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Note:	See following pages for list of included records
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INCLUDED DIA SAB/SAC RECORDS

Panel Report 1-1995 of the DIA Scientific Advisory Board to the Director Defense Intelligence Agency: Improving Intelligence Support To The Warfighters, (SAB001-95), Information Cutoff Date: 15 September 1995

DIA Science and Technology Advisory Board Final Report of the Intelligence Modeling and Simulation panel, Information Cutoff Date: 1 February 1999

Science & Technology Threats Interim Status Report, November 1998 (S&T Threats Panel)

Defense Intelligence Management Document: Science and Technology Advisory Board: DIA Manning Strategy Panel Report (STAB-0000-215-000), May 2000

Memorandum 80-7·of the Advisory Committee to the Director Defense Intelligence Agency: Final Report of the [redacted] October 1980

Report 68-2 of the Scientific Advisory Committee to the Director Defense Intelligence Agency on [redacted], September 1968

Defense Intelligence Agency Scientific Advisory Committee DIA/SAC Report for FY-72

Defense Intelligence Agency Scientific Advisory Board's Strategic Defense Initiative (SDI) Analytic Costing Methodology Panel Report, July 1990

Memorandum for the Record, S&TI Panel briefing to the Director, 09 Dec 97

Background Paper: Subject: Summer 1999 Plenary Report (U-2298-99/ST AB)

Science and Technology Advisory Board meeting minutes, June 10, 1998

Minutes of DIA Scientific Advisory Committee Meeting 23-24 March 1967

DIA Scientific Advisory Committee (meeting) 23 - 24 March 1967 Agenda

Minutes of DIA Scientific Advisory Committee Meeting 18 May 1967

Minutes of DIA Scientific Advisory Committee Meeting 20-21 July 1967

Minutes of DIA Scientific Advisory Committee Meeting 27 September 1967

Minutes of DIA Scientific Advisory Committee Meeting 7 December 1967

Minutes of DIA Scientific Advisory Committee Meeting 14 - 15 March 1968

Minutes of DIA Scientific Advisory Committee Meeting 14 - 15 May 1968

Minutes of DIA Scientific Advisory Committee Meeting 22 July 1968

Minutes of DIA Scientific Advisory Committee Meeting 30 January 1969

Minutes of DIA Scientific Advisory Committee Meeting 27 March 1969

Minutes of DIA Scientific Advisory Committee Meeting 18-19 September 1968

Minutes of DIA Scientific Advisory Committee Meeting l May 1969

Minutes of DIA Scientific Advisory Committee Meeting 29 May 1969

Minutes of DIA Scientific Advisory Committee Meeting 27 June 1969

Minutes of DIA Scientific Advisory Committee Meeting 28 August 1969

Minutes of DIA Scientific Advisory Committee Meeting 16 September 1969

Minutes of DIA Scientific Advisory Committee Meeting 14 October 1969

Minutes of DIA Scientific Advisory Committee Meeting 22-23 January 1970

Minutes of DIA Scientific Advisory Committee Meeting 26-27 March 1970

Minutes of DIA Scientific Advisory Committee Meeting 21-22 May 1970

Minutes of DIA Scientific Advisory Committee Meeting 23-24 July 1970

Minutes of DIA Scientific Advisory Committee Meeting 22-23 September 1970

Minutes of DIA Scientific Advisory Committee Meeting 18-19 November 1970

Report to ·the DIA/SAC from Ad Hoc [redacted] Pane1 19 November 1970

Minutes of DIA Scientific Advisory Committee Meeting 6-7 January 1971

Minutes of DIA Scientific Advisory Committee Meeting 25-26 March 1971

Minutes of DIA Scientific Advisory Committee Meeting 25-26 May 1971

Minutes of DIA Scientific Advisory Committee Meeting 21-22 September 1971

Minutes of DIA Scientific Advisory Committee Meeting 13-14 July 1971

Minutes of DIA Scientific Advisory Committee Meeting 30 NOV - 1 Dec 1971

Minutes of DIA Scientific Advisory Committee Meeting 11-12 January 1972

Minutes of DIA Scientific Advisory Committee Meeting 6 - 7 April 1972

Minutes of DIA Scientific Advisory Committee Meeting 1-2 Jun 1972

Minutes of DIA Scientific Advisory Committee Meeting 18-19 July 1972

Minutes of DIA Scientific Advisory Committee Meeting 7-8 September 1972

Minutes of DIA Scientific Advisory Committee Meeting 9-10 November 1972

Minutes of DIA Scientific Advisory Committee Meeting 4-5 Apr 73 (FTD WPAFB, Ohio)

Memorandum to: Director Defense Intelligence Agency, From: [redacted] Chairman, Advisory Committee. Re: feed-back on the Full Committee meeting at CINCPAC, 24 AUG 1979

Minutes of the Meeting of the Advisory Committee 15-16 February 1983

Closed meeting report for the Scientific Advisory Committee for DIA/SAC 23 January 1978

Closed Meeting Report of the DIA Advisory Committee 16 January 1979

Closed Meeting Report of the DIA Advisory Committee 3 January 1980

Closed Meeting Report of the DIA Advisory Committee 17 December 1980

Closed Meeting Report of the DIA Advisory Committee 5 January 1982

Narrative description on the closed activities of the DIA Advisory Committee for Calendar Year 1982, 25 Jan 1983

Defense Intelligence Agency 1983 Report of Closed Meetings of the Advisory Committee (not dated)

Defense Intelligence Agency 1984 Report of Closed Meetings of the Advisory Committee

Defense Intelligence Agency 1985 Report of Closed Meetings of the DIA Scientific Advisory Committee

Defense Intelligence Agency 1986 Report of Closed Meetings of the DIA Scientific Advisory Committee

Annual Report of the DIA Scientific Advisory Committee 19 July 1966

brief summary of' the DIA/SAC activities for FY-68, 26 July 1966

Fiscal Year 1969 DIA/SAC Activity, 7 July 1969

Review of the Scientific Advisory Committee 23 June 1969

Annual Report of the DIA Scientific Advisory Committee 8 Jan 1974

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Defense Intelligence Agency 1975 Report of Closed Meetings of the Scientific Advisory Committee

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Memorandum 80-6 of the Advisory Committee to the Director Defense Intelligence Agency, Final Report of The Technology Panel, December 1980

Report 87-2 of the DIA Scientific Advisory Committee to the Director Defense Intelligence Agency Space Activity Panel, Information Cutoff date: April 1987

Scientific Advisory Committee Defense Intelligence Agency Review of DoD Intelligence Program on the Strategic Capabilities of China, May 1967

Report No. 68-1 Scientific Advisory Committee Defense Intelligence Agency Collection Needs and Approaches Against Communist China, March 1968

Report 66-6 of The Scientific Advisory Committee to the Director Defense Intelligence Agency on Capability of Soviet Offensive Forces Against US Missiles, October 1966

Memorandum No. 1-68 Scientific Advisory Committee Defense Intelligence Agency, The Threat To Polaris Command and Control, June 1968

Defense Intelligence Agency Advisory Board Minutes of the Meeting of the Advisory Board, 25 Jan 1990

Report 87-3 of the DIA Scientific Advisory Committee to the Director Defense Intelligence Agency U.S. Strategic Defense Initiative (SDI) Panel: Potential Soviet Responses to the U.S. SDI Program, Information Cutoff Date: April 1987

Report 83-2 of the Advisory Committee to the Director Defense Intelligence Agency Final Report of the Intelligence Support To Tactical Commanders Panel, July 1983

DIA/SAC Report 66-5 Possible Over-The-Horizon Radar, September 1966

Memorandum 81-3 of the Advisory Committee to the Director Defense Intelligence Agency, Final Report of the Tactical Weapons R&D Panel, June 1981

Report No. 68-3 Scientific Advisory Committee Defense Intelligence Agency U.S. Capability to Detect and Verify Soviet Strategic Weapons Programs Under Conditions of Arms Limitation, September 1968

Report 85-1 of the DIA Scientific Advisory Committee to the Director Defense Intelligence Agency Arms Control Monitoring Panel, April 1985

Report 81-1 of the Advisory Committee Significant Trends in Soviet Military Technology, February 1981

Memorandum 80-3 of the Advisory Committee to the Director Defense Intelligence Agency Report of the SS-16/20 Panel, May 1980

Minutes of 10-11 October 1996 DIA Scientific Advisory Board Meeting

Minutes of 16-17 January 1997 DIA Scientific Advisory Board Meeting

Minutes of the 22-23 April 1997 DIA Scientific Advisory Board Meeting

Memorandum 83-1 of the Advisory Committee to the Director Defense Intelligence Agency Final Report Of The Soviet Naval Trends Panel, May 1983

DIA Advisory Committee Panel on Soviet Responses To MX Closely Spaced Basing, 14 October 1982

Final Report of the DIA Advisory Committee Bomber Prelaunch Survivability Panel (not dated)

Report 83-3 of the DIA Advisory Committee to the Director Defense Intelligence Agency Department of Defense Intelligence Information System (DoDIIS) Panel, Ju1y 1983

Report 85-2 of the DIA Scientific Advisory Committee to the Director Defense Intelligence Agency Special Actions Panel, July 1985

Report of the DIA Panel for Review of Foreign Nuclear Test Yield Determination, 15 October 1985

DIA/AC Report 84-1, [title redacted] Chemical/Biological Warfare Panel [undated 1984?]

Report 88-1 of the DIA Scientific Advisory Committee to the Director Defense Intelligence Agency Microelectronics and Computers Panel, Information Cutoff Date: June 1987

DIA Advisory Board June 2002 Plenary Meeting Summary

DIA Science and Technology Advisory Board March 2002 Plenary Meeting Summary

DIA Science and Technology Advisory Board June 2001 Plenary Meeting Summary

DIA Science and Technology Advisory Board April 2001 Plenary Meeting Summary

DIA Science and Technology Advisory Board January 2001 Plenary Meeting Summary

DIA Science and Technology Advisory Board November 2000 Plenary Meeting Summary

January 2000 Full Board Meeting Notes

Notes from STAB April 2000 Plenary

June 2000 Full Board Meeting Report to the Director

Notes from June 1998 Plenary Meeting

Minutes from the 18-19 November1998 Plenary

Notes from the 2-3 February 1999 Plenary Meeting

April 1999 Full Board Meeting Notes

Results of STAB 9-10 1999 November Full Board Meeting

Science and Technology Advisory Board DIA Intelligence Products Panel Report, 15 Oct 99

Tribal Warfare, A Study conducted for the Defense Intelligence Agency by the Defense Intelligence Agency Scientific Advisory Committee, Submitted on July 4, 1996

DEFENSE INTELLIGENCE AGENCY

WASHINGTON, D.C. 20340-5100

FEB 29 2012

U-12-9700/DAN-1A (FOIA)

This responds to your Freedom of Information Act (FOIA) request, dated September 6, 1997, that you submitted to the Defense Intelligence Agency (DIA) for information concerning meeting minutes and reports of the DIA Scientific Advisory Board (SAB). I believe that you are aware that the processing of these records has involved an extraordinary amount of time and effort on the part of DIA. The ultimate disclosure package was the result of years of coordination between many federal agencies and a variety of experts on topics studied by the Scientific Advisory Board. Although DIA regrets the amount of time that has passed between your request and this response, I would like to assure you that this agency made a significant resource investment to conclude this very complex case. This effort represents DIA's dedication to resolving each FOIA request individually, while also working to reduce the overall number of FOIA requests in DIA's current case backlog.

As you are also aware, these records are also the subject of litigation filed by *the National Security Counselors* in the United States District Court for the District of Columbia. DIA provided the plaintiff in that case with a fourth release package on February 17, 2012. I have determined that it is appropriate to provide you with the records released to the plaintiff in that case with this FOIA response.

Please be advised that the search of DIA's systems of records ultimately located 118 documents (1747 pages) responsive to your request. Upon the conclusion of the review process, I determined that some portions of 112 documents (1616 pages) must be withheld in part from disclosure pursuant to the FOIA. The withheld portions are exempt from release pursuant to Exemptions 1, 3, 5, and 6 of the FOIA, 5 U.S.C. §§ 552 (b)(1), (b)(3), (b)(5) and (b)(6). Exemption 1 applies to information properly classified under the criteria of Executive Order 13526. Exemption 3 applies to information specifically exempted by a statute establishing particular criteria for withholding. The applicable statutes are 10 U.S.C. § 424, 18 U.S.C § 798, 42 U.S.C. § 2162(a), 50 U.S.C. § 403, 50 U.S.C. § 403(g), 50 U.S.C. § 403-1(i), and Public Law No. 86-36. Statute 10 U.S.C. § 424 protects the identity of DIA employees, the organizational structure of the agency, and any function of DIA. Statute 50 U.S.C. § 403-1(i) protects intelligence sources and methods. Statutes 18 U.S.C § 798, 50 U.S.C. § 403, and Public Law No 86-36 protects other Intelligence

Community information. Statute 42 U.S.C. § 2162(a) protects information regarding atomic energy. Statute 50 U.S.C. § 403(g) protects Central Intelligence Agency information. Exemption 5 protects advice, analysis, recommendations and opinions that are part of the deliberative process. Exemption 6 applies to information which if released would constitute an unwarranted invasion of the personal privacy of other individuals.

Further, I have determined that six of the responsive documents (151 pages) must be withheld in full pursuant to the FOIA. These withheld documents are exempt from release pursuant to Exemptions 1, 3, 5, and 6 of the FOIA, 5 U.S.C. §§ 552 (b)(1), (b)(3), (b)(5), and (b)(6).

Sincerely,

Alesia Y. Williams

112 Enclosures

Alesia Y. Williams
Chief, Freedom of Information Act Staff

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Nine pages are denied in full and are not included.

PANEL REPORT 1-1995

of the

DIA

SCIENTIFIC ADVISORY BOARD

to the DIRECTOR

DEFENSE INTELLIGENCE AGENCY

IMPROVING INTELLIGENCE SUPPORT TO THE WARFIGHTERS

Information Cutoff Date: 15 September 1995

SAB001-95

IMPROVING INTELLIGENCE SUPPORT TO THE WARFIGHTERS

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DIA SCIENTIFIC ADVISORY BOARD MEMBERS

Chairman

(b)(3):10 USC 424

(b)(3):10
USC 424

(b)(3):10
USC 424

*New Members (Fall 95)

Improving Intelligence Support to the Warfighters

I. INTRODUCTION

A. Scope of Effort - This panel was sponsored by the DIA J-2, MG Pat Hughes. The following areas were selected for focused attention based upon discussion with Gen Hughes.

- Review Desert Shield/Storm Intelligence deficiencies.
- Visit ACOM, CENTCOM and SOCOM and discuss their needs and concerns.
- Review the status of and the outlook for, [redacted] and Multi-Level Security Systems (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
- Make specific recommendations for further improvement in support to the Warfighters.

The Terms of Reference are given in appendix A.

B. Panel Membership

(b)(3):10 USC 424

C. Meetings and Reports - Starting in January 1995 The Panel met eight times for a total of 12 days, including visits to ACOM, CENTCOM and SOCOM. Dates and locations of the meetings are given in appendix B. An Interim Report was issued on 19 April and a "near-final" briefing was given to the Director and the Scientific Advisory Board on 20 June. The draft final report was circulated to the members and advisers and the Scientific Advisory Board Chairman in early August.

II. LESSONS LEARNED IN DESERT SHIELD/STORM

A. Intelligence Center

It took a large part of the six months of Desert Shield to create the Intelligence System for the Gulf War and much was learned by using and modifying it. There was concern that this experience might be lost. This did NOT happen. CENTCOM has a deployable Intelligence Center at the JTF level which they consider fully capable. They do assume that the appropriate theater-Conus communications will be provided by others.

B. Intelligence Dissemination

The dissemination of intelligence information (especially imagery) to Wings/Division and below is still the number one problem. Many improvements have been made and many more are being pursued to solve the problems noted in Desert Storm in dissemination of information throughout the force structure. Efforts at improving interoperability, adherence to commercial standards, broader use of common (joint) equipment have all made progress. However, the direct broadcast satellite technologies and systems recently developed in the commercial sector provide an opportunity for the greatest step forward of all. [redacted] are extremely attractive features and are all readily available. We see a danger, however, that "requirements creep" could negate our ability to leverage this commercial investment. There are discussions of the military system operating [redacted] While each change is well intended (and some are probably necessary - e.g. military frequency band), together they could easily result in requiring a totally new system that not only would take many years (and dollars) to develop, but also would not be able to use the low price commercial receivers. Requirements changes should be carefully and critically reviewed and a hard price cap should be placed on the receiving system to insure its affordability throughout the force structure. The most promising of these dissemination techniques will be addressed in proposed Advance Concept Technology Demonstrations (ACTDs). (See Appendix F for a discussion of this new approach to development of new capabilities.)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

C. Imagery Coverage

The noted need for greater (synoptic) imagery coverage (including all weather, if possible) is being addressed by a significant increase in the coverage of the optical systems and the TIER II & III UAV programs. The need for manned [redacted] is still being debated. In any event, the large increase in imagery from UAVs, etc. will require advances in data compression and interpretation aids.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

D. Battle Damage Assessment (BDA)

We were surprised that the Commands did not give this subject the emphasis it received during the Gulf War and in subsequent analyses of that war. The identified problems in accurate assessment of Battle Damage (BDA), now known as Combat Assessment, are being worked but with limited success. There are two different kinds of problems:

- First there is the very difficult problem of determining the effectiveness of a strike against a structure; was the Control Center in the subbasement put out of action? Continuing work is needed in this area. (There are some interesting possibilities for training using simulation: see Appendix A: Simulation.)

- How many tanks, APCs, artillery pieces, etc. were killed? Improved recording of strike results will help but there will always be significant uncertainties. Thus, it may be useful to review historical data with the idea of using derating factors to obtain more realistic numbers. In WW II, for example, factors of four and higher were routinely applied to first estimates of "kills" of tanks, trucks, etc. and even those numbers were found to be on the high side when complete information became available. Analysis of data from the Gulf and other more recent conflicts may provide useful guidance in this area.

III. ACOM, CENTCOM and SOCOM High Interest Topics

The Panel visited the three Commands called out in the Terms of Reference and had discussions with all the staff components. Their concerns are noted here:

- Each Command described countries/areas of special concern and stressed the need for Strategic and Tactical Warning in its AOR. There are high interest countries such as Iran (CENTCOM) and Cuba (ACOM).

- The issue of Releasability/Sanitization of intelligence (especially COMINT and IMINT) to allies (and, in some cases to their own forces) was a serious concern. They noted that in nearly every case the request was approved but it took 2-3 weeks.

- The detection and localization of Weapons of Mass Destruction (WMD) are, not surprisingly, high on the interest list. The importance of HUMINT was stressed because in many cases it is likely to be the only possible source of information.

- Related to WMD is intelligence regarding Theater Ballistic/Cruise Missile (TB/CM) capabilities for countries in each AOR.

- Each noted the growing need for readily accessible and current Data Bases.

- The intelligence problems associated with Military Operations in Built-up Areas (MOBA) and Operations Other Than War (OOTW) were noted. One of the 1994 DSB Summer Studies made a number of recommendations in the MOBA/OOTW area. They included the use of many [redacted] Many, if not all, fall into the MASINT sensor category. The Study also recommended an ACTD to develop a "system' capability in this area.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

[redacted]

- ACOM, the designated center for large joint simulations, pointed out that the intelligence part of the simulations is seriously inadequate and, thus needs significant improvements. There are several issues relating to this topic. They are discussed in Appendix C, Simulation. It seems clear, however, that there is an important role for DIA in the simulation area.

IV. TECHNICAL ISSUES

Because they relate to various proposals for automation of some intelligence functions, these technical areas were reviewed by the Panel to determine status and outlook:

A. [redacted] including Knowledge Based Systems.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

[redacted]

- Ongoing efforts may provide other new capabilities important to the Intelligence Community.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

- A more detailed discussion of [redacted]

B. Multi-Level Security Systems

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

- As with [redacted] original goals for a system which safely allowed all users access to an all source data base have not been met. Nor is a "full solution" in sight.

- Limited capability systems With Risk are available and the key will be managing that risk. The NSA Multi-Level Information System Security Initiative includes the development of building blocks for supporting communication between multiple single level security systems over unsecure communication paths.

- The rate of progress is uncertain and the outlook is not promising because:

  - Operating systems are getting much more complex, opening many holes.

  - Networking is becoming much more complex, opening more holes.

  - The threat is becoming much more sophisticated and has many more tools.

  - The users are demanding much more and much broader connectivity.

All this is working against making progress in multi-level security. There have been, and will continue to be, constrained solutions to specific parts of the problem. But, the overall trend seems to be in the opposite direction. This area is discussed in more detail in Appendix E, Multi-level Security.

V. GENERAL COMMENTS/CONCERNS/QUESTIONS

- The DIA Role, Accomplishments and Interest in SMO over recent years has resulted in steady improvements.

- Someone needs to take the lead to "Solve" the Releasability/Sanitization Issue which is giving the CINCs heartburn. The "solution" will probable involve policy, prescreening, data base changes and new procedures. A brief discussion of automated sanitization is given in appendix D. DIA is the logical organization to address the Releasability/Sanitization issue.

- There would seem to be value in setting up a special team to work with each CINC to "look Ahead" in his area of responsibility. The team could address questions such as: What Data Bases are needed? How will we hook-up with likely coalition partners? What Special Sensors, HUMINT Arrangements, etc, will be needed? Given CINC concerns a [redacted]

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

- Intel Systems (sensors, data bases, etc.) are getting more complex and changing frequently and thus present ever greater technical challenges. Further, each crisis presents a different/unique set of problems. This suggests the need for DIA to strengthen its technical presence at the Commands.

- The ACTD approach involves both developer and user in the creation of new military capabilities: see Appendix F. DIA should become a major participant in those ACTDs involving intelligence issues and a very interested observer for intelligence related ones. Examples include: Battlefield Awareness and Data Dissemination, MOBA/OOTW, Precision SIGINT Targeting System, and Semi-automated IMINT. DIA should view the "leave-behind" products of some of these ACTDs as " theirs to use in exercises and the next war"

  - Further, the ACTD process offers an avenue to explore and develop new ideas and capabilities in intelligence such as the CENTCOM proposal for a "Split J-2 Operation."

  - Copies of several relevant ACTDs are included in Appendix F.

- These ACTD activities include modern sensors and communications, signal and image processing, data base management, etc. Thus, the technical requirements in intelligence are becoming more demanding which will, in turn, require DIA to acquire greater breadth and depth in the relevant technical areas.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

[redacted]

(b)(3): 10 USC 424,(b)(3): 50 USC 403-1(i)

[redacted]

VI. RECOMMENDATIONS

1. The DIA should continue its effective emphasis on SMO.

2. The DIA should take the lead to "Solve" the Releasability/Sanitization Issue for all INTs.

3. DIA should set up a special team to work with each CINC to "Look Ahead" in his area of responsibility. What Data Bases are needed? How will we hook-up with likely coalition partners? What Special Sensors, HUMINT arrangements, language requirements, etc. will be needed? [redacted]

(b)(3):10 USC 424,(b)(3):50 USC 403-I(i)

4. DIA should make a major effort to increase its science and engineering capabilities to deal with the current problems and opportunities (including ACTDs) and to allow it to strengthen its technical presence at the Commands.

5. DIA should become an active participant in those ACTDs involving intelligence issues and an interested observer in other related ones, e.g., an active participant in the Battlefield Awareness and Data Dissemination and MOBA/OOTW ACTDs; and an interested observer in the Precision SIGINT Targeting System, Counter Proliferation, and Semi-automated IMINT ACTDs.

6. DIA should explore with CENTCOM and DUSD (AT) the establishment of an ACTD to develop a "Split J-2 Operation." This might be incorporated into the Battlefield Awareness and Data Dissemination ACTD.

7. DIA should involve itself in the planning for use of Direct Broadcast Satellites for intelligence dissemination to assure that the DoD properly leverages the commercial investment and doesn't reinvent ("militarize") the whole system. A crucial aspect is a low cost encryption system.

8. DIA should review the CENTCOM computer network architecture and experience to determine if modifications to the DIA standard network architecture are warranted.

9. DIA should take the lead for the intel community in supporting ACOM (and other U&S Commands) in the modeling and simulation of intelligence systems, operations, reporting and dissemination activities.

10. DIA should consider establishing Panels of the Scientific Advisory Board on Counter-Proliferation and Third World HUMINT.

APPENDIX A

TERMS OF REFERENCE

APPENDIX A

TERMS OF REFERENCE

MEMORANDUM FOR CHAIRMAN, SCIENTIFIC ADVISORY BOARD

SUBJECT: Terms of Reference – Scientific Advisory Board Panel on Intelligence Support to the Warfighter

1. The Defense Intelligence Agency gives the highest priority to the mission of providing Intelligence Support to the warfighter (Combat Commands). We have made significant advances in this area in the past 5 years and I have taken steps to assure this progress continues.

2. Military intelligence faces a wider range of possible contingencies than ever before, including the need to deal with two major ones fairly close in time. We are facing declining budgets, with which we must do more. Technology can help us do this, but we must have a sound strategy for how we develop and use it in a cost-effective way.

3. Furthermore, since we are faced with greater uncertainty today, we must be more flexible and adaptable. This will include an ability to construct, in real time, intelligence information architectures tailored to meet the warfighters' needs in particular circumstances.

4. All of these factors and others demand close and effective integration of all of our capabilities. I have tasked all elements within DIA to concentrate on meeting this continuing challenge. As part of this effort, I request that the Scientific Advisory Board convene a panel to examine key aspects of the subject, with emphasis on the ability of new technologies to permit additional improvements. To provide focus, the efforts of the panel should concentrate on three Commands: ACOM, CENTCOM, and SOCOM.

5. Suggested Tasks:

a. Review organization and structure of military intelligence to accommodate multinational/coalition operations:

(1) Systems/communications interoperability, and

(2) Worldwide wideband connectivity.

b. Review ability to automatically move intelligence, automatically sanitized as necessary, across networks at different security classifications to provide the information required by U.S. and coalition partners.

c. Review knowledge-based systems and procedures to improve intelligence and counterintelligence operation implementation, analysis, and planning.

d. Review other current capabilities and efforts to improve them.

e. Review the relevant "lessons learned" from the Gulf War including subsequent military actions in that theater and the corresponding responses.

f. Review intelligence needs for Somalia and other current and recent "Operations Other Than War."

g. Analyze the needs/desires of ACOM, CENTCOM, and SOCOM including the intelligence needs of the "early entry" mission.

h. Review and identify advances in technology that might permit achievement of new capabilities.

i. Provide appropriate recommendations supported by the panel's review of intelligence support to the warfighter.

(b)(3):10 USC 424

6. The panel will be chaired by [redacted] and will prepare an interim briefing on its progress by 31 March 1995 and a final report by 30 June. The DIA sponsor will be the J2, MG Pat Hughes, USA, whose organization will provide necessary support. [redacted] will be the J2 point of contact. [redacted] will be the DIA Scientific Advisory Board Staff representative. It is not anticipated that the panel will need to go into any "particular matters" within the meaning of Section 208 of Title 18, U.S. Code, nor will it cause any member to be placed in the position of acting as a procurement official.

Approved
5 December 1994
DD/DIA for DR

APPENDIX B

MEETINGS

APPENDIX B

MEETINGS

Meeting Dates	Location
10-11 January 1995	DIAC and Pentagon
28 February and 1 March 1995	DIAC
28 March 1995	MacDill Air Force Base, FL, USSOCOM
29 March 1995	MacDill Air Force Base, FL, USCENTCOM
25-26 April 1995	DIAC
16 May 1995	Norfolk VA, USACOM
23 June 1995	Charles Stark Draper Laboratory, Cambridge, MA

APPENDIX C

SIMULATION

APPENDIX C

SIMULATION

At USACOM the need to train large numbers of field commanders has led to plans for the extensive use of computer technology in simulations, to facilitate training at minimum cost. The ACOM effort is called JTASC (Joint Training and Simulation Center) and is responsible for developing and conducting joint wargames.

In this training process, computers are applied for simulation of the operational process in accordance with an initial deployment and rules of engagement. This supports the evolution of a combat scenario which presents realistic issues to the trainee and evaluates his decisions.

The JTASC simulation facility is composed of individual simulation programs from all Services. A current deficiency is the lack of the level of interoperability between models which is required to effectively simulate joint operations. A specific need was called out for a group to oversee the fidelity and the joint applicability of their models.

Wargaming requires intelligence inputs, conceivably involving the use of actual intelligence assets in the process. Not only must the intelligence modeling provide the information that would be available at the start of the engagement but the information must evolve with the engagement and present an appropriate up-dated report. This evolution of information must be consistent with information that would be provided in actual operations. The present simulation for this function is too simple and superficial, and an invitation was made to the DIA to participate in the intelligence function of the JTASC activities.

The JTASC effort represents a valuable opportunity for the DIA. A significant coordinating role in the intelligence area of the games and simulations would be ideal, but may not be practical due to manpower limitations. A need was identified for a person or group to define the standards to be met in each area of simulation, the relevant area here being the intelligence system simulations. At a minimum, it is important for DIA to participate at some level to ensure that the appropriate intelligence capabilities are being represented.

Participation by the DIA in the JTASC effort could have several benefits:

- Train the services in the proper utilization of intelligence assets. Teach users what facilities and products are available and what are the appropriate uses of it.

- Develop a continuing close connection to, and feed back from the user.

- Create a desire among the users for commonality. They will see what advanced capabilities can be available to them if they have compatible equipment. The war game exercises could become a vehicle for a natural standardization process, as new capabilities are developed.

In addition to the direct support to the ACOM training mission which this would provide, there is also a real benefit to the intelligence community. Participation would permit the training of field intelligence personnel in tactical operations. Various intelligence capabilities could be tested. In developing the training simulation tools on the planning side, the analyst will be required to define the effectiveness of intelligence systems in the tactical theater, tracing it to the performance of equipment or processes. Projecting an intelligence need is particularly difficult because of the indirect way in which intelligence influences the outcome of tactical engagement, and the performance of the warfighters. The simulation activities could allow these connections to be better understood, which in turn would help the specification process.

In the context of the war games, the DIA could act as an integrator of the various intelligence assets including those of the individual services. With agreement by ACOM an appropriate simulation added to their current facility could be used not only for command training but also for intelligence requirements definition and evaluation. The DIA is the appropriate organization to set standards for and develop simulations of intelligence functions.

These benefits, command and intelligence training, and requirements development for tactical intelligence, make it highly desirable to determine more precisely what the intelligence simulation system should be doing and how it should be implemented. Then the simulation investment costs, operational costs, and organization can be traded against these benefits. This information is essential to deciding how best to support ACOM and how to exploit simulation for intelligence system development.

From the short review we had, there was a sense that for cost reasons the JTASC would use "models developed for other reasons" to train the command staffs. Those other reasons include: weapons effectiveness models; tactics analysis models; system performance models; and many-on-many wargaming models. It was unclear whether, or how, these existing models would satisfy the training objectives. It was clear that it would take a lot of technical effort and money to install all the computers, load all the existing models, and make the modifications necessary to allow them to "interoperate."

Before all this technical effort is undertaken, the validity of the overall approach should be reexamined with respect to the very important command staff training objectives of the JTASC.

The opportunity exists within the ACOM JTASC effort to train the next generation of leaders to be conversant in the uses of intelligence assets and information. The DIA should take as large a role as is practical in coordinating the intelligence aspects of the JTASC effort.

In the illustration below we suggest how simulation might be used to examine the Battle Damage Assessment (BDA) problem.

Illustration

Assume an air attack on the area around a defended hardpoint, with an underground concrete hangar in the center. Several targets present themselves in addition to the hangar. The mission planner working with the intelligence officer might have a choice of several (say three) different sensor suites for observing the effect of bomb impact, and two choices for attacking the reinforced hangar. The performance of each sensor suite can be evaluated as the results of independent data system fusion. The outcomes of the family of bomb releases can be defined from information about the structure and the weapon. Such information can be off-line analytical, or an on-line NASTRAN analysis, or an historical (experience) characterization. Using the simulator the officer in training can take the system through the engagement and record the results. Based upon the BDA report the target is ruled inoperative, or functional and requiring further attention. The selection of a weapon and an intelligence suite can be re-initiated and the engagement repeated. This can be done for all of the candidate systems in combination, with or without chance (noise) elements incorporated into sensors and weapon performance. The effects of weather may be introduced.

Hypothetical performance can be proposed and its effect evaluated. If well designed, that is to say, if the algorithms or the physical simulation do represent the essential operational performance of the equipment and their interconnection, then one has from this gaming an insight into what the current equipment can provide to the warfighter, and what levels of performance can be regarded as necessary or sufficient. The costs of the choices can be estimated in terms of acquisition dollars; in terms of maintenance, reliability and availability; in terms of the effect on force size. Repetition of the engagement by different commanders would provide a measure of the sensitivity of the solutions, and particularly the recommended solution.

APPENDIX D

ARTIFICIAL INTELLIGENCE

APPENDIX E

MULTI-LEVEL SECURITY SYSTEMS

APPENDIX E

MULTI-LEVEL SECURITY SYSTEMS

One of the challenges of the intelligence information dissemination problem results from the fact that a given data item can exist at different classification levels, depending on whether it includes certain associated information such as the source or means of collection of that data item. The end user, in many cases, is not concerned with the means of collection, and an abridged version of the original complete item is acceptable. The problem is providing the user with efficient and timely access to this data.

Multi-level security is a concept to facilitate data handling, particularly when dissemination is time critical. On the production side, the intelligence analyst could generate and release information into networks or repositories at the appropriate classification level, and the user could then access these data bases at a variety of classification levels. The key element is the capacity for a user to have access to networks or data systems that contain data at a higher classification than that user is authorized for.

The ultimate concept in multi-level security is typified by a computer network on which a user who possesses a certain clearance level can access communications and information data bases at various classification levels, up to the limit that their personal authorization allows. This would include both SCI and collateral information. There has been activity toward this end, but practical demonstrations have been far less ambitious than the ideal because of significant challenges in maintaining integrity between the various security levels. No full implementation of multi-level security has been identified that is in operational use at this time.

When it comes to computer security, the tradition has been to place a strong emphasis on physical security. Even a non-specialist can discern whether a cable linking the secure computer to an unsecure network has been properly disconnected. It is difficult, however, even for a specialist to determine whether software protection measures are robust. It is not surprising, then, that many demonstration efforts have focused on narrower goals than the multi-level security concept described above, generally being aimed at facilitating the properly sanitized transfer of information from a network operating at a higher classification to one operating at a lower level.

A practical and expedient solution to providing the timely transfer of information from a classified source to users at a lower level was demonstrated by Joint Task Force 4. They achieved a rudimentary capability by having terminals for an intelligence (SCI level) network and a tactical (collateral secret) network in the same room. This system was set up in Key West in support of drug interdiction operations. Information from the SCI system was filtered, sanitized, and downgraded by the SCI operator, and then passed verbally or on slips of paper to the operator at the terminal of the collateral network.

A further step in integration has been achieved by a project within the US Atlantic Command, where access to both an SCI network and a collateral network is available on a single workstation. The operator at this station works at the highest classification level, and performs the function of gatekeeper between these networks; sanitizing and downgrading information, and passing it to the collateral network. The operator can receive requests for information from either the SCI or collateral network, but must specifically enable the sending of data out to either network.

Current research thrusts try to take advantage of commercial hardware and software. Various commercial outfits offer hardware and software packages directed at the secure communications market through such technology as encryption, filtering routers, and specialized operating systems (Sun Microsystems Compartmented Mode Workstation, for example). Though true standards are lacking, the UNIX operating system is frequently built upon since it has a privilege based hierarchy that is suggestive of the kind of access restrictions and permission levels needed for multi-level security. The focus of many current efforts is to achieve secure compartmented communications between computers over public or unsecure networks. In these cases the secure computers involved are all operating at the same security level; no multi-level capability is implemented.

An active effort in this area is the NSA's Multi-level Information System Security Initiative (MISSI). The long term goal is to develop all the building blocks to support the operation of secure networks, functioning at multiple classification levels, making use of unsecure communications paths. A current product of this effort is the development of "fortezza" cards which provide commercial computers with encryption so that (as an example) two secret level systems can communicate across a government network. Communication between Sensitive But Unclassified nodes is currently supported. Firewall software is being developed to allow these secure systems to have access to the unsecure INTERNET. The near and mid-term goals address multiple single level security systems (enclave to enclave), not multi-level security on a single system.

The fruition of the MISSI effort is still a number of years off, yet the services have immediate needs and requirements. This has led the services to pursue the development of their own secure communications networks. There is concern that this will lead to continued interoperability problems unless an effort is made to supply the services with architecture guidelines along with an evolutionary development plan that addresses their near and mid-term needs.

Though software does already exist which can provide the functionality needed for multi-level security, serious questions remain as to the ability of existing software to meet government standards for resistance to compromise. Consequently, an important companion effort to the development of multi-level security systems is validation testing. The most effective approach is generally through "red team" efforts aimed at the attack of secure systems. For testing of software and hardware developments, this refers specifically to electronic attacks over the network (i.e. hacking).

A number of Information Warfare red team efforts are being pursued at this time. The Air Force Information Warfare Center (AFIWC), the NSA, and the Defense Information Systems Agency (DISA) have continuing efforts in this area. ARPA has launched a Defensive Information Warfare study that is intended to develop a red team approach and identify relevant technologies for protecting information systems. ARPA is also running an Information Science and Technology (ISAT) study to develop technology investment guidelines for civil sector information systems. The Assistant Deputy Secretary of Defense for Special Projects is initiating an effort to study information warfare techniques, not limited to hacking but including more active measures of disrupting information systems.

Overall, the development of full multi-level security systems faces severe challenges in that software for network systems and applications is becoming increasingly complex, causing programmers to work at a very high (abstract) level. The details of the machine level implementation of their code are frequently unknown to them. This and other factors serve to degrade the robustness and "security" of typical software systems. The same advances that allow more powerful encryption schemes also enable more sophisticated security penetration tools. Ultimately, trusted systems will continue to depend on a high degree of physical security (isolation) for robustness. This is at odds with the need for wide ranging access and dissemination of information.

The perfectly secure network can never be created; the issue becomes one of managing risk. There have been, and will continue to be, constrained solutions to specific parts of the problem. But, the overall trend seems to be in the opposite direction because:

- Operating systems are getting much more complex, opening many more holes.
- Networking is becoming much more complex, opening more holes.
- The threat is becoming much more sophisticated and has many more tools.
- The users are demanding much more and much broader connectivity.

Thus, it must be recognized and accepted that the ability to provide timely classified information to the warfighter will bring with it a lesser immunity to compromise than is normally expected in secure enclaves.

APPENDIX F

ADVANCED CONCEPT TECHNOLOGY DEMONSTRATIONS

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DIA Science and Technology Advisory Board

Final Report
Of the
Intelligence Modeling and Simulation panel

2/99 -

Information Cutoff Date: 1 February 1999

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(b)(3):10 USC 424,(b)(5)

FORWARD

The Director of the Defense Intelligence Agency (DIA) commissioned a panel of the DIA Science and Technology Advisory Board (STAB) to provide recommendations with regard to DIA's role as:

- DoD Models and Simulation (M&S) Executive Agent for Military Intelligence.
- [redacted]
- [redacted]

(b)(3):10 USC 424,(b)(5)

The Terms of Reference for this study is enclosed as Attachment A.

INTRODUCTION

The Intelligence Modeling and Simulation (M&S) panel of the DIA STAB was constituted in the spring of 1998 and completed its primary efforts in February 1999. All observations and conclusions reached by the panel do not reflect any efforts after February 1999.

Through the process of briefings by the principal organizations involved in efforts associated with the focused DoD M&S programs in which the DIA is a key participant, the panel became sufficiently knowledgeable to assess the impact on DIA with respect to both consumer expectations and status of activities. The panel's task was to provide the Director, DIA, with recommendations regarding the effective use of DIA assets (both staff and budget) applied to the important evolution of M&S for joint training, as well as to the processes contained in the evaluation of the effects of Red forces on Blue operations. The programs considered were those in which the DIA has a principal role in either (or both) the definition and modeling of the [redacted] assets and process, and the providing of threat data and/or models of the Red Forces and associated processes. Primary focus was on the [redacted] and DIA's associated roles because of the programs large budget and senior leadership involvement in assuring its success for improving the joint training process. Those programs specifically reviewed were:

- [redacted]
- [redacted] collection management process and modeling of MASINT, HUMINT, all-source production (the effort receiving a large portion of DIA's current M&S budget).

(b)(3):10 USC 424,(b)(5)

(b)(3):10 USC 424,(b)(5)

- [redacted]
- [redacted]

The panel found this overall review a difficult undertaking because of the dynamic nature of the evolving [redacted] The panel focused on this program and DIA's role within it because of [redacted] large budget and senior leader's involvement in assuring its success for improving the joint training process within this limiting budget era. The panel found uncertainty in the JSIMS program requirements, built in schedule slippage due to funding issues, and an unclear chain of authority and responsibility. DIA has a clear responsibility to argue for essential M&S funding for the military intelligence community, if M&S requirements are to be met. DIA's responsibilities cut across all elements of the [redacted] and this could result in blame for delays and potential program element failures. The panel's observations and recommendations reflect this concern.

(b)(3):10 USC 424,(b)(5)

(b)(3):10 USC 424,(b)(5)

PANEL MEMBERSHIP

The Panel membership was as follows:

(b)(3):10 USC 424

[redacted]

FINDINGS AND OBSERVATIONS

As the panel began to review the various M&S programs for which DIA has a role as an Executive Agent (EA) and/or a Development Agent (DA), the panel noted the difficulties in the overall development of the Joint M&S programs. This is particularly true for the [redacted] which is the focus of much of this panel's efforts. It is this panel's assessment that the responsibilities of DIA to the [redacted] is a key element in the program's successful implementation. Because of this, with DIA's across the board involvement in all threat and [redacted] of the program, the DIA is open to potentially heavy criticism if there are failures in the successful development of the [redacted] This also holds for the other programs that will fold into the [redacted] All the key developing efforts are shown in the following figure.

(b)(3):10 USC 424,(b)(5)

(b)(3):10 USC 424,(b)(5)

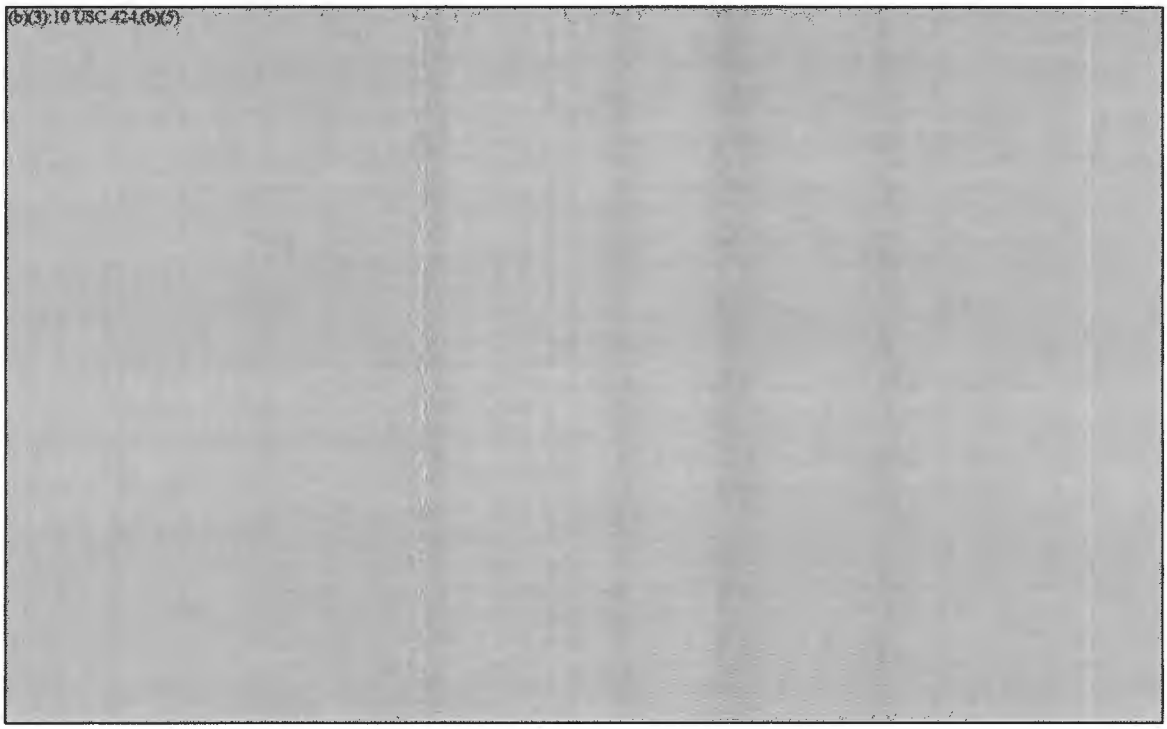

Figure 1: **The Joint Modeling Federation**

As a result of this concern, much of the panel's review was focused on the M&S programs that are noted, and the associated DIA role, program (consumer) representatives' expectations of DIA, their opinions on the efforts of DIA as relates to their developing activities, and the program recommendations as relates to DIA's role. In addition to DIA's key role as the provider of [redacted] DIA is responsible for the [redacted]

(b)(3):10 USC 424,(b)(5)

(b)(3):10 USC 424,(b)(5) [redacted] is to address aspects of this [redacted] The panel considers [redacted] a key activity for both the [redacted] as well as internal DIA use. After review briefings by the [redacted] the panel has concerns as to the realism of the model and how it will be implemented to support the M&S community and its goals. This panel recommends that timely review is warranted to assure program success.

As will be discussed, it is the panel's view that an important aspect of DIA M&S activities is as it relates to the support of internal activities within the agency. Less focus was given to this important area because of the external pressure of the DoD community to meet functions and schedule within the rubric of the [redacted] and the other related programs. It is this panel's view that this internal focus should be considered as a follow-on to this current STAB effort summarized in this report. (b)(3):10 USC 424,(b)(5)

The three programs for which our efforts' concentrated, as relate to DIA's role and responsibility, are summarized in the following figure.

Figure 2: M&S PROGRAM RESPONSIBILITIES

DIA INTELLIGENCE MISSION

- US National, Joint Service Intelligence process and systems (Blue Forces)
- Foreign forces, systems, processes and behaviors (Red Forces)
- Support M&S intelligence requirements of
  - -- US operating forces
  - -- Force planners
  - -- Policy makers

(b)(3):10 USC 424,(b)(5)

(b)(3):10 USC 424,(b)(5)

The panel was presented with briefings, including extensive discussion, from the three program offices. In addition, and as important, briefings and associated discussions were presented by those M&S programs which are the key elements (domains) of the [redacted]

- [redacted]

A short description of [redacted] including their current status, is included as an appendix.

Another important area where M&S could have high payoff, but was not fully discussed, is in the TRANSNATIONAL THREAT arena. Interface with the D-STAB's Transnational Threat Panel highlighted potential benefits if an appropriate model could be developed. This issue should be more carefully studied in subsequent review.

The following charts summarize the panels observations relating to the various briefings and discussions that occurred during the panel meetings.

- The panel placed heavy emphasis on DIA's role within the [redacted]

(b)(3):10 USC 424,(b)(5)

- [redacted] development program shows precursor symptoms of failure:
  - Uncertainty in program requirements
  - Built in schedule slippage due to funding issues
  - Unclear chain of authority and responsibility

- Level of data fidelity required of the INTEL community to support evolving models and simulations [redacted] is uncertain and varies from user to user.
  - Who is being trained should affect the level of fidelity!
    - Task Force Commander
    - Component Commander
    - Senior Staff level

(b)(3):10 USC 424,(b)(5)

- Each service element's model is to be incorporated into [redacted] to integrate into a "system".

- The complexity and scope of the [redacted] M&S program has resulted in insufficient coordination between DIA and the other members.

- DIA should maintain a strong role with regard to individual service models: validation, threat data, and foreign forces model.

• DIA's role as DA for the collection process and associated modeling is essential to the M&S community as a whole, and within DIA as an organization.

(b)(3):10 USC 424,(b)(5)

• M&S consumer needs for [redacted] vary, and may be ill defined. In a number of cases, consumer expectations for level of data higher than warranted.

• [redacted] through efforts of MSIC, is providing positive benefit to the community. Consumers highly satisfied with H/W in the loop and exploitation efforts.

• [redacted] is a program that does not require extensive DIA effort. DIA appears to be providing adequate and appropriate support advising on the integration of INTEL related components.

(b)(3):10 USC 424,(b)(5) –

• As presented to the panel, [redacted] comprising DIA's main identifiable specific contribution to [redacted] will not provide reduction in support resource requirements or improved training. It is also lacking in detail, reality definition, and milestones.

• Current DIA M&S team is dedicated to the implementation of a successful program. Success could be hampered by the team's lack of M&S related technical expertise.

• Overarching objectives and responsibilities of DIA not significantly changed by growing pervasiveness of M&S in DoD. However, effectiveness will increasingly depend on M&S.

RECOMMENDATIONS

The previous observations resulted in the following panel recommendations.

1. The mix of experience involved with the DIA M&S effort should include a larger percentage of technically oriented staff. An appropriate mix of technical and program management staff on the DIA M&S team is essential. To supplement the group, draw upon existing technical expertise within DIA, as required.

(b)(3) 10 USC 424 (b)(5)

2. DIA should become more proactive as the INTEL executive agent within [redacted] to properly manage consumer expectations and requirements, and associated level of data fidelity. If not in the "swing-of-things, DIA could become a scapegoat [redacted] delays and potential failures to meet objectives. DIA must manage the expectations of all its M&S consumers (in terms of fidelity, data and schedule) consistent with available budget and resources.

   a. It is the panel's belief that the [redacted] INTEL requirements are being overstated (if stated at all). DIA should carefully determine the [redacted] INTEL requirements and impose some degree of realism.
   b. There appears to be disparate levels of details in plans for various INTEL codes within the [redacted] For example [redacted] modeling at levels unsupported by other [redacted] As INTEL DA, DIA should make determination of needed detail level and get various DA's coordinated.

3. DIA should perform a triage on INTEL related data requirements to meet defined schedule within budget constraints.

   a. In consultation with M&S users, DIA should define required levels of [redacted] Level of data fidelity should be consistent with models being developed.
   b. Reexamine a balanced approach, between development of U.S [redacted] consistent with consumer needs and budgetary constraints.

4. DIA's [redacted]

   a. No visible performance requirements, only cost and schedule requirements. Recommend performance requirements be clearly specified and made commensurate with other [redacted] requirements.
   b. [redacted] should be representative of the changing situations and interactions that characterize real situations, including [redacted]
   c. The path for [redacted] beyond IOC is vague. DIA should devote increased effort to system planning for follow-on efforts to preclude need for ad hoc, work-around solutions.
   d. A periodic external [redacted] be conducted.

(b)(3) 10 USC 424,(b)(5)

5. DIA should take the lead role in developing threat models in all significant S&T areas not assigned to [redacted] For example, transnational threats models to include terrorism and WMD proliferation.

(b)(3):10 USC 424,(b)(5)

6. M&S technology development will be an important key to DIA's successfully meeting its responsibilities. DIA should move toward increasing use of M&S across the entire spectrum of its operations, such as applying M&S tools to collection management and the production process as a whole [redacted] modeling could be the starting point) [redacted] should be developed as a tool for the Agency as well as for [redacted] DIA's model developers should create a strong association with M&S technology developers elsewhere in government and in industry.

(b)(3):10 USC 424,(b)(5)

7. How will DIA's world change in a rapidly expanding M&S environment?

   a. Within the world of decreasing budgets, M&S provides the means of maintaining levels of productivity necessary for DIA to achieve its DoD chartered responsibilities.
   b. An initial, consolidated survey should be accomplished to establish the current level of M&S related activities within the agency to set the stage for assessing current needs to keep pace with today's world. This would provide the basis for budgetary decisions and development requirements.
   c. The Defense Intelligence M&S Executive should provide the Director, on a semi-annual basis, with the status of M&S efforts throughout the agency, and provide appropriate recommendations.

APPENDIX A

Science and Technology Advisory Board
Terms of Reference
Intelligence Modeling and Simulation Panel

Abstract

The panel will examine approaches to Defense Intelligence support to DoD modeling and simulation (M&S), assist in identifying promising technologies and tools for use in modeling, identify interfaces for electronically transferring relevant existing data bases to various models and simulations, and assist in R&D planning. The panel will assess the long-term implications and impact on DIA's budget, manpower mix, and acquisition process of modeling and simulation programs. This effort will provide experienced insight and knowledge to the process of structuring an approach to be used by the Defense Intelligence [redacted]

(b)(3):10 USC 424,(b)(5)

Background

DIA is the designated executive agent for DI M&S. In this role, DIA will work with the Services and various Agencies to:

Define M&S program objectives.

Establish standards and procedures.

Provide direction to meet Defense Intelligence M&S requirements.

Define a conceptual model of the requisite mission space.

Develop a validation plan.

Assess utilization of the DoD M&S Resources Repository (MSRR), to facilitate the provision of intelligence date to M&S applications.

Identify, integrate, and coordinate intelligence M&S support.

As the Executive Agent, DIA is the organization responsible for defining, planning, and managing Defense Intelligence support to DoD M&S. The Director, DIA, has recommended that [redacted] develop and implement a plan of action. To accomplish this task, the panel will look at DIA's responsibilities, resources, and organizational structure for M&S, and develop specific recommendations.

(b)(3):10 USC 424,(b)(5)

Terms of Reference

The Panel will review DIA's current and projected roles and responsibilities in M&S. It will examine existing and planned resources and structures for executing assigned modeling and simulation tasks. The panel will identify inconsistencies among roles, responsibilities, authority, resources, schedules, and milestones. The panel will thus determine whether DIA's customers' understanding of DIA's roles, responsibilities, and modeling and simulation products is consistent with the understanding at the Director's level and at lower levels of the Agency.

Approach

Based on this review, the panel will provide not less than three (3) nor more than six (6) options for Defense Intelligence support to DoD M&S. These options will be designed to illustrate the tradeoffs between resources. One of the options will be the current approach. These options, including the rationale for their selection, and their advantages and disadvantages, will be presented to the Director.

The panel will present a preliminary implementation plan based on the Director's feedback on the above, and on which option(s) the Director wishes to further review.

Administration

(b)(3):10 USC 424

The action officer will be [redacted] hereby appointed by the Director. [redacted] will serve as the executive secretary for the panel and will be the primary point of contact for scheduling briefings, demonstrations, interviews, surveys or any specific need as determined by the Panel Chair. The D-STAB office will be responsible for all logistic and administrative support for panel members and the AO. All panel activities will be coordinated through the Director, D-STAB, who is also a member of this panel study. The panel will deliver a final report of findings and recommendations for approval and publication within 90 days after the final briefing.

The panel is chartered for the 1998 fiscal year and will present its final report on, or about, 1 October 1998. [redacted] will chair the group, with the participation of other board members and/or consultants. The panel Chairman and the Chairman of the STAB will discuss progress and issues with the Director, DIA, on a regular basis.

APPROVED_____

DISAPPROVED_____

(b)(3):10 USC 424,(b)(5)

APPENDIX B

[redacted]

Program Description

[redacted]

Intelligence Support Status

(1) Historically, the GDIP has developed threat models almost exclusively with customer funding. An inconsistent DoD threat modeling process has resulted in a number of flaws including: lack of funding for life cycle O&M costs; inaccurate threat models resulting in poor equipment performance; and wasted funding to build duplicative threat models, often without intelligence validation and using non-authoritative data.

(2) The Defense Intelligence community is working with the Acquisition Functional Working Group to develop revised business practices to correct many of these faults, including the issues of life cycle O&M funding. Defense Intelligence is fully engaged in the [redacted] (b)(3):10 USC 424,(b)(5)

(b)(3):10 USC 424

[redacted]

(b)(3):10 USC 424,(b)(5)

Program Description

Intelligence Support Status

(1) Defense Intelligence support to analysis M&S, chiefly the is in the form of conceptual modeling and subject matter experts (SME). Thus far, we have met conceptual modeling requirements with the same conceptual model called the Defense Intelligence development has been supported with intelligence SMEs. However, this support has largely been done on an ad hoc basis, impeding our ability to provide consistent, dependable, expert advice to development. In part, this has been overcome in recent months with the designation of a Defense Intelligence liaison who has greatly improved the coordination of Defense Intelligence support. This support comes largely from our analytical work force which is stretched to respond to operational requests. This limits the availability of SMEs to meet requirements. Additionally, Defense Intelligence has concerns regarding plans and funding for security and security accreditation. It is estimated that the FY99-05 shortfall for intelligence to fully fund its responsibilities and validation of intelligence related models (b)(3):10 USC 424

(b)(3):10 USC 424,(b)(5)

(2) To maximize limited intelligence support to and answer concerns related to security, DIA proposes to work with the Program Office to develop an intelligence support plan.

(b)(3):10 USC 424,(b)(5) [redacted]

Program Description

[redacted]

Intelligence Support Status

(1) The largest claimant on Defense Intelligence resources is the [redacted] (b)(3):10 USC 424 [redacted] Together these programs will provide limited automation of the planning and directing, collection, and processing parts of the intelligence cycle, as well as data on foreign threat systems, organizations, equipment, tactics and doctrine. Missing will be full automation of the complete U.S. intelligence process and attendant conceptual models, and [redacted] However, other intelligence IOC responsibilities should be met. As is done today, intelligence will remain largely role player dependent, continuing a lack of realistic intelligence play.

(b)(3):10 USC 424,(b)(5)

(2) As a result of an estimated [redacted] (b)(3):10 USC 424 shortfall, DIA will not be

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Science & Technology Threats

Interim Status Report

Chair

[redacted]

11/98

S&T Threats Panel

- Technological Surprise

  An unexpected change in technology or technological application intended to further the tactical or strategic capabilities of the adversary. It may be in science, engineering, production or information technology.

  – Can you forecast S&T surprise?

    Can define time, nature of technology, size of effort required to put technology in place - but in general, not very well.

    The experts say No, Maybe and Yes.

Technological Forecasting, page 105: Forecasting, An Appraisal for Policy Makers, by Ascher, William, JHU Press

S&T Threats Panel

- Technological Surprise

Can you expedite discovery? YES - with lots of resources.

- Rumsfeld Commission
- Deutch, Carter in Foreign Affairs
- Must be smart

Smart = use of limited resources in discriminating technological areas to maximum effect.

Science and Technology Advisory Board

S&T Threats Panel

- Avoiding Technology Surprise How is it done now?

(b)(3):10 USC 424

[redacted]

We reviewed with NAIC, NGIC, MSIC, CIA, DOE, DARPA with mixed replies.

"ONI to concentrate intelligence resources on production"
Defense News February 1999

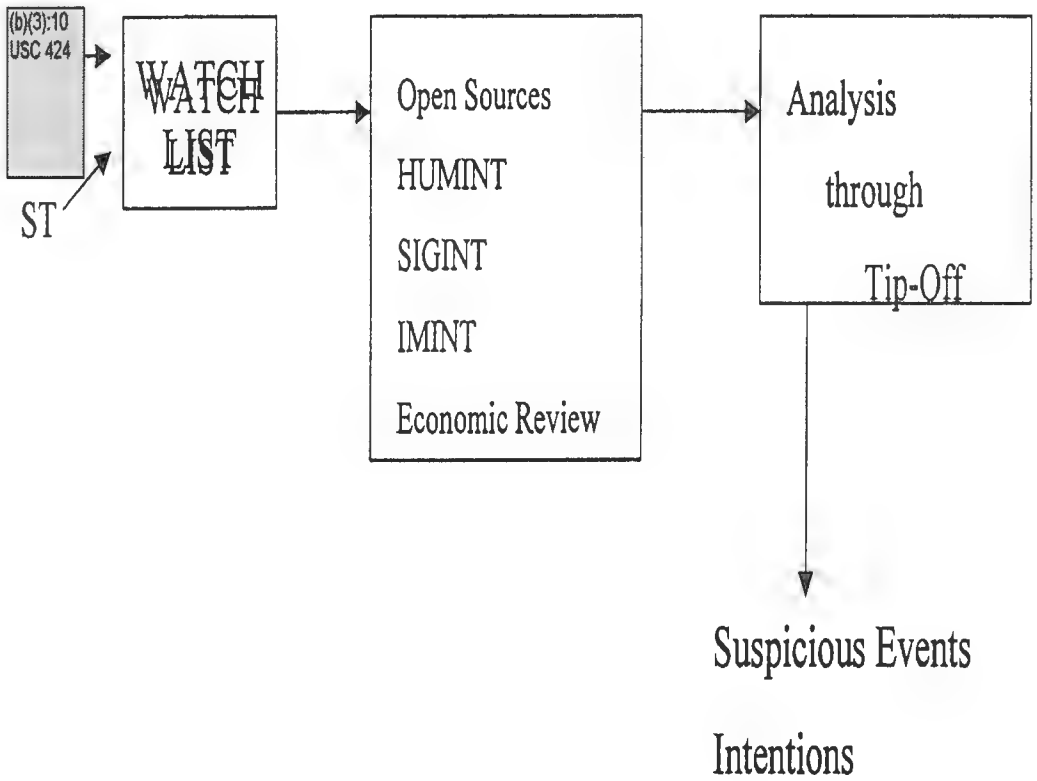
S&T Threats Panel

- Some Past Technological Surprises
  - Jet Aircraft
  - V-1, V-2
  - Cryptanalysis, ENIGMA
  - Nuclear Weapons
  - [redacted]

(b)(3):10 USC 424

S&T Threats Panel

- Early Discovery Process



Science and Technology Advisory Board

S&T Threats Panel

- **Discussed emerging technology programs with:**
  - Sandia
  - LANL
  - DIA
  - DARPA
  - [redacted]

(b)(3):10 USC 424

- **Still Open**

[redacted]

(b)(3):10 USC 424

Science and Technology Advisory Board

S&T Threats Panel

EARLY THREAT DISCOVERY

Analysis of U.S. Vulnerability

[redacted] (b)(3):10 USC 424

Selected S&T

Intelligence Actions | Adversary Events

ACTIONS

[redacted]

(b)(3):10 USC 424

ASSIGN WATCH
CONSEQ OF SUCCESS
ESTIMATE SUCCESS
ALT SCENARIOS
THREAT EVAL

OPEN SOURCES
MEETINGS
INVESTMENT SUPPORT
FOLLOW:

[redacted]

(b)(3):10 USC 424

- RESEARCH
- EXPLORATORY DEV
- DESIGN & ENG MODEL
- TEST
- REDESIGN TO SPEC
- TEST
- TRAIN
- DEPLOY

[redacted] (b)(3):10 USC 424

S&T Threats Panel

- SELECTION OF S&T WATCH AREAS (5 TO 20)

(b)(3):10 USC 424

  - Responsibility
  - Support
  - Review
  - Process:

(b)(3):10 USC 424

1. Analyze
2. Estimate systems performance (state of art) against perfect systems.
3. Compile list of vulnerabilities and "far from perfect" and determine critical technologies.
4. Rank technologies and draw Watch List therefrom.
5. Assign to a leader. Budget, plan and execute.
6. Initiate watch process for early discovery.

Science and Technology Advisory Board

S&T Threats Panel

(b)(3):10 USC 424

Science and Technology Advisory Board

S&T Threats Panel

- Key Information Sources

(b)(3):10 USC 424

S&T Threats Panel

- Summary and Initial Recommendations
  - (b)(3):10 USC 424
  - Maintain ongoing review and reporting to assure attention to most critical near term areas.

5b

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May 2000
STAB-0000-215-00

DEFENSE INTELLIGENCE MANAGEMENT DOCUMENT

(U) Science and Technology Advisory Board: DIA Manning Strategy Panel Report

This Report was never printed in hard copy

11/99

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Defense Intelligence Management Document

(U) Science and Technology Advisory Board: DIA Manning Strategy Panel Report

Information Cutoff Date: 15 April 1999

This document is published under the auspices of the Department of Defense Intelligence Production Program (DoDIPP). The Defense Intelligence Agency produced it as the designated DoDIPP producer for this subject.

Prepared by:
Science and Technology Advisory Board
Defense Intelligence Agency

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STAB-0000-215-00

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Appendix

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(U) Science and Technology Advisory Board: DIA Manning Strategy Panel Report

Foreword

(U) The Director, Defense Intelligence Agency (DIA), established a panel of the DIA Science and Technology Advisory Board in 1998 to assess DIA manning strategy for a changing world, leading to greater competence and effectiveness in the 21st century. The panel reviewed existing, proposed, and potential strategies for defense intelligence manning, focusing on scientific and technical intelligence. The panel focused on the required characteristics of entry-level intelligence officers who can carry DIA into the 21st century. The panel surveyed the current defense intelligence work force on how it plans to meet DIA's future needs. The panel made recommendations on how to achieve desired manning capabilities.

(U) All unmarked titles and headings are unclassified.

(U) Your organization can place requests for secondary dissemination of DIA products (either paper or CD-ROM) and requests for initial digitization of DIA paper products through the Request Processing System, which is integrated with the JIVA InfoSphere Management System. This system is accessible via Intelink-SCI (b)(3):10 USC 424 and Intelink-S (b)(3):10 USC 424 or on Intelink-SCI via the DIA home page under Intelligence Products, Products by Subject, Database Products.

- If yours is a DoD organization without access to Intelink-SCI or Intelink-S, submit requests through your dissemination program manager/administrative chain of command.
- If yours is an OSD, JCS, or non-DoD national-level organization without access to Intelink, submit an electronic message or a letter to DIA. Send electronic messages to (b)(3):10 USC 424 (b)(3):10 USC 424.

(U) If your organization needs to modify its dissemination requirements, you can do so online through the Joint Dissemination System. You can access it on Intelink-SCI under the DIA home page, Community Projects, under Systems/Infrastructure. For Intelink-S, the location is (b)(3):10 USC 424.

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- If yours is an OSD, JCS, or non-DoD national-level organization without access to Intelink, submit a request via electronic message to (b)(3):10 USC 424 or in writing to (b)(3):10 USC 424

(U) Science and Technology Advisory Board: DIA Manning Strategy Panel Report

Background

(U) The end of the Cold War, the subsequent downsizing of the US defense establishment, and the rapid advances in defense-enabling technologies have had a profound impact on the demands placed on DIA. At the same time, the Intelligence Community must deal with a dramatically changed threat. The threat has progressed from a monolithic, well-recognized superpower to a multitude of more amorphous, less familiar threats from less understood nations and hostile groups. This transformation has significantly changed the dynamics of intelligence collection, analysis, and delivery.

(U) The types of combat and warfare environments in which US and allied forces now must operate have changed as well. The number of simultaneous military engagements and the diversity of their locations are markedly greater than those in the 40 years following World War II. DIA's work force must possess the skills and the intelligence background to predict and deliver intelligence in markedly different command and control environments than in the recent past.

(U) These new and increasingly complex demands on the content, form, and method of delivering intelligence to military forces and the national command structure have strained DIA's decreasing resources.

(U) Entry-level staff characteristics investigated include experience, education, soft skills, cognitive capabilities/hard skills, and technological awareness.

(U) The Terms of Reference for the panel are included in this report as appendix A.

Membership

(U) The following people served on the Manning Strategy panel:

	(b)(3):10 USC 424,(b)(3):P.L. 86-36

Approach

(U) The panel surveyed the existing scientific and technical intelligence work force to obtain a baseline of its current characteristics (experience, education, soft skills, cognitive capabilities/hard skills, and technology awareness). For the purposes of this study, the "future" will cover the period from 1998 to 2005. The panel considered strategies including professional development opportunities and incentives for attracting and retaining high-quality staff. Costs for achieving the needed manpower base of the future were not estimated.

(U/[redacted]) The panel held four meetings throughout 1998. It examined specific strategies for DIA manning through briefings and document reviews with internal DIA and external Intelligence Community representatives. Initially, the panel received extensive information from the DIA Office for Human Resources, which assisted the panel in understanding the relationship

(b)(3):10 USC 424,(b)(6)

among DIA manning, missions, and functions. The panel then examined other DIA key component's missions and future science and technology roles and requirements through 2010. The panel also reviewed statistical, regulatory, and technical data. The National Security Agency (NSA) provided an indepth briefing. A brief meeting was held between [redacted] Recruitment Division Chief and [redacted] DIA Science and Technology Staff, in which notes were provided.

(U/[redacted]) The first meeting was held 24 July 1998. The panel received briefings from the Chief, DIA Office for Human Resources, the DIA Occupational Analysis Skills Study, and two DIA Science and Technology Staff members. [redacted] Chief, Office for Human Resources, provided an overview on his divisions' missions, functions, and activities. [redacted] DIA Human Resources Manager, discussed the phases of the occupational analysis/skills study under way in DIA. [redacted] Science and Technology Staff, explained the trend in DIA S&T personnel in the last 5 years, the skills that have been lost, and the manning level trend in DIA. [redacted] Science and Technology Staff, briefed on the current and planned outsourcing of science and technology functions.

(U/[redacted]) The 4 September 1998 meeting focused on active-duty military and civilian recruiting. In addition, the Occupational Analysis Skills Study provided an update from the 24 July meeting. [redacted] DIA Human Resource Manager, conducted a deskside briefing to the panel on recruiting methods for civilian S&T personnel in DIA. [redacted] Military Personnel Manager, provided the panel with a statistical and historical overview of the role of active-duty military personnel in DIA S&T. [redacted] Contractor/Scientific Researcher, American Institute For Research, Skills Analysis Office, led a discussion on the difference between the clusters in engineer and science job descriptions and specific work activities in DIA.

(U/[redacted]) In the 13 November 1998 meeting, the panel received a "Mission and Future S&T Requirements — 2010" briefing from four elements in DIA. In addition, a hardcopy briefing was provided on future DIA operations. The meeting began with [redacted] DIA Special Projects office, providing a briefing on DIA roles and missions. Others briefing were [redacted] Deputy TA, Directorate for Intelligence, [redacted] Deputy Director, Directorate for Operations, and [redacted] Vice Deputy Director, Directorate for Information Systems and Services. [redacted] USA, Deputy DIO, Global Trends and Projections, provided the hardcopy briefing "Global Overview 1998-2018: DIA Threats and Challenges in the Decades Ahead."

(U/[redacted]) Finally, in the 16 December 1998 meeting, NSA provided a 4-hour briefing to the panel. Briefers included Mr. George R. Cotter, NSA Chief Scientist, [redacted] Chief, NSA Human Resources Research and Analysis, and [redacted] Executive Secretary, Senior Technical Review Panel. They discussed current S&T manpower, the information technology skills task force, and the technical track and development programs (including an overview of the senior technical development program and other related activities, such as the NSA Human Resources Management System).

Findings

(U) A number of events both internal and external to DIA have necessitated changes to DIA's manning strategy. Some of these are highlighted below:

(b)(3):10 USC 424

[redacted]

- The key external circumstance, which spawned a series of subsequent events, was the end of the Cold War in 1991. The end of the Cold War caused an overall downsizing in defense resources, including military and civilian personnel. A second effect was disorientation as the defense establishment

attempted to define its new global environment with new threats, new missions, and new information requirements. The culmination of these two changes resulted in a real decrease in DIA personnel while simultaneously causing understandable confusion about what types of intelligence experts would now be in most demand in DIA.

- An external set of events entirely separate from defense or intelligence occurrences that have impacted heavily on needed skill sets are the incredible breakthroughs in information technology (IT), information systems, and global Internet use. Concurrently has been an explosive growth in new communication modalities. All of these developments have resulted in a demand for IT experts that far exceeds the supply in the labor market. DIA, constrained by government compensation limits, finds itself in a potentially unfriendly manpower market.
- DIA's customers in Congress, the White House, OSD, and JCS as well as the CINCs have had difficulty clarifying what types of information they expect from DIA in the changing global defense environment. This lack of a defined objective makes it difficult for DIA management to identify the types of S&TI experts to which it should give high priority for retention and/or recruitment.
- "Bottom-line" or near-term objectives have been given a higher priority by both industry and government than was common previously. This focus has been dictated by demands for greater productivity, for decreased costs, and for a "retreat" to core functions as well as by pressure for near-term vs long-term growth objectives. DIA management needs to reflect these demands in goals assigned to its directorates.
- Some of the forces of change described above also have affected other intelligence agencies and have led in some cases to significant increases in outsourcing and/or privatization both of noncore functions or of high-tech tasking. Many complex issues are involved in deciding whether or what to outsource or privatize. DIA's IT element already is studying this issue; the potential benefits make it worthwhile for DIA to give this topic serious consideration across the entire S&T spectrum.

(U) The panel identified many such causal-effect relationships between changing events and the difficult manpower problems that DIA is encountering. Specific difficulties worthy of note, specific progress worthy of commendation, and a set of recommendations for actions still needed are provided in later sections.

Recommendations

The Human Resources Management System, PeopleSoft

(U) The Directorate for Administration (DA) has been working intensively to replace the current, nonresponsive Human Resources Management System with an integrated, state-of-the-art, Y2K-compliant system called PeopleSoft. DIA is partnering with NSA and the National Imagery and Mapping Agency (NIMA) to implement a standardized system with the functionality necessary to support Intelligence Community personnel initiatives.

(U) The panel commends the work under way and the dedication of the involved staff. The panel encourages the Director and his senior management to show more support and interest in the project, not only because of its importance to DIA but also as a means of expediting its completion. The panel is particularly concerned because milestones have slipped, and the project may need additional resources.

(U) NSA is about 10 months ahead of DIA in implementing PeopleSoft, and some lessons learned by NSA could well serve DIA.

DIA's S&T Skill Requirements and Capture by PeopleSoft

(U) Concern exists about how well PeopleSoft will capture S&T analysis skill sets. When NSA applies this system, it is for a mathematician who is actually doing math or a computer scientist who is doing computer science. Similarly at NIMA, an imagery specialist is performing imagery analysis. However, an S&T

analyst at DIA is not "doing" math or physics or engineering. The analyst is assessing other countries' S&T capabilities within an area of expertise. This assessment involves a more complex set of skills — a combination of technical knowledge and analytical/intelligence skills. Accurately defining these skills is the underpinning for the whole system — DIA cannot inform prospective or current employees what skills they need to have (or develop) until it knows what skills are required for each DIA S&T job. In addition, the program envisions tying all aspects of career progression to this system: recruitment, performance assessment, awards, training, and promotions.

Special Attributes of DIA's S&T Skill Requirements or Skill Sets

(U) With the ill-defined S&TI objectives from its customer base, DIA cannot know the precise jobs and skills needed at the Defense Intelligence Analysis Center (DIAC). The panel's assessment is that the DIAC needs mature analysts who can deal effectively with senior Washington area decisionmakers. [redacted]

(b)(3):10 USC 424

(U) In fact, expansion of the PeopleSoft system to encompass skills registration from employees of other agencies would be an effective way to locate such potential experienced talent for the DIAC (the function of DISCAS before its demise). Cross-registration may be easily accomplished with agencies that use PeopleSoft already: NSA and NIMA. However, the most likely sources of experienced S&T analysts are production centers, such at National Air Intelligence Center, National Ground Intelligence Center, and Office of Naval Intelligence, in addition to MSIC and Armed Forces Medical Intelligence Center (AFMIC).

DIA-Sponsored S&T/S&TI Career Development Programs

(U) DIA faces a difficult task of attracting S&T or S&TI professionals even within the Intelligence Community. NSA, NIMA, CIA, and the Production Centers offer opportunities to perform actual scientific and engineering functions and to advance into technology management positions. With a few exceptions, DIA does not. The alternatives appear to be that DIA will lose its S&T professionals before the value of on-the-job training is realized or that DIA set up an S&TI *career development* program that will attract civilians and will encourage military officers to request return tours to DIA.

(U) It is not difficult to set up such a career development program. The Joint Military Intelligence Training Center, CIA, and other US government agencies and industrial organizations specializing in S&T analysis have done so successfully. DIA should put together a small team (DIA and D-STAB) to look into this as soon as possible; funding such a program should be a priority.

Civilian

(U) It must be recognized that working for DIA may not and probably will not be an employee's entire career path. The Federal Employees Retirement System makes it easier to move in and out of the federal government, and both the DC area and Huntsville are competitive markets for good S&T personnel. Because it takes time to develop as an analyst, DIA must make it attractive to stay for longer than a few years, in particular by demonstrating the existence of S&T career paths. DIA needs a technical track "with teeth," [redacted]

(b)(3):10 USC 424

(U) DIA should consider establishing a career track similar to that of the Foreign Area Officer specialty, which would provide rotational assignments to government laboratories or industry, options for DIA-paid advanced degrees accomplished on a part-time basis, and certification by peer review that would

affect promotions. NSA has developed such a program. Some S&T developmental programs extant at NSA could be expanded to include DIA. A major issue is how to build into manning documents the fact that (b)(3):10 USC 424 [redacted]

(b)(3):10 USC 424 [redacted] DIA Defense Intelligence Senior Executive Service or Defense Intelligence Senior Leader positions.

Military: Issues and Manning Strategies

(U) Military personnel define a significant, virtually untapped S&T asset for the DIA community. Unfortunately, no clear career path exists to capture, retain, and invigorate this work force. Field and operational unit assignments remain the core requirement for career progression. In the post-Cold War environment, military billets have been reduced across the disciplines and incentives for retention in military service and the Intelligence Community, particularly in science-based or science-leveraging positions, have diminished substantially. Erosion of the science talent readily accessible for crisis and urgent national security needs has resulted. The S&TI-skilled military analyst is not only a shrinking commodity, but that individual has been subtly divested from the military culture and must be reimmersed in the military mainstream to regain opportunities for career progression. Even upon reentry, mentors are rare, and the process of mentoring is, at best, ad hoc. Hence, not only has a loss of a significant human resource and national asset occurred, but also that resource is discouraged from entry and continuation in this critical career path.

(U) Three recommendations are suggested to address this multipronged problem:

- Establish a formal mentoring career track for S&TI military officers within the Intelligence Community.
- Initiate leadership awareness training to heighten understanding of the critical nature of S&T within the Intelligence Community.
- Enhance career progression options for career officers.

(U) Formal mentoring may leverage assets within the civilian and Federally Funded Research and Development Centers (FFRDC) academic communities/laboratories, hence functioning as an extended network of broad-based science, engineering, and analysis talent. Career paths, which are interdisciplinary in nature (i.e., physics and biosciences), should be embraced as the complexity of analysis increases.

(b)(3):10 USC 424 [redacted] It is not clear that a career path for an S&T-oriented military officer easily incorporates a tour at DIA; however, the agency should explore this with the military services to ensure DIA's S&T requirements are met.

Outsourcing and Privatization of Functions

(U/[redacted]) Outsourcing or privatization of functions has become quite popular and has generally exceeded expectations of anticipated benefits. The panel expressed considerable interest in the feasibility of outsourcing a variety of functions ranging from collection and analysis to support, with the focus on analysis. The group also looked at the potential capability of joint reserve intelligence units and the new joint reserve intelligence centers. The focus was on reestablishing a viable capability for S&TI. Comments heard as anecdotes over the past few years by panel members indicate that in the services and commands, DIA

is no longer viewed as a viable S&TI entity. A billet review revealed that [redacted] scattered across DIA, AFMIC, and MSIC could be classified as S&TI related. At its maximum strength, the former Directorate for Technical Intelligence had approximately [redacted] (b)(3):10 USC 424 [redacted] who were not only bona fide experts but also acted as substantive production managers for a broad range of products and conducted a series of wide-ranging substantive exchanges with allies and at NATO. Apparently, one problem is how to draw together existing billets in an appropriate architecture that could accomplish most of what DIA once did. Given the paucity of S&TI billets within DIA itself, (for example, approximately [redacted] DIA appears to lacks critical mass to conduct meaningful research and may even lack the capability to manage distributed production.

(U/[redacted]) The disparity between approaches within DIA was evident in discussions of S&TI in support of [redacted]

(U/[redacted]) Discussion with representatives of the various laboratories of the Department of Energy revealed a high level of interest in performing more of the S&TI mission on behalf of DIA and the Department of Defense. Historical precedence for this exists, given DIA's close ties Sandia National Laboratories and Los Alamos National Laboratory in the 1970s and 1980s. The level of General Defense Intelligence Program funding was also significantly higher during that period. The panel believes this subject merits further investigation by DIA in collaboration with the Department of Energy to ensure individual expertise and database information can be made available as necessary, especially in rapidly moving situations, and that legal impediments can be resolved to permit this. Efforts under way [redacted] are a start but must be part of an overall concept.

(U) Another approach to operating with a diminished manpower base might be [redacted] No evidence exists to lead the panel to believe that this has occurred or is about to take place.

(U) FFRDCs offer another potential source of assistance, and several are renowned for the types of expertise on their staffs. The personnel briefing the panel were, for the most part, unfamiliar with these organizations and the assistance they can provide. They were also unfamiliar with contracting mechanisms to obtain such support or how to initiate inquires to the various FFRDCs. Although some contact between the D-STAB and such entities as the DoD Science Board and similar boards within the services, apparently no effort to coordinate studies to prevent duplication exists. The panel believes the same can be said for work under way at the Defense Advanced Research Projects Agency.

Lack of a Coherent S&T Manpower Strategy

(U) A review of scientific and technical manpower issues affecting DIA and quite likely to affect the agency over the next 2 or 3 years indicates a lack of a coherent strategy in how to approach the issues. As a first step, DIA must define its own S&TI mission. A delineation of functions to be accomplished by DIA Headquarters, [redacted] is essential as is a statement of what support is to be provided by such [redacted] The panel received a series of very informative presentations by individuals who appeared to be dedicated and knowledgeable but often did not know the overall DIA objective or who is leading the

way in addressing manning issues. The issues are legion and complicated, but the panel attempted to develop a list of questions for consideration. Although not all inclusive, the following questions stand out:

- What manpower levels will be required to accomplish the DIA's goals and missions?
- What should the infrastructure look like to accomplish the objectives and to satisfy DIA's missions?
- What has DIA done to create a compelling story for OSD and Congress to depict the impact of manpower shortages on mission accomplishment?
- What has DIA done to manage existing billets and available personnel to ensure maximum utilization of the present work force?
- What priorities have been established for the many missions assigned to DIA and to both available personnel and to available billets?
- What functions are no longer required and can be eliminated?
- What has DIA learned from other agencies of the Intelligence Community in addressing manpower issues?
- How has DIA applied these lessons learned?
- In approaching possible expansion of outsourcing, what has been done with Congress to explore necessary changes to legislation?
- What is the impact on DoD intelligence of manpower shortages elsewhere in the military intelligence community? (The panel did not address this point but believes it cannot be avoided in the long run.)

(U) Apportioning of analytical functions might be one means of satisfying the burgeoning requirements, but the panel did not investigate this matter in detail. It is apparent that the agency is constrained in its mix of military and civilian personnel and that it will be increasingly difficult to fill certain military billets with officers of the required rank and expertise and who come with the desired educational background. Reduced manning levels within the military results in a lower fill rate for the individual services to meet their own requirements and also limits their flexibility in sending people for graduate education, particularly for degrees in scientific and technical subjects for which the military may not have priority requirements. The panel's inquiries revealed no effort by DIA to reach out to the military services in seeking to establish base line requirements by grade, specialty, and experience or to discuss a career path for such officers that would include service at DIA or elsewhere in the joint structure.

Comparative Treatment of Manpower Issues by DIA and NSA

(U) The panel applauds the DIA Occupational Analysis Project and the collaboration with [redacted] NSA. The HR21 program to create a concept for human resources in the next century was also impressive, as was the briefing on S&TI staffing. In every case, however, the briefing was presented by an expert down the ladder from senior management. Thus, there was the impression that these programs, while impressive by themselves, are not part of a cohesive overall effort with a set of goals and objectives. It is especially important that the military services participate in this undertaking so that S&TI billets can be accurately inventoried and properly grouped for meaningful production, recruitment, and career development.

(U) It should be noted that NSA produced the most comprehensive presentation on S&TI manpower issues. NSA has had a training and accessions program in place for almost 40 years. NSA's Unified Cryptologic Architecture 2010 Support Resources Team has identified the critical skills required to sustain the agency into the next century and has compiled a matrix of core skills and mission skills as a basis for recruiting and training. NSA also has a well-defined set of current education and developmental programs for its work force, much of which serves as a recruiting "bait" for new hires, often at lower salaries than those available outside the government. Particularly impressive was the NSA Senior Technical Development Program, which is designed to increase the competency of NSA's leaders in the technical disciplines and to provide a tailored program to intensify and accelerate development of technical and leadership skills. Not all of this is applicable to DIA, but the

panel believes the NSA effort should be a model for DIA and the service production centers to develop civilian scientists and engineers and to retain them in the face of intense outside hiring pressures.

Benefit From a Manpower "Czar"

(U) The panel believes that at the highest level should be a "czar" who oversees everything related to manpower and can assume the leadership role on this subject for DIA across the Intelligence Community with the leadership of the Department of Defense and before the Congress. Although the panel will not presume to specify in detail how that might be accomplished, the Deputy Director or the Chief of Staff might appear to be the best choice this role. If the topic of manpower levels for all of military intelligence is to be addressed, it should be in the context of the Joint Military Intelligence Staff on behalf of the Director of Military Intelligence.

Emphasis on DIA Entry-Level Personnel

(U) The panel was asked to focus on the required characteristics of entry-level intelligence officers who can carry DIA into the 21st century. DIA is both "lucky" and "unlucky" in this regard. (b)(3):10 USC 424

(U) In particular, the (b)(3):10 USC 424 in the changing S&TI world encountered by DIA.

(U) DIA depends on the Services for its military personnel. Obtaining personnel with the needed skills apparently is becoming increasingly difficult. The best pragmatic way to resolve this issue is for DIA to take on the responsibility of setting up initial education/training courses for all first-time military and civilian entrants. The cost (although there are no cost calculations yet for DIA) in most organizations is easily "amortized" against improved performance, productivity, and output quality.

S&T Skills in Demand at DIA: 2000-10

(U) The skills most needed by DIA S&TI staff not surprisingly reflect the general demand for S&T skills in the overall human resources marketplace. The panel's assessment of this demand is based on work accomplished by the DIA Office of Human Resources and discussions with individual DIA staff or managers. The PeopleSoft project under way was not sufficiently validated to justify total reliance on it.

(U/[redacted]) The list of most needed skills includes:

(b)(3):10 USC 424

(U) DIA would benefit from career development paths emphasizing subsets of the above skill listing.

Appendix A
Science and Technology Advisory Board Terms of Reference: A DIA Manning Strategy for a Changing World — Leading to Greater Competence and Effectiveness in the 21st Century

UNCLASSIFIED

Abstract	This panel will review existing, proposed, and potential strategies for defense intelligence manning, focusing on scientific and technical intelligence. The panel will survey the current defense intelligence work force in terms of how it meets DIA future needs. The panel will focus on the required characteristics of entry-level intelligence officers that can carry DIA into the 21st century. The panel will make recommendations about achieving desired manning capabilities.
Background	The end of the Cold War, the subsequent downsizing of the US defense establishment, and the rapid advances in defense enabling technologies have had a profound impact on the demands placed on DIA. At the same time, the Intelligence Community must deal with a dramatically changed threat. The threat has progressed from a monolithic, well-recognized superpower to a multitude of more amorphous, less familiar threats from less understood nations and hostile groups. This shift has significantly changed the dynamics of intelligence collection, analysis, and delivery. The types of combat and warfare environments in which US and allied forces now must operate have changed as well. The number of simultaneous military engagements and the diversity of their locations are markedly greater than those in the 40 years following World War II. DIA's work force must possess the skills and the intelligence background to predict and deliver intelligence in markedly different command and control environments then in the recent past. These new and increasingly complex demands on the content, form, and method of delivering intelligence to military forces and the national command structure have placed a great strain on our decreasing resources. The entry-level staff characteristics to be investigated include experience, education, soft skills, cognitive capabilities/hard skills, and technological awareness.
Terms of Reference	The Director, DIA has requested that the DIA Science and Technology Advisory Board (D-STAB) form a panel to address the DIA manning strategy focusing on scientific and technical intelligence. The study will examine specific strategies for defense intelligence manning. The panel should determine characteristics of entry-level intelligence officers and professionals, taking into account the changes needed in capabilities, training, and education to meet DIA's future needs and requirements.

Appendix (Continued)

UNCLASSIFIED

Approach	The panel will survey the existing scientific and technical intelligence work force to obtain a baseline of its current characteristics (experience, education, soft skills, cognitive capabilities/hard skills, and technology awareness). Using this baseline, an extrapolation model will be developed to assist in projecting the work force's skill base needs. The panel will identify any gaps in the current skill base that must be eliminated to meet the demands of the manning infrastructure of the future. For the purposes of this study, the future will include the period from today until 2005. The panel will consider strategies, including professional development opportunities and incentives, for attracting and retaining high quality staff. Costs for achieving the needed manpower base of the future will be estimated.
Administration	The DIA action officer will be (b)(3):10 USC 424 She will serve as the executive secretary for the panel and will be the primary point of contact for scheduling meetings, briefings, demonstrations, interviews, surveys, or any specific needs as determined by the panel chairperson. (b)(3):10 USC 424 of the D-STAB, will facilitate the study. The panel will be chaired (b)(3):10 USC 424 Its members will be drawn from the D-STAB and will include outside consultants as appropriate. The panel will meet from January 1998 through August 1998. A final report of findings and recommendations will be delivered on or about 1 October 1998.

APPROVED: 2 December 1997

DISAPPROVED: _____

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~~CONFIDENTIAL~~

MEMORANDUM 80-7

of the

ADVISORY COMMITTEE

to the

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

FINAL REPORT OF THE

[redacted]

OCTOBER 1980

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DIA/AC MEMO 80-7

THIS MEMORANDUM WAS APPROVED BY THE
DIA ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

LIAISON TO THE COMMITTEE

(b)(3):10 USC 424

THIS MEMORANDUM WAS PREPARED BY THE
(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

(b)(3):10 USC 424

[redacted]

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(This Page is Unclassified)

I. INTRODUCTION

(U) The Intelligence Community has devoted its major effort in the past twenty-five or thirty years to the principal adversaries of the U.S. -- the Soviet Union and its allies, North Korea, North Vietnam and to a lesser degree, China. The trend of events however has required that U.S. foreign policy be increasingly concerned with nations of the so-called "Third World" -- defined broadly as the rest of the world, excluding the aforementioned nations, the U.S. and its principal allies. Consequently, the Intelligence Community has been required to devote more and more attention to this arena.

(U) The Third World comprises a diversity of peoples, geographies, economies, customs, internal and external relations and military capabilities of large and important variation. These must be thoroughly understood by the Intelligence Community if meaningful intelligence contributions are to be made to the U.S. decision process. The range and importance of situations to be considered, suggests that the intelligence data base available to DIA analysts might not be adequate to support the subjects and issues he must treat. The Director of DIA, therefore requested that an ad hoc Panel of the DIA Advisory Committee be constituted to review the matter (see Appendix A for the Terms of Reference). The Director invited [redacted] [redacted] to participate as members of the Panel to provide expert foreign relations perspectives.

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(U) The tumultuous change in Iran had also recently occurred, largely unforseen by the Intelligence Community, and emphasized the point that there are a number of areas in the world, very important to the United States, that are influenced by factors very foreign to Western thinking. Nevertheless they must be understood if we are to deal with them effectively.

(U) Concurrent with the formation of the Panel the Director commissioned a special study (intelligence estimate) on the likely trends and developments in Saudi Arabia over the next decade and requested that the Panel serve as advisors on this study (see Appendix B). In addition to providing DIA with a current estimate on a very important area, it was expected that the development of this study would (b)(3):10 USC 424

(U) We found this approach of following in detail an estimate while it was being formulated most enlightening. (b)(3):10 USC 424

(b)(3) 10 USC 424

Second, we gained an understanding of some of the practical, day to day problems with which the analyst must deal during the preparation of the estimate. Third, it provided us the opportunity to identify with the analyst these questions or issues that are pivitol to the conclusions the analyst seeks to reach in his estimate.[1] The identification of these questions permitted us to review what data was available bearing upon them and to gain some insight on how the analysts treated them.

(U) The reviews and discussions we held on the concurrently developed Saudi Arabian study provided the mechanism by which we formulated our perspectives, conclusions and recommendations. However, we believe that our conclusions and recommendations are generally applicable, and we have therefore so stated them. We did review the comprehensiveness and quality of the (b)(3) 10 USC 424 and this review supported the views in this report.

(U) The National Intelligence Survey (NIS) was a report issued periodically by the Intelligence Community from about 1948 to 1973

[1]An example of such a question in the Saudi Arabia estimate relates to the long term effect of the large foreign population within that country. There are at present more than 1.5 million foreigners residing there, or 20% of the total population of the country. What is likely to be the influence in the future of this outside influence?

that endeavored to supply basic information on countries that would be of use to those desiring a ready reference. The suggestion was made, early in our considerations, that the NIS might be reinstituted to provide a data base for the analysts to draw upon. We therefore devoted special attention to this possibility, and discussed the genesis, evolution and termination of the NIS with individuals in the Intelligence Community that had been intimately involved with this program.

(U) We did not have access to [redacted] that might bear upon the Saudi study and were therefore not able to consider its usefulness. [redacted] We accepted this opinion for the purpose of this report.

(U) We were impressed with the capabilities of the individuals with whom we worked during our sessions. Special appreciation must be given to those outside the DIA that took the time to meet with us. These included (b)(6) who served as the political/military affairs officer at the American Embassy in Saudia Arabia from 1976 to 1978; (b)(6) for the Near East and South Asia; and (b)(6) then the Special Assistant to the DCI, and previously the representative of the Secretary of Defense to the MBFR negotiations.

II. PERCEPTIONS, FINDINGS, AND OBSERVATIONS

(U) An intelligence estimate on a country or region (such as Saudi Arabia) is prepared principally for individuals outside of the Intelligence Community who need the information to fulfill their responsibilities in formulating defense or foreign policy recommendations or actions. The intelligence assessment (or estimate) in general comprises both current information and projections. Current information includes: pertinent facts about the country, such as geography, make-up of the population, particulars about the economy; its present military capability, strengths and weaknesses, "order-of-battle"; and its foreign policy, alliances, and external relations. Under the category of projections the following may be provided: military trends -- new weapons, expected changes in personnel strength or training that could augment or diminish its military capability; foreign policy trends -- such as changes in relationships or alliances that could give rise to reconsiderations of United States policy; and internal economic or social trends that could alter the nature or policy of its government.

(U) The task of the analyst preparing the estimate differs substantially depending upon which of the above areas requires his attention. If he is dealing with current facts about the country, his task is to select and present pertinent information which bears on his reader's problem area, or which his customer may need only as

background. For example, if the analyst charged with furnishing background data is dealing with military order-of-battle he may find that such information is collected as a matter of course by other elements of the Intelligence Community. His task then, is to insure that the information is current, and that the facts germane to the present situation are highlighted. If however the analyst is dealing with projections -- i.e., the likely course of events for several years to come in the country of interest -- his task is particularly more demanding. It calls upon the analyst to speculate upon complex future possibilities and influences, many of which may be subtle; to identify and analyze factors which could come into play and cause a significant change in the course of events. In short, to develop an assessment or projection which requires an in-depth understanding of the region or country.

(U) The data needed to support the analyst in the preparation of an assessment comes from many sources. Some can be drawn from an existing data base or standard references (e.g., the ethnic make-up of the population), and some (e.g., details of tribal relationship) may exist only in the minds of a few scholars. Other information (e.g.,current status of fluid or unstable internal relations) may require sophisticated intelligence collection capability to gather, and may at best, be fragmentary.

(U) We considered the task of the analyst in preparing an estimate and posed for ourselves three questions.

- o Is there information available to the analyst of sufficient quality and detail to enable him to make accurate and credible projections of situations in countries and regions with which the U.S. must be concerned?
- o Assuming that the data were available, are the analytical capability and procedures adequate to ensure the development of professional assessments?
- o Assuming the data were available and effectively exploited, can we convince ourselves that the Intelligence Community can avoid surprises?

A. ADEQUACY OF THE DATA BASE

(U) In considering whether the information available (the data base) is adequate to support the analyst we considered several questions.

1. Are there particular classes of information that could be usefully augmented? For example, do we need more emphasis on military or on political/social information?

2. Are knowledgeable sources of information or perspectives outside of the Intelligence Commuinity available to, and made use of, by the analyst?

3. Would it be useful to reestablish the National Intelligence Survey, the compendium of basic information on countries in most of the world that was terminated about seven years ago.?

4. Does information from [redacted] play a

significant role in supporting the analyst?

(U) With respect to the first question, we believe that military information (order-of-battle, etc.) on Third World countries is, in general, adequate for the analysts needs. Unlike that of the Soviet Union, it is of course easier to collect. It seems to be so organized in the data files that it is readily available. While there may be several questions about [redacted] (b)(3):10 USC 424 we believe that [redacted] (b)(3):10 USC 424 [redacted] (b)(3):10 USC 424 are drawn upon, the information available should be, in general, adequate for the DIA analyst.

(U) Political-social information seems deficient. Some of this information is difficult to collect -- for example, information on the strength and areas of dissident groups within a country where freedom of expression is lacking. Moreover, the analyst may be unaware of critical, internal politics and influences operating within a country. These may even be foreign to his experience and training. As a consequence, he may not be able to communicate the nature and need for certain key elements of information to those responsible for collection tasking. We became convinced that a good data base would not be achieved unless there were a highly professional staff of analysts to use and critique it.

(U) With regard to the second question, [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i) [redacted] -- we found such sources of information employed to a very limited degree if

at all. (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

[redacted]

(U) We believe that the administrative procedures of the Defense Department, while it may not explicity prohibit such (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

[redacted]

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

(U) Although there was differing opinion on the overall utility of the NIS, it was agreed that those sections of the NIS that were sensitive to rapidly changing factors were generally responsibile for the high cost of updating the documents. Such sections were also of least enduring usefulness to the analysts. Thus, if a new NIS were initiated, it perhaps should be limited data that remains relatively constant, such as geographical information. Although a reinstituted NIS might be useful for general information, we do not believe that it would be of much help to the analyst in treating the more important questions with which he must deal. Consequently, we believe that intelligence resources may be employed better in other directions such as making available to the analyst (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

(U) With respect to specially compartmented information, as mentioned before, our review on this area did not qualify us to offer specific recommendations with respect to its adequacy. However,some members of the Panel, based upon other experience, believe that the

priority, attention and resources devoted to [redacted] [redacted] against Third World countries should be augmented. The statement has been made that, in the last ten years, the U.S. has suffered more damage from OPEC countries than from the Soviet Union. If this fact became a criterion for the allocation of collection resources, the effort against Third World countries should be multiplied several fold. We believe that DIA should separately review the [redacted] collection efforts against Third World countries to determine if there could be potentially high-payoff areas that are not currently being exploited. Our conviction is that substantial improvements could be achieved without major impacts on the overall intelligence budget.

B. EFFECTIVE UTILIZATION OF THE INFORMATION (THE DATA BASE) BY THE ANALYST

(U) The task of the analyst in preparing an assessment on a Third World country, must involve much more than reorganizing and making comprehensible information already available in the files. The Secretary of Defense should be better served. The major part of the analyst's time should involve research into the pivotal issues -- searching for information outside the files, analyzing alternative hypotheses, and challenging views that may be widely accepted and even considered as national doctrine. What is required is a highly professional, often scholarly, study of his area of interest in order to develop meaningful insights and convictions upon which national

foreign policy can be soundly based. We observed that there was little or no time for such activity, although the need for it was recognized. A senior executive said succently: "No one has time to think about the problem".

(U) In endeavoring to be responsive, DIA devotes a large amount of time and priority to "answering the mail" -- responding to questions and supplying information to a host of recipients, and it is our perception that generally the individual that must handle these questions is also the individual required to produce a professional asessment. We are convinced that a much different atmosphere must be established. The analyst must be less occupied with mundane activities, important as they may be, and time and opportunity must be made available for research of issues and seeking to understanding the views of others, both inside and outside of government. In short, the analyst must analyze.

(U) We are not able to offer a ready panacea to this problem. However a number of possible actions occur to us and we believe each should be implemented at least to some degree.

1. More analytical staff. We hesitate to recommend this as the primary means of providing a solution to the problem because it seems such a pat solution. Nevertheless we think the analytical staff needs to be augmented, and several congressional committees have recommended this be done. Increase in total numbers may be minimized by reallocation of responsibility, to reduce the amount of time now required of the analyst on activities other than analysis.

2. More use of outside expertise. We believe that this would be helpful and urge its implementation although we hasten to add that outside expertise is an aid to and not a replacement for, effective internal analysis. We advocate the use of outside expertise in at least two ways -- consultants chosen for their personal experience in the area of interest, and contracted studies on issues of particular significance.

3. Acquisition and retention of trained analysts. To some degree at least, the existing procedure for personnel assignment works against the derivation of in-depth, professional estimates. Military officers naturally do not regard an analyst assignment as their career choice, and three years may be the most that they expect to be assigned to the DIA. Moreover, many are not equipped by prior experience for dealing with the country or region to which they are assigned. Of course, the Army's Foreign Area program is very helpful in training knowledgeable military analysts and we urge its support. It would be beneficial if the other Services had similar programs. We emphasize that when dealing with complex social-political phenomena in strange (foreign) cultures, years of continuity are required to gain workable comprehension of the problems. Language expertise, significant service in the area, and regular trips are all needed to gain and retain the necessary familiarity.

Not only are knowledgeable military analysts in short supply but there exists a real problem of obtaining properly trained civilian

analysts. The national decline in the study of foreign languages and international relations, has been documented* and it may be necessary for DIA to send individuals to language school (e.g., the Defense Language School) and other special schools if properly trained people cannot be found. We believe such an approach may be justified equally as well as DIA support of advanced degrees in the scientific and technical areas.

4. Management attention to professionalism. Most large companies with large technical staffs have at their top level, an executive charged with ensuring that his company is competitive in its technical capability. The exective may have a title such as vice president for engineering or research and is almost invariably an individual who is respected for his own technical contributions and competence. He is expected to insure that the company's policies are such to attract and retain top level technical capability, and while he may or may not have line responsibiity, his position in the company assures that his views are broad and considered by the chief executive officer.

(U) We believe that a case can be made for an analogous position in the DIA. The individual selected should have established a reputation for highly professional analysis, he should report to the Director

*STRENGTH THROUGH WISDOM: A CRITIQUE OF U.S. CAPABILITY, Report to the President from the President's Commission on Foreign Language and International Study, November 1979 (U.S. G.P.O. Stock No. 017-080-02065-3).

and should be responsible for recommending policy that would establish and retain a professional analyst cadre. He should be expected to know, or know how to find, outside expertise, and should be asked to review intelligence estimates of significance to ensure their professionalism.

(U) In summary, we recognize that the establishment and implementation of the above steps is a more difficult task than stating the need for them. Nevertheless, we believe them to be essential to making the contribution that the Intelligence Community must provide to the Department of Defense.

C. POTENTIAL FOR SURPRISE

(U) The avoidance of surprise means that the analyst must present, and obtain consideration of views that are not generally accepted, and indeed may be vigorously opposed at important government levels. Such views must not be based on intuition alone. There must be credible information supporting the position that the analyst is presenting. The analyst must have had sufficient opportunity for study and analysis in order to develop and present persuasive arguments for his position. Finally, of course, there must be an arena for treating the subject thoughtfully and objectively, at executive levels in the government.

(U) We would like to promise that surprises would not occur if the steps we have recommended before are taken, but in good conscience hesitate to do so. Even with the substantially greater analytical

capability and improved intelligence collection, which we believe are feasible, data may remain ambiguous and the avoidance of surprise means accepting what could well be an unpopular minority viewpoint. However, we believe that the improvements we urge, when supported by professional intelligence management, will greatly reduce the possibility of surprise.

(U) Our experience with large organizations, within and without government, suggests to us that the Director of DIA should not always look to his own organization only for analysis in critical areas. We believe he should occasionally, on selected issues, commission the development of views from expertise outside DIA and independent of opinions held within. We believe that this would minimize the potential for surprise; support the professional development of the analyst by exposure to different views, and; sharpen management perspectives on the validity of advice given to the Secretary of Defense. To be effective, such an activity requires the support of highly qualified individuals outside of DIA and as free as possible of other influences. It should be understood that such independent studies will be done as a matter of principle and on important issues, but not to replace the internal analytical capability that must be relied upon as a regular matter.

D. SPECIAL STUDY ON SAUDI ARABIA

(U) As noted earlier, we found the concurrent special study on

Saudi Arabia very useful in obtaining an insight into the problems faced by the analyst in preparing an appraisal. In addition to serving as a mechanism by which we addressed the adequacy of the intelligence base supporting intelligence assessments and the feasibility of improving the data base by utilizing experts outside DIA, the study made us aware of the limited resources available to do the many tasks levied upon the analyst. For example, although many analysts submitted inputs into the study, only one analyst was really responsible for the Saudi Arabian estimate and only a fraction of his time was available. We fear that these limitations on time and resources are the rule rather than the exception. Nevertheless, we believe that a competent study has emerged that should be useful to the Intelligence Community and to the Department of Defense.

(U) In any assessment or study, such as that on Saudi Arabia, there are generally a number of pivotal issues upon which the analyst must make a judgment if he is to arrive at a product that is to be useful. It may not always be apparent what these issues are and sometimes the analyst may argue that they are not subject to debate or differing interpretation and he may well be correct. Nevertheless, his views of these issues form the basis of his conclusions, and if circumstances should change, the conclusions could change.

(U) We believe it is useful to identify as carefully as possible, what these issues are in an assessment or estimate, acknowledging

of course, that there may be others which are not recognized at the time of the preparation of the assessment. The identification of these issues assists in the following way.

1. It gives the reader a better understanding of the important factors influencing the trend of affairs in the country or area under consideration.

2. It permits collection resources to be better focused on the most important intelligence questions.

3. It assists intelligence management to recognize when a new assessment should be prepared, when it is seen that the interpretation of pivotal issues is changing.

(U) With the help of the analyst preparing the Saudi Arabia study we prepared a list of pivotal issues relating to that study. The list is presented as illustration of the process we would like to see followed, and is not intended to be comprehensive nor do we wish to defend the inclusion of any particular question. As a whole, however, we do believe them to be significant.

1. Will the ruling family continue to be successful in maintaining a balance between the forces for modernization and those supporting religious conservatism?

2. Will the Moslem fundamentalist movement lead to a growth in terrorist activity (such as the recent Mecca incident) and will action by the ruling family result in the development of greater popular support for such activity?

3. Will graft or corruption in key offices become a popular cause for discontent?

4. Will the large number of foreigners resident in the country result in an important shift in domestic or foreign policy?

5. Will concern for its nation's security produce a change in alliances or foreign policy?

(U) Although there are of course exceptions, the general view of the Intelligence Community is that we can count on the regime in Saudi Arabia to continue to control and follow policies much like those of the past. However, the issues illustrated by the proceeding questions could result in substantial changes in direction, and even to the establishment of a different regime. They could be, therefore, pivotal intelligence issues to which collection resources should be allocated and careful and professional study directed.

III. CONCLUSIONS AND RECOMMENDATIONS

(U) The terms of reference for the Panel was to examine the adequacy of the data base available to the analyst and which he uses in constructing an assessment or estimate on a country or region. Some of our recommendations are directed toward the data base, therefore (e.g., reinstitutions of the NIS, and use of outside experts). However, we were drawn to the view that the most important step that could be taken to improve the content and quality of the assessment was to improve the professional environment in which the intelligence analyst works. We were impressed with the capability of the analysts with whom we interfaced, but we were equally impressed with the difficulties under which they operate and which we believe restrict the quality of their work. Our priority recommendations therefore relate to steps that we believe are feasible to take and would substantially improve the professionalism of the analytical product.

1. Top DIA Executive Responsible for Professionalism: (U) We believe that the job of an intelligence analyst must be a professional career, just as an engineer or scientist considers his job a professional career. Just as most technically oriented companies have a top executive responsible for the professionalism of their technical staffs, we believe that the DIA should have an individual charged with the fostering of a top professional staff of analysts. The office should report to the Director of the Agency and the incumbent should

be a career analyst of national reputation. The individual should be charged with reviewing appraisals* for their professionalism and establishing policies and an environment condusive to the development of highly professional appraisals. If such an office were established, most of our following recommendations could well have come from it. In any case, the office could be responsibile for implementing those that may be approved by the Director.

2. (b)(3) 50 USC 403-1(i)

(b)(3) 10 USC 424, (b)(5)

3. Time for Analysis: (U) We were told and observed, that no

*Includes both assessments and estimates.

one has the time to think about the problem because of the heavy workload placed upon the analyst. Thus, analysts mostly collect and compile information and they have little time for such matters as study, testing of hypothesis, and discussions with outside experts or scholars.

(U) Although the obvious solution would be to increase the number of analysts or decrease the workload via some prioritization scheme -- we suggest the Director also consider establishing quick reaction segments and long term study groups. The quick reaction segment would be composed of people having broad areas of expertise and would be capable of responding to queries with only minimal verbal interactions with the long term study groups. To assure cross-fertilization between both segments, they must be collocated in the same physical space. Further, we suggest that some of these long study groups (months-to-years) be guided by outside scholars or experts.

4. Training and Retention of Analysts: (U) Since the Panel views the individual as the key ingredient to successfully build, maintain and utilize an intelligence data base -- DIA must continue to cultivate long term retention of both civilian and military personnel. In the Civil Service arena, the Agency should undertake to formally establish a career progression ladder which would periodically require travel and living in those areas of interest to the analyst; provide for part and full time academic training; and encourage exchange of ideas with individuals outside the Intelligence Community (e.g.,

attendance and participation in appropriate meetings and conferences). In the military area, DIA should contine to support the Army's Foreign Area Officers (FAO) program; to encourage the other Services to follow the Army's lead; and to provide for increased tours of duty at DIA for those officers who are uniquely qualified and desire to do so. In such instances efforts must be undertaken to reduce or eliminate the promotion penalties currently perceived by the military analyst.

(U) Although we realize that promotion opportunities may be beyond the control of DIA, we do believe it can take some steps which would encourage longer retention. These primarily include those areas which would augment the recognition of the analysts' work, both within and outside the Intelligence Community. Included in this category would be the listing of the author(s) who prepared the appraisal (in addition to the organization); opportunities to travel and participate in non-intelligence related meetings and conferences in their areas of speciality; the allocation of time during normal duty hours to prepare unclassified papers for publication in non-intelligence related journals and periodicals.

5. NIS Revisited: (U) After reviewing the genesis, evolution and demise of the NIS with several knowledgeable individuals and probing the utility of reinstatement, we conclude that while it could be useful to have, its cost, particularly in manpower, is difficult to defend. Consequently, we recommend that the limited

resources be directed to other areas (e.g., routinely having access to outside experts and scholars).

6. Use of Special Studies: (U) Our experience with large organizations, within and outside the government, leads us to recommend that the Director of DIA not depend alone upon his own organization for analysis in critical areas. We believe he should -- in important areas -- commission the development of views from experts/scholars outside DIA which are basically independent of opinions held within. We believe that this approach would minimize the potential for surprise; support the professional development of the analyst by exposure to different views, and; sharpen high level management perspectives on outside views.

7. Collection Against Third-World Countries: (U) The Panel believes that the priority, attention and resources devoted to innovative and special collection efforts against Third-World countries should be augmented. This suggests that the Agency separately review the SIGINT AND HUMINT collection efforts to determine which potentially high-payoff areas are not currently being exploited.

(U) In summary, we wish to emphasize that the analyst is the key to providing professional assessments and estimates. We observe, with great concern, that today the analyst spends most of his time on activities that can in no way be called analysis. The analyst must be provided time to study the issues involved, to consult with others inside and outside the Intellgience Community, -- in short, to analyze.

Only in this way can the highly professional assessments the Department of Defense needs be produced.

(b)(3):10 USC 424,(b)(6)

Panel Chairman.

(b)(1),(b)(3):10 USC 424,(b)(3):1.4 (c)

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TERMS OF REFERENCE
FOR THE
DIA ADVISORY COMMITTEE (DIAAC) PANEL
ON
(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

1. OBJECTIVE: ~~(C)~~ The Panel will review the intelligence data base available to DIA for assessing political-military situations of interest to the DoD. Particular attention will be focused on the continent of Africa.

2. APPROACH: ~~(C)~~ An ad hoc Panel designated by the Chairman, DIAAC, and approved by the Director of the DIA, will conduct the study. Initially, the Panel will direct its attention to African nations. After reporting on this area to the Director, other areas may be established as requested by the Director.

~~(C)~~ In reviewing the intelligence data base available to the Agency, the Panel will address the adequacy of the intelligence base supporting intelligence assessments and the feasibility of improving the data base by utilizing experts outside of the Agency. Based upon review of the above areas, the Panel will recommend approaches and/or techniques for building the data base requisite for DIA present and future needs.

3. LEVEL-OF-EFFORT: (U) The Panel will consist of about five members and require about four meeting sessions. An interim report will be given in the first quarter of CY 79 and the final written report will be submitted by July 1979. The DIA advisor for this effort is (b)(3):10 USC 424

PANEL CHAIRMAN: (b)(3):10 USC 424

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SPECIAL STUDY GUIDELINES

~~(C)~~ The Director of DIA has long been concerned with a great intelligence gap he finds in DIA's basic cultural data base and body of analysis on much of the world. It is especially apparent to him that in those areas of the developing world, in particular where policy decisions are being made by the U.S. Government, on a near daily basis, there are conspicuous holes in the fabric of our "nap of the earth" knowledge of the complexities of peoples and their activities, earth-wide. While some of our judgments may be correct, they may be drawn from all the wrong data.

~~(C)~~ As a pilot project for study of this problem, I have asked the DIA Advisory Committee to review DIA's Data Base. The subject is so broad a one that it is important to articulate an achievable thesis subject. Toward that end, I ask that a detailed appraisal be drawn on the future of Saudi Arabia. I would expect the Advisory Panel to be fully conversant with all the details of appraisal preparation and that the DIA SAC report to me their views of the report's value as well as shortcomings and on their views of the professional resources available to DIA to complete the task.

~~(C)~~ The appraisal should be framed for long term advice to the Secretary of Defense on U.S. arms sales policy and should address the likely paths that Saudia Arabia will follow over the next few decades.

(U) Special attention should be given to the cultural dynamics that would bring about changes in the nation's path. Specific areas that should be addressed include:

a. The social, religious, and economic factors which could lead to a major change in the country;

b. The probabilities of such change in the context of development, as old mores become subjected to the pressures of modernity;

c. The role of the military in the country in retarding or accelerating this process and its possible role in revolutionary activities;

d. The mechanisms and potential in Saudia Arabia for channeling change into non-violent, gradual directions;

e. The attitudes of the present government toward change and its ability to accommodate rival pressures of tradition and modernization.

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Declassify on [redacted]

Re[illegible]

(U) Since this special study seeks to provide the Panel membership with a better insight into the problems faced by the Intelligence Community, the Panel should be thoroughly informed on the tasking procedures, the personnel and data bases used in the effort, deficiencies uncovered during each phase of the appraisal, and any other directly relevant issues.

(U) (b)(3):10 USC 424 will be the DIA Advisor to the Panel. He will delegate a full-time DIA representative to the Panel for purposes stated above.

(b)(6)

(b)(3):10 USC 424

EUGENE F. TIGHE, Jr.
Lieutenant General, USAF
Director

~~SECRET~~

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REPORT 68-2

of the

SCIENTIFIC ADVISORY COMMITTEE

to the

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

on

[redacted]
(b)(1),(b)(3)-10 USC 424,(b)(3)-50 USC 403-1(i),1.4 (e)

(b)(3) 10 USC 424
50 USC 403-1(i)

SEPTEMBER 1968

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5. CLASSIFICATION CANCELED
6. CLASSIFIED INFO BRACKETED
7. OTHER (SPECIFY): DOE Info. SRD

S-154/AC

~~SECRET~~

20080002085

THIS REPORT WAS APPROVED BY THE
DIA SCIENTIFIC ADVISORY COMMITTEE

MEMBERSHIP

[redacted]

(b)(1)
(b)(3) 10 USC 424
50 USC 403-1(i)
(b)(6)

THIS REPORT WAS PREPARED BY THE
[redacted]

MEMBERSHIP

[redacted]

GUEST ADISORS

[redacted]

DIA TECHNICAL ADVISOR

[redacted]

SECTION I

INTRODUCTION (b)(1) 1.4(c)

1. In its first report (DIA/SAC Report 67-1), [redacted] with particular emphasis on technological aspects. The appendices of that report examined, in some detail, the measurable effects [redacted]

2. Except in a few instances where requirements have become somewhat better understood, or the technology may offer an improved capability, [redacted] and no effort is made herein toward a wholesale updating of its contents. However, the Panel is pleased to note improved communication and coordination [redacted] This report presents salient Panel actions or recommendations in areas which came to our attention since the publication of Report 67-1. Discussion, conclusions, and recommendations are contained integrally within each of the following three sections:

[redacted]

SECTION II

[redacted]

1. [redacted]

~~Possibly through misinterpretation of the Panel's comments on the~~ [redacted] by $1 million. The Panel prepared a letter to DIA on this subject which resulted in restoration of funds. Also at our suggestion, [redacted] has screened its R&D budget to remove operational and other type expenditures.....This way, a "10% across the board R&D cut," will only affect the R&D by 10%. Under the previous arrangement with the R&D budget intermingled with "other" categories to produce a large total, a 10% cut comprising a few million dollars might have the effect of removing half the true R&D funds, not the 10% intended.

(b)(1)
1.4(c)

In May 1968, the Panel assisted DIA [redacted] program request for FY 70, by providing requested [redacted] portion of the 1968 CIP.

2. [redacted]

This year the [redacted] unique capabilities [redacted] In the years since the [redacted] become quite adequate to detect the kinds of abrogation that seem realistic. [redacted] and could profit tremendously

(b)(1) 1.4(c)

from the line-of-sight location of a satellite platform. The Panel urges that the U.S. accept [redacted] Section III of this report treats this matter in greater detail.

3. [redacted]

In a letter to DIA, the Panel urged consideration of a breakdown [redacted] requirements and objectives and implementing activities as shown in the table below.

TABLE I

[redacted]

An approach to item (b) Table I was undertaken by [redacted] (sub-panel chairman) and [redacted] Their study is included as Section IV of this report.

4. The Panel visited Fairbanks, Alaska, [redacted] May 3, 4, and 5. Here, [redacted] In addition to acquiring

(b)(1) 1.4(c)

an increased understanding [redacted] the Panel members were very favorably impressed with the capabilities, dedication, and morale [redacted]

5. As a result of participation of a panel member [redacted] the Panel was apprised of events at [redacted] in April and June of 1968. (b)(1),1.4 (c) [redacted] (b)(1),1.4 (c) Mr. Gromyko's speech before the Soviet Presidium which included some comments pertaining [redacted] and negotiations on missile systems. (b)(1),1.4 (c) (b)(1),1.4 (c) [redacted] This memorandum suggested some possible motives and implications for the change in policies for the U.S.S.R:

a. The move may have been a ploy by Soviet [redacted] in order to make agreement [redacted] more difficult, or

b. By agreeing that [redacted]

(b)(1) 1.4(c)

SECTION III

[redacted]

1. [redacted] Somewhat improved capabilities [redacted]

However, it is clear that our understanding of present technology goes well beyond the features that are planned for present versions of either system. Hence consideration should be given to the possible usefulness of systems which would more fully exploit the [redacted]

THE FOLLOWING THREE PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED

S-154/AC

PURSUANT TO (b)(1) 1.4(c) (b)(3) 42 USC 2162(a)

(b)(1) 1.4(c)

[redacted]

TABLE II

[redacted]

4. Follow-On Efforts

a. There is a growing recognition that the [redacted] capabilities which can be incorporated [redacted] are very

(b)(1) 1.4(c)

similar to those which would satisfy some of the [redacted] requirements for the U.S. readiness program. The proposal to combine many of the functions of [redacted] obvious attractions.

b. If a U.S. [redacted] it is most likely that major emphasis [redacted]

(b)(1) 1.4 (c)

(1) Inflexible requirements for [redacted] priorities, and the management of the technical interfaces may conspire to limit the actual system to a capability considerably less useful than technology permits.

(2) There may be a drawback to the [redacted]

(b)(1) 1.4 (c)
(b)(3) 10 USC 424, (b)(6)

SECTION IV

[redacted]

1. A small Sub-Panel* was asked to formulate a listing of both those [redacted] This section summarizes a proposed listing of both categories of data.

2. [redacted]

[redacted]

(b)(1) 1.4(c)

3. [redacted] where much of the experiment is concerned with the surrounding environment, considerable additional information about the environment will be needed. [redacted] data themselves, and a considerably larger collection effort would be necessary.

4. [redacted] is being considered. In general, there will be a need [redacted] The discussion here is addressed predominatly to requirements for these [redacted].

5. To begin this discussion, it is appropriate to list some questions that the [redacted] should help to answer. Some are general questions and can only be answered by a thorough modeling based on a wide variety of data. Other questions are more specific and can often be answered by a specific measurement.

a. [redacted]

b. Did the experiment result in or display any significant increase [redacted]

c. [redacted]

d. [redacted]

THE FOLLOWING TWO PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED. PURSUANT TO (b)(1) 1.4(c) AND (b)(3) 40 USC 2162(a)

of the values are considerably outside present capabilities. It can be remarked that almost any unique measurement is of some interest, even with very low accuracy. As the accuracy increases, the resulting constraints on formulating a model become tighter and more useful. The listed accuracy values are believed to be reasonable values, with no great improvement in interpretation expected to be realized from higher accuracy.

TABLE III

DESIRED NUCLEAR TEST DATA FOR TEST DEVICE MODELING

(b)(1) 1.4(c)

[redacted]

(b)(1) 1.4(c)

TABLE III (continued)

Desired Accuracy

2.

[redacted]

3.

4.

TABLE III (continued)

SECRET

[redacted]

(b)(1) 1.4 (c), (b)(3) 42 USC 2162(a)

SECRET

TABLE III (continued)

Desired Accuracy

6. [redacted]

(b)(1) 1.4 (c)

~~SECRET~~

7. [redacted]

For [redacted] other information is needed beyond that required to [redacted] itself. The additional [redacted] desired are mainly of use to fix the time and place of the [redacted] to possible collateral information.

To obtain a good understanding of a [redacted] considerable collateral data will be needed. A greater volume of such data may be required than the volume of [redacted] These collateral data are likely to be more important than most of the [redacted] Examples of data desired are the identification of the [redacted] if any, and the identification of all the important equipment associated with the [redacted]

Because of the extreme importance of some possible [redacted] conduct in the future, a coordinated plan should be made in advance [redacted] and to collect the various important collateral data. This large collection task needs study from an overall systems viewpoint.

Here the Panel's recommendations address predominantly the [redacted] of the required data. These required [redacted] are listed in Table IV.

TABLE IV

(b)(1) 1.4 (c)

NUCLEAR TEST DATA OF AID IN UNDERSTANDING NUCLEAR EFFECTS TESTS OR

[redacted]

TABLE IV (continued)

(b)(1) 1.4(c)

3.

4.

5.

[redacted]

TABLE IV (continued)

(b)(1) 1.4(c)

5. [redacted]

6. [redacted]

DISTRIBUTION LIST
FOR
DIA/SAC REPORT 68-2

DIA

(b)(3) 10 USC 424
50 USC 403-1(i)

[redacted]

OTHER DOD

[redacted]

(b)(3) 10 USC 424
50 USC 403-1(i)

OTHER AGENCIES

[redacted]

~~SECRET~~
~~NO FOREIGN DISSEM~~

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

DIA/SAC Report for FY-72

I. General

(U) The DIA Scientific Advisory Committee met in full Committee sessions six times during FY-72. In addition, there were 19 meetings of various Panels of the SAC to review and study specific technical problems. A complete calendar of these activities is attached (Encl 1).

II. Membership

(U) The complete membership of the DIA/SAC at the beginning of FY-72 was as shown on Enclosure 2. In November 1971 [redacted] resigned from the SAC upon being appointed [redacted] was named by the Director, DIA to be the new Chairman [redacted] also resigned from the Committee in November 1971 to take a position on the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424

III. Significant Committee Activities

~~(S/NFD)~~ During FY-72, the full Committee listened to and commented on a great number of briefings, covering a wide range of topics. The more significant items, as reported to the Director in the Chairman's reports on the Committee meetings, are summarized below:

A. B-1 Threat (13-14 July)

Presentations were made by DIA on the total threat to the B-1 aircraft, and by the Air Force on the B-1 design goals for countering specific threat systems as defined by the Air Force. The Committee raised the question of the extent to which DIA should participate in establishing the threat against which a weapon system is designed, and made specific suggestions for changes in the manner in which long-range threat estimates are made.

B. Tactical Intelligence Support (13-14 July, 21-22 September)

The Army, Navy and Air Force gave detailed presentations to the SAC on their plans for developing computerized intelligence support systems for tactical commanders. The major cause for concern in this area, as stated by the Committee, was that these systems, being developed

Review On ~~1 Jan 1992~~

S-212/SAC

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EXEMPT FROM GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTION CATEGORY 2
DECLASSIFY ON ~~Notification by DT~~

separately by the Services, would not be compatible with each other or with national reporting systems, and that their specific functions were in general, not well-defined. The SAC recommended that one central [DoD] agency be given overall responsibility for the control of ADP for intelligence support, to ensure that there will be a viable program in this area.

C. Antiship Missile Threat (21-22 September, 30 Nov-1 Dec)

A review was made of the intelligence data available on Soviet antiship missiles, the Navy's requirements for information required to develop an effective counter, and [redacted] Plan to improve collection of this data. The SAC felt that DIA's efforts in this area were commendable, but in reality offered little hope for any great success. They felt that the Navy's own collection programs had the best chance of succeeding and should be emphasized, while at the same time it was recommended that the Navy might put more emphasis on the design of countermeasure systems which would not be so dependent upon a detailed knowledge of the threat. It was suggested that a Panel of the SAC might work with the Navy to study their resources for specialized collection against the antiship missile threat. This action was deferred pending completion of a study being accomplished for RADM Rectanus by a group headed by [redacted] and of other efforts which are being taken by various agencies within the intelligence community. (b)(3):10 USC 424

D. Development of Solid Propellant Motors (21-22 September)

FTD presented to the SAC an analysis of data relating to the development by the Soviets of solid propellant motors for ICBMs. The SAC expressed considerable appreciation for this analysis, especially in light of other recent Soviet missile developments. It was recommended that the analysis be extended to address Naval, Tactical and ABM systems.

E. DIA R&D Program (30 November - 1 December)

In response to the DIA R&D program plan, the Committee agreed that a program of this magnitude is entirely appropriate for DIA. However, they expressed two major concerns. First, they felt that in the area of long-range threat projection, there is considerable difficulty in arriving at a valid methodology and data base. Secondly, they felt that there had been no overall statement of intent made for the program as a whole, and recommended that the underlying rationale and criteria for the program be developed.

F. Magnetospherics (11-12 January)

The SAC listened to an accounting of the work being done by the Soviets in the field of magnetospherics and found it to be intriguing. However, they could offer no substantive connection between this activity and any weapon-related system.

G. [redacted] (11-12 January)

The SAC expressed their reservation about any program such as [redacted] which uses a [redacted] to arrive at most probable threats. They stated that while it is useful to study possible future Soviet weapon systems on the basis of their technology and production capabilities, it is probably not worthwhile to [redacted] They felt that a more acceptable method of dealing with long-range threat projections would be to portray a range of possible or probable weapon systems for a given mission with an associated band of uncertainty.

H. Command and Control (11-12 January)

The Committee was greatly impressed by the progress made in definition of the Soviet command and control systems and recommended that collection and analysis in this area continue to receive special emphasis.

I. KY-9 Missile (1-2 June)

In response to the series of briefings on the KY-9 missile, the Committee stated that tentative hypotheses on this system should be taken as such, since the data do not provide particularly solid foundations for them. With the Director's concurrence, a Panel will be formed to help define a broader range of hypotheses as to the associated sensor technology and system mission application.

IV. Panel Activities

~~(S/NFD)~~ A summary of the activities of special Panels of the SAC is given below. [redacted] is the only permanently designated panel of the SAC [redacted] is listed in Enclosure 2. The membership of each ad hoc Panel is listed in Enclosure 3.

(b)(1),1.4 (c)

A. [redacted]

The Panel met in January 1972 to review the impact on the [redacted] of proposed budget cuts for FY-73. They concluded that

(b)(1),1.4 (c)

there are no serious questions as to the adequacy of the (b)(1),1.4 (c) (b)(1),1.4 (c) in spite of the budget cuts, but noted that the point may be near at hand when further cuts would reduce that coverage. Findings of the Panel are contained in DIA/SAC Report 72-1, April 1972.

B. Warhead Panel (1 meeting)

This Panel was established to review the (b)(1),1.4 (c) [redacted]. They found that there were several problems associated with this activity, particularly in the area of management and recommended that someone (not a Committee) look at the overall program to determine if the resources used are justified. Findings of the Panel were contained in an informal letter from the Panel Chairman to the Director.

C. F-14/F-15 Panel (2 meetings)

This Panel, which included representatives from Navy, Air Force and NASA, was formed to review the approach being taken by DIA in their report to the Deputy Secretary of Defense on the capability of the F-14 and F-15 aircraft to counter the threat through the 1985 time period. There was no written report made by the Panel.

D. [redacted] (5 meetings)

This Panel was created to review the flow of telemetry data, from a particular collection system, through the processing and dissemination agencies to the S&T intelligence production agencies, and to evaluate the capabilities of the various agencies [redacted] Inherent in this task was the questionof whether the allocation of resources among the various functions isproperly balanced. The findings of the Panel were reported to the Director in DIA/SAC Report 72-3, June 1972.

E. Silo Panel (5 meetings)

The Panel is reviewing recent developments pertaining to Soviet ICBMs and associated silos, to help the intelligence community to arrive at a better understanding of the significance of these developments. Several significant factors have been surfaced during these meetings, but no formal report has been made to date by the Panel.

F. [redacted] (1 meeting)

This meeting was held to review the amount of data which is available for estimating the functions and effectiveness of the many [redacted] in use by the Soviets in Naval, AAA and other systems.

It was determined that the available data is too sketchy to permit any in-depth study by the Panel at the present time.

G. Accuracy Panel (4 meetings)

The Accuracy Panel was sponsored jointly by DDR&E and DIA to determine if the accuracy of the SS-9 MOD IV system could be reliably estimated. The Panel determined that it presently is not possible to make such an assessment, but recommended that a refined analysis be made of the i(b)(1),1.4 (c) of the MOD IV, which could provide a better estimate of the design accuracy. Their review of the SS-9 MOD II system led to a new interpretation of (b)(1),1.4 (c) (b)(1),1.4 (c) and it was concluded that the MOD II has an overall accuracy of about 1/3 nautical miles. The findings of the Panel were reported to the Director in DIA/SAC Report 72-2, June 1972.

(b)(3):10 USC 424,(b)(6)

Executive Secretary, SAC

3 Encls
1. Calendar of Activities (U)
2. DIA/SAC Membership (C)
3. DIA/SAC Ad Hoc Panel Membership (C)

ACTIVITIES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
FY-72

DATE	PLACE	GROUP	CHAIRMAN
7 Jul 71	[redacted]	[redacted]	(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),(b)(6)
8 Jul 71	1D883, The Pentagon	Silo Panel	
8 Jul 71	2D921A, The Pentagon	F-14/F-15 Panel	
13,14 Jul 71	3E267, The Pentagon	Full Committee	
15 Jul 71	1D883, The Pentagon	Warhead Panel	
17 Aug 71	MIA, Huntsville, Ala.	(b)(1),(b)(3):10 USC 424,1.4 (c)	
31 Aug 71	FTD, Dayton, Ohio		
3 Sep 71	2D921A, The Pentagon	F-14/F-15 Panel	
8,9 Sep 71	SAMSO, Los Angeles, Calif.	Silo Panel	
20 Sep 71	1D883, The Pentagon	(b)(1),(b)(3):10 USC 424,1.4 (c)	
21,22 Sep 71	3E267, The Pentagon	Full Committee	
29 Sep 71	2E271, The Pentagon	Accuracy Panel	
30 Sep 71	NAVSTIC & CIA	(b)(1),(b)(3):10 USC 424,1.4(c)	
26,27 Oct 71	SAMSO, Los Angeles, Calif.	Accuracy Panel	
18 Nov 71	[redacted]	[redacted]	
30 Nov - 1 Dec 71	3E267, The Pentagon	Full Committee	

DATE	PLACE	GROUP	CHAIRMAN
7-8 Dec 71	SAMSO, Los Angeles, Calif.	Silo Panel	(b)(3):10 USC 424,(b)(6)
11-12 Jan 72	3E267, The Pentagon	Full Committee	
13-14 Jan 72	1A1079, The Pentagon	(b)(1),1.4 (c)	
8 Feb 72	SAMSO, Los Angeles, Calif.	Silo Panel	(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),(b)(6)
9 Feb 72	SAMSO, Los Angeles, Calif.	Accuracy Panel	
6-7 Apr 72	ESL, Sunnyvale, Calif.	Full Committee	
10 May 72	1E864, The Pentagon	Accuracy Panel	
23 May 72	SAMSO, Los Angeles, Calif.	Silo Panel	
1-2 Jun 72	3E267, The Pentagon	Full Committee	
30 Jun 72			

DIA Scientific Advisory Committee
Membership FY 72

Committee Members

(b)(3):10 USC 424,(b)(6)

(b)(1),(b)(3):10 USC 424

Consultants to DIA/SAC

(b)(3):10 USC 424,(b)(6)

Secretariat

(b)(3):10 USC 424 Executive Secretary
Administrative Assistant

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DECLASSIFIED ON 31 DECEMBER 1978

DIA Scientific Advisory Committee
Ad Hoc Panel Membership
FY-72

Warhead Panel

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424 DIA Technical Advisor
DIA Technical Advisor

F-14/F-15 Panel

Guest Advisors

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424 DIA Project Officer

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424

(b)(3):10 USC 424 DIA Technical Advisor

Silo Panel

(b)(3):10 USC 424

Guest Advisors

(b)(3):10 USC 424,(b)(6)

*Attended first meeting only.

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SUBJECT TO GENERAL DECLASSIFICATIC
SCHEDULE OF EXECUTIVE ORDER 1165
(b)(3):10 USC 424

Accuracy Panel

(b)(3):10 USC 424,(b)(6)

Guest Advisors

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424

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DEFENSE INTELLIGENCE AGENCY
ADVISORY BOARD
WASHINGTON, D.C. 20340-1328

S-160/DT-AB

5 JUL 1990

THRU: Assistant Deputy Director for Scientific and Technical Intelligence

TO: Lieutenant General Harry E. Soyster, USA
Director
Defense Intelligence Agency
Washington, D.C. 20340-0001

SUBJECT: Strategic Defense Initiative (SDI) Analytic Costing Methodology

1. As you requested, an ad hoc panel of the Advisory Board, chaired by [redacted] addressed the issue of costing methodologies used by [redacted] and [redacted] (b)(3):10 USC 424

2. The enclosed report summarizes the panel's findings.

(b)(3):10 USC 424,(b)(6)

Chairperson
Advisory Board

1 Enclosure
DIA AB SDI Analytic Costing
Methodology Panel Report
(S) 1 Cy

UPON REMOVAL OF ENCLOSURE(S) THIS
DOCUMENT BECOMES UNCLASSIFIED

DEFENSE INTELLIGENCE AGENCY ADVISORY BOARD'S STRATEGIC DEFENSE INITIATIVE (SDI) ANALYTIC COSTING METHODOLOGY PANEL REPORT (U)

1. ~~(FOUO)~~ The Panel, in performance of the assigned task, met on 15 May, 4 June, and 11 June with [redacted] (b)(3):10 USC 424 In accordance with the Terms of Reference, the Panel has attempted to establish the sources of the difference between the two estimates.

2. ~~(S)~~ The Defense Intelligence Projections for Planning (DIPP) and the System Threat Assessment Report (STAR) were used initially by both teams to define the specific hardware and quantities to be costed. However, [redacted] used production quantities as published by [redacted] arbitrarily multiplied the number of launchers by two to establish the quantity of missiles. This leads to some discrepancies in time phasing of investment costs and quantities. Neither is sufficient to explain the large disparity between the two estimates. (b)(3):10 USC 424

3. ~~(S)~~ [redacted] used different methodologies to arrive at the required costing figures. [redacted] used a bottom-up approach to derive Soviet weapon systems' cost. The technique essentially requires separating the weapon system into subsystems and black boxes, then establishing the costs of each element to conform to the weapon system performance and the Soviet design philosophy. These individual elements are then summed to provide a total cost for one item of the total weapon system. (b)(3):10 USC 424

4. ~~(S)~~ [redacted] developed a top-down approach which took major hardware items from various U.S. weapons systems and combined these items to emulate the Soviet system. By a series of extrapolations, he then determined the cost of a single weapon system. Both approaches developed single unit costs in 1987 dollars. [redacted] used DoD-approved inflation factors. [redacted] added to the inflation (b)(3):10 USC 424

(b)(3):10 USC 424

Classified by DIA [redacted]
Declassify on [redacted]

factors a "technology factor" which he derived from examining the evolution of "selected" U.S. systems.

5. ~~(S)~~ Both approaches extended the derived cost into a total production cost over an appropriate time period--using standard production "learning curve" techniques. Although there were differences in the use, and in the assumed rate of production, these differences also do not explain the final cost disparity. Note that the sum of these differences may be significant, but do not account for the full magnitude of the disagreement.

6. ~~(S)~~ Prior to identifying items of general agreement and disagreement, it is useful to examine Figure 1. Here, both for the Baseline and the SDI response, it becomes obvious that the two approaches differ by a factor range in from 4.5 to 6.5.

7. (U) In summary, we found:

a. ~~(S)~~ Both teams generally agreed on quantities, and the differences previously noted are not material over the 30-year time period.

b. ~~(S)~~ Cost estimates for the flyaway hardware portion (not including post-boost vehicle (PBV) and guidance and control (G&C)) differ by about a factor of two to three.

c. ~~(S)~~ Cost estimates for the PBV, G&C, and launch and ground support equipment differ by a factor of five or more.

8. ~~(S)~~ A review of these costs also revealed that allocation of subsystem costs to the total missile costs were approached differently by each team. [redacted] allocated the cost of the various parts making up the missile in a manner consistent with the latest System Acquisition Report for comparable U.S. systems. (b)(3):10 USC 424 On the other hand, [redacted] allocated subsystem costs in accordance with his best judgment.

FIGURE 1

COMPARATIVE PROCUREMENT-INVESTMENT COSTS

(b)(1),(b)(3)-10 USC 424,1.4(c)

(THIS FIGURE IS CLASSIFIED ~~SECRET~~)

9. ~~(S)~~ The Panel was unable to reconcile the two results, but is currently disposed to go along with the estimates of [redacted] and the apparent systematic approach utilized. However, it should be noted that the precision, or lack thereof, of either cost estimate is very dependent upon the attention paid to details and the crispness of definitions used. Further, we recognize that cost estimates derived by either method have a wide range of uncertainty. (b)(3):10 USC 424

10. (U) AD HOC COMMENTS:

(U) It is the consensus of the Panel that this report should not be used to discredit either of the two methodologies, and if one is accepted over the other, that it is as a result of implementation, definition, and ground rules used in this particular instance, and not the logic (i.e., top-down versus bottom-up) of the approach. Further, in the future, we believe that both approaches should be pursued because they can provide valuable debate and insights into other countries' weapons systems and investments. However, to gain the benefits of performing both processes, efforts must be made to establish strict ground rules and to enforce rigor in each approach in order to provide an easily followed audit trail. Finally, it should be recognized that these measures, if prudently implemented, will not significantly improve accuracy of estimates but only improve correlation of the two results or highlight major misconceptions.

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MEMORANDUM FOR THE RECORD

10 Dec 97

SUBJECT: S&TI Panel briefing to the Director, 09 Dec 97

(b)(3):10 USC 424

(b)(3):10 USC 424

1. [redacted] Vice Chair, STAB, briefed the results of the S&TI Panel's study on the role of Science & Technology in Defense Intelligence. Attendees included: [redacted] and D-STAB (Acting).

(b)(3):10 USC 424

(b)(3):10 USC 424

2. The Director, DIA, concurred with the Findings, and accepted the Recommendations proposed by the Panel. He thanked [redacted] and his Panel for their work.

3. During the discussion concerning the Findings and Recommendations, the Director indicated that he will take action to address the issues and recommendations raised by the Panel. He was very concerned with the starkness of the report.

4. The Director commented that a recommendation that should have been made was the need for a systematic approach for S&TI in the Intelligence production process.

(b)(3):10 USC 424

5. The Director concurred with the proposal for a follow-on Panel to review the progress made. The Panel is to convene next year.

6. The Director stated there is a need to bring senior-level technology experts to the Board. [redacted] Chair, STAB, assured him that the next member of the Board is a technologist.

7. DI is interested in utilizing the capabilities of Advisory Board members on an ad-hoc basis.

8. A summary of the S&TI Panel Findings and Recommendations is attached.

[redacted]

(b)(3):10 USC 424,(b)(6)

ADVISORY BOARD SCIENCE AND TECHNOLOGY
INTELLIGENCE PANEL FINAL REPORT

Summary Findings

Finding 1: The DIA S&TI mission, management philosophy, and organizational structure needs to be reconsidered in total.

Findings 2: There are dangerous shortfalls in S&TI in research areas, applied technology, and weapons systems areas.

Finding 3: The S&TI mission of DIA HQ and its ability to fulfill that mission should be addressed as first priority.

(b)(3):10 USC 424,(b)(5)

S&TI Panel Recommendations

Principal Recommendations

1. Develop a clear statement of the "Commander's Intent" for S&TI management to guide development of a revitalized S&TI function at DIA. This statement should specifically address DIA's role:

- Conducting S&TI
- Prioritizing S&TI efforts by others
- Insuring reasonable resource allocation
- Meeting continuous "level of effort" production needs
- Quality control of S&TI products

(b)(3):10 USC 424,(b)(5)

ADVISORY BOARD SCIENCE AND TECHNOLOGY
INTELLIGENCE PANEL FINAL REPORT

(b)(3):10 USC
424,(b)(5)

3):10 USC

(b)(3):10 USC
424,(b)(5)

ADVISORY BOARD SCIENCE AND TECHNOLOGY
INTELLIGENCE PANEL FINAL REPORT

(b)(3):10 USC 424,(b)(5)

[redacted]

ADVISORY BOARD SCIENCE AND TECHNOLOGY INTELLIGENCE PANEL FINAL REPORT

(b)(3):10 USC 424,(b)(5)

[redacted]

Useful References on S&TI status in DoD

14. Carefully consider the recommendations included in the following references:

[redacted]

(b)(3):10 USC 424

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U-2298-99/STAB

Background Paper

SUBJECT: Summer 1999 Plenary Report

1. PURPOSE: (U) To provide the Director with feedback on the Science and Technology Advisory Board meeting.

2. POINTS OF MAJOR INTEREST:

a. (U) DIA Science and Technology Advisory Board (STAB) held its summer plenary meeting on 22-23 June 1999. The Board visited the Armed Forces Medical Intelligence Center (AFMIC) on 22 June, and then convened on 23 June at the Defense Intelligence Analysis Center. The specific agenda is attached.

b. (U) The orientation of AFMIC was valuable to the STAB. The AFMIC staff welcomed a number of suggestions and advice offered by Board members. The Board noted that the AFMIC staff is committed and mission-oriented. Due to its relatively small staff and budget, AFMIC has been forced to "think out of the box" to address some outstanding intelligence issues and has initiated a number of interesting technical projects. In half a day, it was hard to gauge the technical grounding of the AFMIC staff or their connection to the rest of the technical intelligence community. The Board proposes that the STAB form a subgroup that can periodically travel to AFMIC to provide advice and assistance in linking the AFMIC staff with community projects and resources. Note: Since the orientation visit, the AFMIC commander has indicated his support of and interest in such a subgroup. The STAB Office will work with AFMIC to schedule a subgroup "kick off" meeting in September.

c. (U) At the second consecutive plenary meeting, the STAB was briefed on [redacted] (b)(3):10 USC 424 This briefing centered upon defensive issues and raised broad concern by a number of Board members on the DIA program and its interaction with the rest of the relevant community, such as the [redacted] The STAB proposes that a small subgroup be formed, to follow-up on Board questions. This subgroup would spend half a day with the [redacted] staffs, and, at the end, make an assessment on the value of any further STAB activity on this topic for DIA.

(b)(3):10 USC 424

(b)(3):10 USC 424

(b)(3):10 USC 424

d. (U) The STAB was briefed on intelligence support to the [redacted] (b)(3):10 USC 424 program. The Board recognizes the complexity of the intelligence issues involved in this high-profile program and offers any assistance to the DIA efforts. Perhaps some Board members, individually or as a subgroup, could work with the staff of the Technology Assessments Group on some aspect of this program. In years past, individual Board members have worked with this office on [redacted] (b)(3):10 USC 424 related issues.

(b)(3):10 USC 424

e. (U) The Board met with [redacted] 23 June to discuss new ways the STAB could serve DIA. Ideas included subgroups of the Board aligned with each intelligence production center, and convening sessions in support of important near-term issues or problems for the Command Element. The Board would like to include dedicated discussion forums with DIA leadership on any topic as part of the agenda on future plenary meetings.

(b)(3):10 USC 424

(b)(3):10 USC 424

PREPARED BY: [redacted]
STAB

APPROVED BY: [redacted]
CHAIRMAN, STAB

Enclosure:
June 1999 Full Board Meeting Agenda

63

D-STAB
(b)(3):10 USC 424

Science and Technology Advisory Board

June 10, 1998

General Hughes,

The meeting of the STAB which occurred on 3,4 June 1998 hosted by MSIC was productive and informative.

1. MSIC personnel briefed board members on various aspects of work being done under their authority in the Huntsville area.
2. Board members were especially impressed with [redacted] work being accomplished; but, as has been true previously, were concerned about availability of adequate funding for both programs, especially given the high potential payoff in this work. (b)(3):10 USC 424
3. Other briefings including those on [redacted] and related programs served to reinforce our confidence in the technical competence of the personnel of MSIC and in their pursuit of appropriate priorities in support of the DIA mission. (b)(3):10 USC 424
4. Several STAB panels reported progress in their work

   A. The [redacted] led by [redacted] has had briefings from several agencies. They have organized into two sub-panels, one dealing with collection and the second dealing with information management. Focusing first [redacted] they intend to make recommendations for improvements which can be accomplished within existing resources and those which will require additional resources. A more extensive IPR should be available by the time of the October STAB meeting. (b)(3):10 USC 424 (b)(3):10 USC 424

   B. The [redacted] led by [redacted] has defined several [redacted] [redacted] issues for further study, including: (b)(3):10 USC 424 (b)(3):10 USC 424

      i. [redacted]
      ii.
      iii.
      iv.

      It has also become a concern that DIA [redacted] and priorities are not broadly understood within the Agency or among the Services, making the DIA role as executive agent difficult. The panel expects to make interim recommendations at the October STAB meeting. (b)(3):10 USC 424

   C. The [redacted] led by [redacted] has focused on defining means towards predicting and avoiding technological surprise. In doing so, they have identified three broad areas which they will consider as examples for possible tech surprise: [redacted] [redacted] They will also consider "minor but effective" modification of existing systems as an area of possible technological surprise. (b)(3):10 USC 424 (b)(3):10 USC 424 (b)(3):10 USC 424

   D. The [redacted] led by [redacted] is still gathering information, but is organizaing into three general areas [redacted] The panel was especially complimentary of the support they are receiving from [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424

   E. The [redacted] led by [redacted] has met twice and has considered both DIA hard-copy [redacted] (b)(3):10 USC 424

   F. The [redacted] led by [redacted] will report at the October meeting. (b)(3):10 USC 424

   G. The [redacted] led by [redacted] has just begun its consderations.

(b)(3):10
USC 424

5. I have asked [redacted] to arrange a meeting with you for further discussion of panel work and several other issues, including:
   a. DIA support of panels;
   b. STAB support personnel;
   c. S&T Report Follow-On;
   d. STAB membership;
   e. Future STAB direction.

I look forward to discussing these issues with you.

(b)(3):10 USC 424,(b)(6)

Chairman,
DIA Science and Technology
Advisory Board

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

4 April 1967

MINUTES
OF
DIA SCIENTIFIC ADVISORY COMMITTEE MEETING
23-24 March 1967

I. (U) GENERAL: A meeting of the DIA/SAC was held on 23 and 24 March 1967 in Room 3E267, The Pentagon. The meetings were convened at 0830 hours on both days.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was [redacted] (b)(3):10 USC 424

III. (U) AGENDA: Copies of the original and corrected agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. During the current intelligence briefing, a question arose concerning the effect of turbulence on satellite photography. [redacted] stated that SSD was preparing to make a series of experiments on this topic. [redacted] informed him that such work had already been done and referred him to [redacted] (b)(3):10 USC 424

(b)(3):10 USC 424 B. [redacted] described a recent presentation by the National Range Division to DDR&E concerning [redacted] (b)(1),1.4(c) He also described a new long focal length camera system under development by ARPA. [redacted] would like to head a project to see that [redacted] (b)(1),1.4(c) has all needed collection equipment on board. As a result of [redacted] talk, [redacted] dictated a letter (S-51/AC) to [redacted] (b)(1),(b)(6),1.4(c) [redacted] (b)(1),(b)(6),1.4(c) to which [redacted] attached a list of characteristics which [redacted] (b)(1),1.4(c) should have. The letter requested a meeting between [redacted] and NRD to discuss the problem.

C. As a result of the briefing by [redacted] requested that further briefings on blackout analysis be scheduled for the next Committee meeting. Action was passed to [redacted]

~~GROUP 3~~
~~Downgraded at 12 year intervals;~~
~~Not automatically declassified~~

~~SECRET~~

(b)(3):10 USC 424

D. During (b)(1),1.4(c) briefing, [redacted] passed out maps showing deployment of (b)(1),1.4(c) These were placed in all folders.

E. Following the ABM briefings, [redacted] read off a list of reasons prepared by CIA which substantiate [redacted] as being a SAM, not an ABM, system. The points were discussed pro and con by the Committee.

F. In addition to his ABM briefing, [redacted] also gave a short presentation on the (b)(1),1.4(c) (b)(1),1.4(c)

G. [redacted] liked the (b)(1) presentation in general but suggested that the conclusions be put in a more positive form. [redacted] objected to the conclusion on (b)(1) and suggested it be reworded to recommend that DDR&E task (b)(1) in a firm manner so that R&D responsibility is explicit. [redacted] will forward final draft of report to Panel, plus copies to [redacted] and have final copy to Secretariat for printing before 24 April 1967. A presentation to Gen. Carroll was scheduled for 24 Apr 67.

H. (b)(1) (b)(1) As a consequence, a briefing on this subject will be presented at the next meeting. In particular, this should prove why the (b)(1),1.4(c) [redacted]

(b)(3):10 USC 424

I. [redacted] requested a readout of Russian personalities involved in OHD.

J. A verbal briefing on ABM collection was given to Gen. Carroll. He requested a written, well-documented report as soon as possible. A Collection Panel meeting was subsequently scheduled for 30 March 1967. [redacted] also presented an outline of ABM questions and conclusions to the Committee (copy enclosed).

K. As a result of ASW discussion, it was agreed that [redacted] would brief the Strategic Panel on the DIA ASW study during the 6-7 April meeting. At that time a decision will be made on whether or not to convene the ASW Panel.

L. [redacted] requested a briefing on the (b)(1),1.4(c)

M. As an overall summary of the ABM review, (b)(3):10 USC 424 saw no reason to change the Committee opinion from the Jul-Aug 66 position. The Committee had misgivings on interpretation of (b)(1),1.4 (c) as a SAM although it might have a (b)(1),1.4 (c) (b)(1),1.4 (c)

N. (b)(3):10 USC 424 is having a TS facility installed (b)(3):10 USC 424

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

4 Enclosures
1. Attendee List (U)
2. Original Agenda (S)
3. Revised Agenda (S)
4. ABM Outline (S)

~~SECRET~~

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE
23 - 24 March 1967
The Pentagon (Room 3E 267; OX 50252)
Washington, D. C.

AGENDA

1st Day, Thursday, 23 March

0840 - 0935	A	Current Intelligence Update	(b)(3):10 USC 424
0935 - 1000	B	Administrative	
		1. Discussion of (b)(1),1.4(c)	
		2. Welcome to New Member	
		3. Presentation to	
		4. Security Letter (in all folders)	
1000 - 1005		BREAK	
	C	ABM	
1005 - 1025		1. Review of ABM Estimates	(b)(3):10 USC 424
1025 - 1105		2. (b)(1),1.4(c)	
1105 - 1135		3.	
1135 - 1205		4. Blackout Problems	
1205 - 1230		5. (b)(1),1.4(c) and Other Radars	
1230 - 1240		6. Special Deployment Charts	
1240 - 1310		LUNCH	
1310 - 1400		7. (b)(1),1.4(c)	
1400 - 1530		8.	
1530 - 1630		9. Summary	
1630 - 1710	D	(b)(1)	

Special Access Clearances required for all sessions

~~CONFIDENTIAL~~
~~SECRET~~

~~Revised 27 March 1967~~
~~DOWNGRADED AT 12 YEAR INTERVALS;~~
~~NOT AUTOMATICALLY DECLASSIFIED~~
~~DOD DIR. 5200.10~~

2d Day, Friday, 24 March

0380 - 0900	A	(b)(1) 1.4(c)	(b)(3):10 USC 424
0900 - 0945	B	Collection Panel	
		1. OHD Memorandum (2-67)	
		2. Future Plans (Next meeting Date; ABM Report; etc) - 30 March	
0945 - 1010	B	Strategic Panel	(b)(3):10 USC 424
		1. Discussion of Report	
		2. Future Plans (6-7 April Meeting)	
1010 - 1055	C	Movie on Nuclear Tests	
1055 - 1100		BREAK	
1100 - 1600	D	Planning Session	(b)(3):10 USC 424
		1. ABM Collection	
		2. Committee Meeting for 18-19 May.	
		3. Committee Meeting and Social for 20-21 May.	
		4. ASW Problem	(b)(3):10 USC 424
		5. Disposition of Soviet ABM Question	
1430 - 1515	E	Meeting with General Carroll	(b)(3):10 USC 424
		1. OHD Memorandum 2-67	
		2. ABM Collection	

Special Access Clearances for all sessions

Revised 27 March 1967

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

ABM

SUBJECT: ABM (Thursday) - Panel Reports (Friday)

Date of Meeting Thursday/Friday, 23/24Mar Time 0830

Place The Pentagon, Room 3E 267

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓		✓			✓	✓	✓	
				✓					✓	✓	✓	
			X	X					X	X		
				✓					✓			
			X	X					X	X		
			X	X					X	X		
			✓	✓	X				X	X		
			✓	✓					✓	✓		
			✓	✓					✓	✓		
			1830	✓					✓	1		
			✓	✓		✓			✓	1330		
			✓	✓		✓			✓	✓	✓	
			✓	✓					✓	✓		
			✓	✓					✓	✓		
			✓	✓		✓			✓	✓		
			X	X	X				X	X		
			✓	✓					✓	✓	✓	

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: ABM (Thursday) - Panel Reports (Friday)

Date of Meeting Thursday/Friday, 23/24 Ma Time 0830

Place The Pentagon, Room 3E 267

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424												
												Technical Advisor ABM
												Technical Advisor Collection Panel
												Technical Advisor (b)(1)
												Technical Advisor ASW PANEL
												Briefing
												FOBS. Briefing

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: ABM (Thursday) - Panel Reports (Friday)

Thursday, 23 March 1967

Date of Meeting Friday, 24 March 1967 Time 0830

Place Pentagon, Room 3E 267

NAME	REPRESENTING	SECURITY	23 March DATE AM	PM	EX	23 March DATE AM	PM	EX	24 March DATE AM	PM	EX	REMARKS
(b)(3):10 USC 424,(b)(3):P.L. 86-36,(b)(6)			1100	✓ 1515								
			1100	✓ 1515								
			1130	✓ 1515								
			1000	✓ 1515								
			1000	✓								
			X	X								
			1100	X								
			1000	✓ 1535								
			1100	✓								
			X	✓ 1534								Briefing
			1100	✓								
			1100	✓								Briefing
			X	✓								
			1100	✓ 1534								
			1100	✓ 1534								
			1100	✓								
			1100	✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: ABM (Thursday) - Panel Reports (Friday)
Thursday, 23 March 1967

Date of Meeting Friday, 24 March 1967 Time 0830

Place The Pentagon, Room 3E 267

ME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)												
												Briefing [redacted]
												(b)(2),(b)(3):10 USC 424
												(b)(2),(b)(3):10 USC 424

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

22 May 1967

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
18 MAY 1967

(b)(3):10 USC 424

I. (U) GENERAL: A meeting of the DIA/SAC was held on 18 May 1967, in [redacted], The Pentagon. The meeting was convened at 0830 hours.

(b)(3):10 USC 424

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC representatives were [redacted]

III. (U) AGENDA: Copies of the original and corrected agenda are enclosed.

IV. (U) SUMMARY:

(b)(3):10 USC 424

A. (U) During the briefing on hardened antennae in the Soviet Union, [redacted] remarked that the MINUTEMAN complexes also have hardened antennae associated with them. He provided [redacted] with a contact at BSD to discuss configurations and usage.

(b)(3):10 USC 424

B. (U) [redacted] stated that someone should request the DIA/SAC to study the Soviet space reconnaissance program, including a correlation of what appears to be the Soviets' priority targets.

(b)(3):10 USC 424

C. (U) [redacted] requested [redacted] to collaborate in a full study of the SS-6-X missions. The study will be done primarily by the Strategic Panel.

(b)(3):10 USC 424

D. (U) [redacted] will investigate a cooperative launch for [redacted]

(b)(3):10 USC 424

[redacted]

(b)(3):10 USC 424

F. (U) [redacted] was requested to sanitize DIA/SAC Report 67-2 so that it may be circulated among the Committee.

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Defense Intelligence Agency
By DR Date 7-14-98
NOT Reviewed for Public Release

Review On ~~[illegible]~~

~~SECRET~~

G. (U) The U.S. OHD Report by [redacted] was approved.

(b)(3):10 USC 424

H. (U) The [redacted] assigned the task of compiling a consensus report in the Soviet ABM system.

I. (U) [redacted] was assigned to the [redacted] (b)(3):10 USC 424

J. (U) The Secretariat was asked to prepare a chart on the Pro's and Con's of ABM/SAM/

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

FBM SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting THURSDAY, 18 MAY 1967 Time 0830

Place PENTAGON, ROOM 1D 883

(b)(3):10 USC 424,(b)(6)

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE AM	DATE AM	DATE PM	DATE AM	DATE PM	DATE AM	REMARKS
[redacted]			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						
			✓	✓	✓						

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting THURSDAY, 18 May 1967 Time 0830

Place THE PENTAGON, ROOM 1D 883

Executive Session

(b)(3):10 USC 424,(b)(6)

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
[redacted]			✓	✓	✓							
			✓	✓	✓							
			X	✓	✓							
			X	✓								
			X	✓	✓							
			✓	X								
			X	✓								
			X	X								
			X	X								
			✓	X								
			✓	X								
			✓	X								
			X	X								
			X	X								
			✓	X								
			✓	X								
			✓	X								

THE SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

Subject: FULL COMMITTEE MEETING

Date of Meeting: THURSDAY, 18 MAY 1967 Time 0830

Place: PENTAGON, ROOM 1D 883

(b)(3):10 USC 424,(b)(6)

461 Briefing Executive Session 1400

NAME	REPRESENTING	SECURITY	DATE			DATE		DATE		REMARKS
[redacted]				✓						Project 461 Briefing
				X						Project 461 Briefing
				✓						
				✓						
				X						
				✓						
				✓						
			X	✓						
			X	✓						
			X	✓						
			X	✓						
			X	✓						
			X	✓						
			✓	✓	✓					

ACTION ITEMS

DR. FUBINI: (b)(3):10 USC 424

1. Read ABM letters from Committee members.

(b)(3):10 USC 424 2. Read [redacted] letter to [redacted] on optical systems.

(b)(3):10 USC 424 3. Read draft [redacted] report on U. S. OHD; NSA letter; DIA letter.

EXECUTIVE SESSION

(b)(3):10 USC 424 4. Following [redacted] report on ABM Collection and U.S. OHD:

a. Discuss plans for any future Committee action on Soviet ABM. If a follow-up memo on ABM is to be written, is the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted] to do it?

(b)(3):10 USC 424 b. Discuss plans for writing [redacted] Reports as follow-ons to the ABM Collection Report.

(b)(3):10 USC 424 5. Following report by [redacted] on [redacted] activities: (b)(3):10 USC 424

a. Discuss future plans for the Panel: Soviet ABM? Soviet nuclear? Soviet missiles?

(b)(3):10 USC 424 6. Following [redacted] report on the [redacted] (b)(3):10 USC 424

a. Discuss future plans of the Group.

(b)(3):10 USC 424 7. After [redacted] report on Ship Signal Activities:

a. Discuss future actions planned.

(b)(3):10 USC 424 b. Enclosure to letter [redacted] on ARIS is still needed.

8. Assign [redacted] to a Panel (recommend Strategic Panel).

(b)(3):10 USC 424

DIA/SAC - 16 May 1967

DIA SCIENTIFIC ADVISORY COMMITTEE
The Pentagon - Room 1D 883
Washington, D. C.
Thursday - 18 May 1967

AGENDA

0830 - 0900	A	Current Intelligence	[redacted]	(b)(3):10 USC 424,(b)(6)
	B	Special Intelligence Topics		
0900 - 0930		1. Operation Complexes		
0940 - 1005		2. Hardened Antennae		
1005 - 1200		3. Soviet Space Program		
1200 - 1245		LUNCH		
1245 - 1345	C	[redacted] Special Events		(b)(3):10 USC 424
1345 - 1700	D	Executive Session		
		1. JCS Paper on Vulnerability		
		2. ABM Collection and U. S. OHD Report		
		3. Plan for Future Action on ABM question		
		4. Plan for Future Action on [redacted] Report		(b)(3):10 USC 424
		5. [redacted]		(b)(3):10 USC 424
		6.		
		7.		

Revised - 22 May 1967

67

~~SECRET~~

[redacted]

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

15 August 1967

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
20-21 JULY 1967

I. (U) GENERAL: A meeting of the DIA/SAC was held on 20 and 21 July 1967. The meeting on 20 July 1967 was convened at 0900 in Room 3E 267. This meeting adjourned at 1730 at which time the Committee was transported to Bolling AFB for a dinner hosted by General Carroll. The meeting was reconvened at 2100 hours. The meeting on 21 July was convened at 0830 hours in Room 1E 864.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representatives were [redacted] (b)(3):10 USC 424

III. (U) AGENDA: Copies of the original and corrected agenda are enclosed.

IV. ~~(U)~~ SUMMARY:

A. In conjunction with the "Current Intelligence" briefing, [redacted] requested a briefing on Israel's aircraft weapons, and status of any (b)(1),1.4(c),1.4(d) [redacted] These briefings were provided by [redacted] respectively.

(b)(1),1.4(c) B. In response to the briefing on Project [redacted] requested that the Secretariat ask [redacted] if he had any ideas about [redacted] Also, [redacted] emphasized that the United States has a major problem with the lack of cross-correlation of technical intelligence data gathered from different sources. In this connection, he requested that [redacted] be sure to get a copy of the report of the [redacted] Committee."

C. The JSTPS briefing caused extensive discussion. Generally it was felt that many alleged intelligence facts presented in the briefing were not in accordance with current intelligence community information. The Committee had numerous criticisms and suggested several changes to improve the validity of the briefing.

D. [redacted] presented the Strategic Panel Report (DIA/SAC Report 67-3) and the Committee's Annual Report (DIA/SAC Report 67-4) to General Carroll. (b)(3):10 USC 424

[redacted]

Review On 15 Aug 87

~~SECRET~~

[redacted]

E. General Carroll, [redacted] discussed the proposed footnote to NIE 11-4. During these discussions General Carroll requested that the Committee provide him with a sound technical judgment on the evidence of a Soviet ABM/SAM development and deployment. [redacted] stated that [redacted] Strategic Panel was studying this problem. [redacted] invited General Carroll to meet with the Committee on 21 July 1967 in order that the General could take advantage of each member's views on the ABM problem, in particular his views on the [redacted] (b)(3):10 USC 424

F. [redacted] reported to the Committee on his investigation of the [redacted] [redacted] told the Committee that he had previously asked the Strategic Panel to do a study of the SS-X-6.

G. [redacted] reported to the Committee on the status of his work on Re-entry Vehicle [redacted] [redacted] stated that he had seen a DIA response to a request from [redacted] on Intelligence Requirements for an [redacted] which was somewhat contradictory to [redacted] and his views as contained in a paper on this subject which was sent to [redacted] The disagreement was primarily in the type of radar to be used. Also, [redacted] expressed the thought that an [redacted] should be designed primarily for the purpose of gathering intelligence information, in contrast to the intelligence gathering capability being an increment added to some other primary capability. [redacted] asked [redacted] to work with [redacted] and to resolve the differences. Specifically he wanted a new position paper prepared for DDR&E which would reflect DIA/SAC and DIA agreed recommendations. [redacted] said that he would take the appropriate action. (b)(1),1.4 (c) (b)(1),1.4 (c) (b)(1),1.4 (c)

H. [redacted] briefed the Committee on recent Collection Panel activities and future plans. Collection Panel meetings were planned for 21 August 1967 and 8 September 1967.

I. [redacted] briefed the Committee on a DIA study being done on Missile System Vulnerability and on a study being prepared by DDR&E for the Secretary of Defense on possible [redacted] [redacted] stated that the Committee shouldn't be directly involved in either effort but stated that he, [redacted] and [redacted] would be available to review and comment on DIA's input to the latter. (b)(3):10 USC 424

J. The Committee discussed the proposed [redacted] in an evening session on 20 July 1967.

[redacted]

K. The Committee was briefed by [redacted], USN, and [redacted] on [redacted] (b)(3):10 USC 424.

L. [redacted] briefed the Committee on OHD detection of missiles and aircraft at two-hop ranges. He discussed computations which indicated that (b)(1),1.4(c) [redacted] The Committee agreed with the computations in theory and stated that they would reword DIA/SAC Memorandum No. 3-67 to reflect this new information. This was done and approved by [redacted] for publication. [redacted] signed the forwarding letter to General Carroll.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L 86-36

[redacted]

N. The "ABM Update" briefing by [redacted] was particularly well received. [redacted] made specific comment on the excellence of the briefing as a basis for the Committee action. After summarizing the "pros and cons" regarding the mission of the system in question,

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36

[redacted]

O. The Committee met with General Carroll to discuss (b)(1),1.4(c) [redacted] General Carroll again stated that he would like the Committee to provide him with a substantive report on the Soviet ABM Program in time for him to use their advice (b)(1),1.4(c) [redacted]

P. [redacted] told the Committee that he had a contact who had an interesting analysis of [redacted] [redacted] recommended that he brief the Committee at their next meeting.

(b)(1),1.4 (c)

(b)(3):10 USC 424

CERTIFIED:

(b)(3):10 USC 424.(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED DOD DIR. 5200.10

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON
WASHINGTON, D. C.
20 - 21 July 1967

CORRECTED AGENDA

Room 3E 267
Thursday, 20 July 1967

0900-1000	A	Current Intelligence	(b)(3):10 USC 424
	B	(b)(1),(b)(3):P.L. 86-36,(b)(3):50 USC 403	
1000-1045			
1045-1115			
1115-1250			
1250-1315		LUNCH	
1315-1610	C	Integrated Air Defense	JSTPS
	D	Executive Session	
1530-1600		1. Presentation of Reports to Director, DIA	(b)(3):10 USC 424
(b)(1),1.4 (c)		a. Strategic Panel Report	
		b. Annual Report	
1610-1630		2. Collection Panel Status Report	
1630-1645		3. [redacted]	
1645-1700		4. (b)(1),(b)(3):P.L. 86-36,(b)(3):50 USC 403	
1700-1730		5. Missile System Vulnerability; SecDef Study - [redacted]	
2100-2220		6. [redacted]	
(b)(1),1.4 (c)			
	E	Social with General Carroll at Bolling AFB Officers Club; transportation will depart the River Entrance at 1730.	

Room 1D 883
Friday, 21 July 1967

0830-0930	A	[redacted] (b)(1),1.4 (c)	(b)(3):10 USC 424
0930-1000	B	OHD Discussion	
1000-1100	C	(b)(3):P.L. 86-36,(b)(3):50 USC 403	
1100-1200	D	ABM Update	(b)(3):10 USC 424
1200-1230	E	LUNCH	
1230-1430	F	Committee ABM Discussion	(b)(3):10 USC 424
1430-1520	G	Discussion of [redacted] (b)(1),1.4 (c) with General Carroll	

Review On 21 Jul 87

Special access clearances required for all sessions. 15 August 1967

~~SECRET~~

~~CONFIDENTIAL~~

DIA/SAC MEETING - Thursday, 20 July 1967, Room 3E 267 -
Friday, 21 July 1967, Room 1D 883
Security Level: SI/TK

Committee Members:

(b)(3):10 USC 424,(b)(6)

DIAAC

(b)(3):10 USC 424

DIA

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424,(b)(6)

NSA**

(b)(3):P.L. 86-36

(**have been requested to send clearances to DIA)

(b)(3):10 USC 424

18 July 1967

NSA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT:

THURSDAY/FRIDAY

Date of Meeting: 20/21 July 1967 Time 0900

Place 20 July: 3E 267 - 21 July: 1D 883

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)				X								
			✓	✓								
			✓	✓								JAC
			✓	✓								briefing
			✓	✓								only
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								HBM
			✓	✓								"
(b)(3):P.L. 86-36,(b)(3):50 USC 403	NSA											
	NSA											
	NSA											

[illegible] - [illegible]

[illegible]:

Thursday/Friday

[illegible] 20/21 JULY 1967 Time 0900

[illegible] 20 July: 3E 267 - 21 July: 1D 883

out 1040-1120

[illegible]	RESPONSIBLE	SECURITY	DATE					DATE				
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
(b)(3):10 USC 424			✓	✓	✓	✓	✓					30 Jul [illegible]
			\	✓		✓	X					
			\	\			X					
			\	\			X					
			\	✓			X					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					30 Jul [illegible]
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					

[illegible] SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT:

Date of Meeting: Thursday/Friday 20/21 JULY 1967 Time 0900

Place 20 July: 3E 267 - 21 July: 1D 883

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EV	DATE AM	DATE PM	DATE EV	DATE AM	DATE PM	DATE EV	REMARKS
(b)(3):10 USC 424			✓	✓	✓	✓	✓					
				14			X					
						✓	X					
						X	X					
				✓		1100 ✓	✓					
						X	X					
						1100	✓					
						X	X					
						X	X					
						X	X					
						X	X					
						0930 ✓	X					
						X	X					
						X	X					
				✓		0930 ✓						
						X	X					
						✓	✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT:

Date of Meeting Thursday/Friday 20/21 July 1967 Time 0900

Place 20 July: 3E 267 - 21 July: 1D 883

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424			1210	✓		1100 ✓	✓					
			X	X		X	X					
			✓	✓		X	X					
			1000	X		X	X					
			0550 1230	✓		0930 ✓	✓					
				✓		1030 ✓	✓ 1415					
				X		X	X					
				X		X	X					
			X	✓		X	X					
				✓		X	X					
			X	✓		1100 ✓	✓					
(b)(3):P.L. 86-36			X	X		✓ 1100	✓					
(b)(3):10 USC 424			X	X		1100 ✓	X					
			X			X	✓					guest advisor (OHD)
			1000 1045	X		X	✓					
			X	X		1100 ✓	✓					

68

~~SECRET~~

(b)(3):10 USC 424

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

[redacted]

11 October 1967

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE MEETING
27 SPETEMBER 1967

I. (U) GENERAL: A meeting of the DIA/SAC was held on 27 September 1967 in the Pentagon. It was convened at 0900 hours in Room 2D 921, recessed at 1300 hours, reconvened at 1345 in Room 3E 267, and adjourned at 1700 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representatives were [redacted]

(b)(3):10 USC 424, (b)(6)

III.(U) AGENDA: A copy of the tentative agenda is enclosed. The topics discussed were as shown on the agenda. [redacted] presented the Current Intelligence briefing in lieu of [redacted] The morning session was extended to cover the "Executive Session" items 1, 2, 4 and 5. In the afternoon, the ABM deliberations were completed, and the Committee plans were discussed, so that no session was required Thursday morning.

IV. ~~(S)~~ SUMMARY:

A. [redacted] briefed on Soviet ASW, including ships, submarines, torpedoes, and experimental efforts. [redacted] asked that at an appropriate future time the Committee be provided with a presentation or data regarding our sonar intercept capabilities. [redacted] expressed concern over his belief that insufficient U.S. resources and effort are applied to listening to Soviet active sonar activities and equipment. [redacted] subsequently indicated that this topic would be considered in the future activities of the ASW Working Group.

B. The Current Intelligence briefing raised questions about the construction materials and techniques associated with Soviet ICBM silos. [redacted] was particularly interested in getting the latest information in this area, and he requested [redacted] to have the Strategic Panel look further into this matter. [redacted] also requested that a discussion be planned for the next Committee Meeting on P.I. capability enhancement.

(b)(3):10 USC 424, (b)(6)

C. The briefing by [redacted] covered (b)(1),1.4(c) [redacted] Much interest was evidenced by the extensive discussion by the Committee regarding many of the construction features. Figures were presented on assessed performance capability (b)(1),1.4(c) [redacted]

Review On 11 Oct 87

[redacted]

~~SECRET~~

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

(b)(1),(b)(3):10 USC 424,1.4 (c)

D. The DIA/SAC Memorandum 5-67 [redacted] was approved by the Committee, and the transmittal letter to General Carroll was signed by [redacted]

(b)(3):10 USC 424

E. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

F. [redacted] reviewed his and [redacted] activities in relation to ASW, including their recent letter to General Carroll. He then reviewed the reply from Admiral Lowrance requesting continued activity of the ASW Working Group under [redacted] Additional comments by [redacted] centered around the subject discussed in paragraph IV. A. above.

G. [redacted] reviewed the agenda for the Collection Panel meeting to be held the following two days, 28 and 29 September. He indicated that the Panel would be taking a two-part approach to its China collection effort: [redacted]

(b)(1),(b)(3) 10 USC 424,(b)(5),1.4 (c)

H. The ABM discussion was initiated in the afternoon session. New information from FTD on interceptor missile size constituted a major new input to the Committee. Based on this and previous analysis, the Committee agreed on the substance of a SAC Memorandum to be transmitted to DIADR.

I. At [redacted] request, [redacted] agreed to meet with General Carroll the afternoon of 16 October on the subject of ABM. This meeting would be in conjunction with FTD and MID briefings to General Carroll. Other SAC members to be invited were identified as follows: [redacted]

(b)(3):10 USC 424

J. Based on the Committee discussions and those of the Strategic Panel on 26 September, [redacted] requested that information on the following topics be presented for Panel consideration at the next Panel meeting:

1. [redacted]
2. [redacted]
3. [redacted]
4. Sensitive Operational Complexes (SOC's).
5. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

2 Enclosures a/s

~~SECRET~~

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON, WASHINGTON D. C.

27 - 28 September 1967

TENTATIVE AGENDA

Wednesday, 27 September 1967
Room 2D 921

0900 - 0945 A ASW

0945 - 1045 B Current Intelligence

1045 - 1115 C (b)(1)

1115 - 1200 D Complex J

(b)(3):10 USC 424

Room 3E 267

1300 - 1700 E Executive Session

(b)(1),(b)(3):10 USC 424,1.4 (c)

1. Memo Approval
2. (b)(1)
3. Collection Panel Status Report
4. ASW Working Group Report
5. R/V and SIGINT Review Status Report
6. ABM Deliberations
   a. ABM Draft Report
   b. General Discussion

(b)(3):10 USC 424

Thursday, 28 September
Room 3E 267

0900 - 1200 Executive Session (continued)

7. Committee Plans
8. ABM Discussion continued

Special Clearances required for all sessions

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

Review on 25 Apr 87

~~CONFIDENTIAL~~

~~SECRET~~

25 September 1967

DEFENSE SCIENCE BOARD MEETING - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE:

WEDNESDAY/THURSDAY

Date of Meeting 27/28 SEPTEMBER 1967 Time 0900, 27 Sep - 1700; 0900 - , 28 September;

Place 27 Sept a.m.: 2D932; 27/28 Sept: 3E 267 - PENTAGON

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE AM	DATE PM	DATE AM	DATE PM	DATE AM	DATE PM	REMARKS
(b)(3):10 USC 424			✓	✓							Chairman
			✓	✓							Vice Chairman
			✓	✓							
			✓	✓							
			✓	✓							
			0430	✓							
			0430	✓							
			✓	✓							
			0430	✓							✓ out
			0430	✓							
			✓	✓							
			✓	✓							
			✓	✓							
			1000								
			[illegible]	✓							
			✓	✓							

DEF. SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee:

WEDNESDAY/THURSDAY

Date of Meeting 27/28 SEPTEMBER 1967 Time 0900 - 27 SEP; 0900 - 28 SEP

Place 0900 - 27 Sep: 2D 932; 27/28 September 3E 267, PENTAGON

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)			✓	✓								
				X								
				✓								
				✓								
			✓									
			✓									
			X									

THE SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: SCIENTIFIC ADVISORY COMMITTEE MEETING

Date of Meeting 7 December 1967 Time 0900 - 1600

Place The Pentagon, Room 3E 267

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424			✓	✓								
			✓	✓								
			X	X								
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			✓	tdy ✓								
			✓	✓								
			X	X								
			✓	✓								
			✓	tdy								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								

Page 1 of 1 Pages

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

(b)(3):10 USC 424

~~CONFIDENTIAL~~

11 December 1967

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE MEETING
7 DECEMBER 1967

I. (U) GENERAL: A meeting of the DIA/SAC was held on 7 December 1967 in the Pentagon, Room 3E 267. The meeting was convened at 0900 hours and adjourned at 1530 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was [redacted] (b)(3):10 USC 424

III. (U) AGENDA: A copy of the tentative agenda is enclosed. Briefings "A" and "C" on that agenda were interchanged with respect to time of presentation. In lieu of item E, a detailed discussion was held on the visit of [redacted] to the JSTPS on 21 November 1967; the discussions that were held there with the JSTPS; and the best approach for the DIA/SAC to take in contributing to the DIA inputs to the JSTPS on the [redacted] (b)(1)1.4(c) The meeting was concluded at 1530 so that the China Collection Panel participants could attend that Panel meeting starting at 1600.

IV. SUMMARY:

A. ~~(S)~~ Before the formal briefings began, [redacted] read two letters. One [redacted] had prepared for transmittal to General Carroll on the subject of the approach that the ASW Working Group proposes to take. [redacted] signed the letter. The second letter was one from [redacted] (b)(1) to [redacted] on the subject of the [redacted] (b)(1) [redacted] (b)(1) Lengthy discussions ensued, and [redacted] [redacted] (b)(1) to prepare a follow-on letter to DIA addressing two specific questions: first, the question of adequacy as far as the military is concerned of the [redacted] (b)(1) [redacted] (b)(1) [redacted] (b)(1)

B. The briefing on the SOC's (Sensitive Operational Complexes) and associated equipment aroused much interest on the part of the Committee. The Committee clearly suspected that all this equipment and activity (and the large investment) constitute a land mobile ICBM program. It was suggested by [redacted] that possibly the appropriate element of DIA could be directed to make a more detailed evaluation of this problem. No specific Committee action was proposed at this time.

~~CONFIDENTIAL~~

Review On 11 Dec 87

~~SECRET~~

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

(b)(3):10 USC 424

C. ~~(S)~~ [redacted] also reported briefly on [redacted] (b)(1),1.4 (c)

D. ~~(S)~~ The briefing on the Moscow Parade clearly gave the Committee the impression that the Soviets are continuing to put great effort and extensive resources into enhancing their military strength. Of particular importance to considerations of the Soviet strategic defensive system was the appearance of a new modification of the SA-2, which appears to be designed capable of carrying a nuclear warhead.

E. ~~(S)~~ A complete update on the "Current Intelligence" was provided by [redacted] It was agreed with respect to the suspect GEM that [redacted] talk with [redacted] and then get in touch with [redacted] further discussion, with a view to reporting back to the next Committee meeting.

F. ~~(S)~~ After a brief review of the charts presented by [redacted] summarizing the ABM inputs to the JSTPS, the Committee went into the deliberations reported in "III," above. As a result of these deliberations, a letter was dictated by [redacted] to General Carroll on the subject of General Carroll's request that the DIA/SAC review the detailed [redacted] characteristics provided by DIA to the JSTPS; and [redacted] dictated a memorandum for the record, on the subject of the possible [redacted] These items are attached as enclosures. (b)(1),1.4 (c)

G. (U) The status reports were presented briefly and without major comment from the other Committee members, except that the [redacted] (b)(1) discussion continued from the early morning and resulted in the requested follow-on letter reported in "IV. A.," above.

H. (U) Future plans call for a full Committee meeting to be called between 25 January and 10 February 1967.

CERTIFIED:

(b)(3):10 USC 424.(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

7 DECEMBER 1967

TENTATIVE AGENDA

Room 3E 267

0900 - 1000	A	Current Intelligence	(b)(3):10 USC 424
1000 - 1030	B	Moscow Parade	
1030 - 1130	C	SOC's	
1130 - 1200	D	Summary of ABM Inputs to JSTPS	
1200 - 1230		LUNCH	
1230 - 1430	E	Details of (b)(1),1.4 (e) Inputs to JSTPS	
1430 - 1440		BREAK	
1440 - 1730	F	Executive Session	

1. ASW Status Report
2. (b)(1)
3. Collection Panel Status Report (b)(3):10 USC 424
4. Status Report
5. follow-up regarding inputs to JSTPS
   a. Remarks
   b. Committee Discussion
6. Future Plans

(b)(1),1.4 (e)

Special clearances required for all sessions except for Moscow Parade which is at a SECRET level.

4 December 1967

~~CONFIDENTIAL~~

Review On 4 Dec 87

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING - Thursday, 7 December 1967
The Pentagon, Room 3E 267, 0900 - CLEARANCE LEVEL: SI/TK

(b)(3):10 USC 424,(b)(6)

DIA/SAC Secretariat

(b)(2),(b)(3):10 USC 424

Review on 7 Dec 87

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: SCIENTIFIC ADVISORY COMMITTEE MEETING (continued)

Date of Meeting 7 December 1967 Time 0900

Place The Pentagon, Room 3E 267

NAME	REPRESENTING	SECURITY	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)			100 ✓	✓								
			X									
			1100	✓								
			1100	✓								
			1100	✓								
			100	✓								
			100 ✓	✓								
			1100 ✓	✓								
			X	X								
			X	X								
			1100	✓								
			✓	✓								
			1000 ✓	✓ 1524								
			✓ 1630	X								
			✓	✓								
			X	X								
			X	X								

page 24 page

DEA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: SCIENTIFIC ADVISORY COMMITTEE MEETING (continued)

Date of Meeting 7 December 1967 Time 0900

Place The Pentagon, Room 3E 267

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			900 ✓	X								
			X	X								
			✓	✓								
			✓	X								
			X	X								
			X	X								
			✓	✓								
			✓	✓								
			1100	✓								

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

26 March 1968

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
14 - 15 MARCH 1968

I. (U) GENERAL: A meeting of the DIA/SAC was held on 14 and 15 March 1968. The meeting on 14 March was convened at 0900 hours in Room 3E 267. This meeting adjourned at 1630; at ~~which time~~ 1800 hours the Committee was transported to Ft. McNair for a cocktail-buffet hosted by General Carroll. The meeting on 15 March was convened at 0915 in Room 1D 883 and adjourned at 1600 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. The Current Intelligence ~~Briefing~~ was an update since the last full Committee meeting in December. A relatively limited amount of new material was available. As a result of one part of the briefing, [redacted] requested for the next SAC meeting a briefing on the US "Order of Battle" with respect to BW/CW decontamination.

(b)(1),1.4 (c)

[redacted]

C. The SS-N-2 briefing indicated that it was very similar to the SHADDOCK missile. Performance characteristics were presented, after which three flight profiles were discussed in detail. It was noted that for one flight profile the missile (b)(1),1.4(c) [redacted] The modes of operation of the missile trackers and radar were discussed, as well as other features of the guidance capability. It was noted that, for a high-altitude flight profile, the missile has a range of (b)(1),1.4(c) [redacted]

Review On 26 Mar 88

~~SECRET~~

Reaction time of the system as related to submarine surfacing, launching missiles, and re-submerging was presented. The SS-N-3 missile was then discussed noting that it has a range of 4 1/2 to 22 nm. Details of the guidance system were presented, including [redacted] (b)(1),1.4(c) Details were also presented for the radar design and for the fuzing and warhead sub-systems. It was noted that the guidance appears to be suitable for incorporating good anti-jam capability. Also discussed briefly was [redacted] (b)(1),1.4(c) (b)(3):10 USC 4 commented emphatically that the SS-N-2 is an important threat to surface ships and that it is one version of the low altitude threat to the Navy. He indicated his desire to have the Navy brief at the next Committee meeting its capability to counter the SS-N-2. [redacted] suggested and it was agreed that [redacted] make a presentation on this subject at the next Committee meeting. (b)(3):10 USC 424

D. The DIAAP presentation on [redacted] (b)(1),1.4(c) presented a comparison between US and Soviet capability. As representative of US capability, data were presented on ship yards at the [redacted] (b)(1),1.4(c) [redacted] (b)(1),1.4(c) because of the characteristically partial utilization, limited by governmental policies and resources allocated to production.

E. [redacted] gave an introduction to a proposed project, [redacted] (b)(1),1.4(c) [redacted] then explained this collection effort in detail. He discussed the geographic and geometric relations involved and also discussed major US and Soviet equipment related to the proposal. The general [redacted] (b)(1),1.4(c) was described, as were prime equipment aspects, including an [redacted] (b)(1),1.4(c) A summary was presented. The Committee raised numerous questions and indicated an unclear understanding of a number of specific details. [redacted] then made additional observations. He noted that collection actions started in November 1967, but that [redacted] (b)(1),1.4(c) However, this was not considered a continuing major problem. Additional discussion ensued. [redacted] indicated that he understood and supported the purpose of the project and was inclined to support a minimum program of this type. During the technical discussion and the cost-estimate discussions, [redacted] withdrew from the Committee meeting in order to avoid a conflict of interest situation. (b)(3):10 USC 424

(b)(3):10 USC 424

F. [redacted] introduced [redacted] who presented the briefing on the recent [redacted] He indicated that the study included: [redacted] response to a comment made by [redacted] indicated that as of 11 March FTD had started a similar study of errors associated with Soviet ICBM's systems. He noted that this was but the beginning of a study, with a preliminary report due from the DIA to JCS on 15 April. It was agreed that the study should be an agenda item for the next Committee meeting.

G. [redacted] discussed the Soviet Capabilities [redacted] and plans for reevaluation of [redacted] His discussion included only the approach and current status of this analysis which is underway. He indicated that war-gaming efforts along this line had been undertaken by the Joint Staff. [redacted] suggested that with his MINUTEMAN experience [redacted] could perhaps help in this study by providing data on US missile characteristics. [redacted] indicated that he felt he had most of the data necessary. [redacted] indicated a need for volunteers from the Committee to review the study results, and [redacted] agreed to help.

(b)(1),1.4 (c)

H. [redacted] strongly complimented him on the presentation and requested that a letter of commendation be prepared by the SAC Secretariat. [redacted] also requested that the DIA collect all analyses of Soviet [redacted] vulnerability and present that information to the Strategic Panel.

(b)(1),1.4 (c)

I. [redacted] briefly discussed recent information on the [redacted] His report that certain signals had been received raised the question by [redacted] as to why other equipment did not receive the same signals. As the result of this, [redacted] requested that a letter be written for his signature. [redacted] indicated that he has good confidence that we have received [redacted] signals and went on to discuss an analysis which he has developed which relates the various [redacted] He proceeded to explain that he feels that the [redacted] and new equipment at [redacted] are a family of radars representing a continuing evolution. He enumerated in detail specific reasons for this belief. He noted the deployment date for both [redacted] and the relationship of those dates to the October 1962 tests. He further discussed the things that he felt the [redacted] was not and theorized that it is used as a near real-time [redacted]

(b)(3):10 USC 424

(b)(1),1.4 (c)

[redacted]

(b)(1),1.4 (c)
(b)(3):10 USC 424

K. Following lunch the Committee met in Executive Session to discuss the [redacted] and its targeting by the JSTPS. [redacted] discussed the letters written on the subject and noted the limitation of DIA responsible in relation to that of the Joint Staff and JSTPS.

L. [redacted] made his two brief presentations as noted on the agenda.

M. The Committee then returned to Executive Session. Initially presented was a review of the ASW Working Group activity. This included discussion of the meetings and findings which are reported in the current draft reports. The more detailed of these reports is a joint DIA-DIA/SAC report, and the other is a shorter, draft, DIA/SAC report. Details were discussed of our communication capability with the POLARIS submarines, and potential Soviet or CHICOM threats were reviewed. Also discussed was ASW [redacted] Certain possible improvements in the latter were discussed. [redacted] emphasized that he wanted to clear up two "classified rumors." (b)(1),1.4 (c) [redacted] He indicated that the next phase of the ASW study would consider in detail capabilities for trailing.

N. [redacted] reviewed the last Strategic Panel Meeting on 22-23 January, including a summary of the group's findings in relationship to SOC's. [redacted] indicated that he would like the SAC to review a report that the DIA is now doing for the Joint Staff, in relation to the CEP of Soviet missiles and the recent [redacted] of US missiles. The hardness of ICBM missiles was discussed in relation to soil behavior, EMP, gamma radiation, and [redacted] vulnerability panel.

N. The meeting adjourned at 1520 hours to Room 1E 864 where the Executive Session continued. The Collection Panel report, now in final draft, was verbally reviewed by [redacted] in the absence of [redacted] and the agreement of all Committee members present was indicated. The meeting adjourned at 1600 hours. (b)(3):10 USC 424

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

SECRET

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

14 - 15 MARCH 1968

REVISED AGENDA

Thursday, 14 March 1968
Room 3E 267

(b)(3):10 USC 424,(b)(6)

0900 - 0945	A	Current Intelligence
0945 - 1030	B	(b)(1):1.4(c)
1030 - 1145	C	SS-N-2 and SS-N-3
1145 - 1215	D	(b)(1):1.4(c)
1200 - 1300		LUNCH
1300 - 1500	E	(b)(1):1.4(c)
1500 - 1630	F	(b)(1):1.4(c)

Special clearances are required for all sessions.

CONFIDENTIAL

Review on ~~[illegible]~~

SECRET

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

Friday, 15 March 1968
Room 1D 883 (ISIC)

(b)(3):10 USC 424

0915 - 1000	A	Soviet Capabilities for [redacted] and Plans for Reevaluation of Soviet ICBM CEP
1000 - 1115	B	Missile Silo Hardness and III-C Model
1115 - 1210	C	(b)(1),1.4(c) Update, and (b)(1),1.4(c)
1210 - 1250	D	SA-2 and SA-3 Site and Facilities Update
1250 - 1320		LUNCH
1320 - 1345	E	Executive Session [redacted] JSTPS)
1345 - 1355	F	Possible New CHICOM (b)(1),1.4(c)
1355 - 1405	G	(b)(1),1.4(c),1.4(g)
1405 - 1600	H	Executive Session ASW Report Review of Strategic Panel Meeting, 22-23 Jan 68 Collection Panel Report

(b)(3):10 USC 424.(b)(6)

(b)(3):10 USC 424

21 March 1968

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14-15 March 1968 Time 0900

Place The Pentagon, Room 3E 267 (14); Room 1D883 (15)

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓		✓	✓					
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			✓	✓		✓						

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14-15 March 1968 Time 0900

Place The Pentagon, Room 3E 267 (14); Room 1D 883 (15)

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
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(b)(3):10 USC 424			✓	✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting March 1968 Time 0900

Place The Pentagon, Room 1E 267 (14); Room 1D 883 (15)

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)				✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 14 - 15 March 1968 Time 0900

Place The Pentagon, Room 3E 267 (14); Room 1D 883 (15)

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 14-15 March 1968 Time 0900

Place The Pentagon

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)						✓						
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 14 - 15 March 1968 Time 0900

Place The Pentagon

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424							✓					
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							✓					
							✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 14 - 15 May 1968 Time 0900

Place The Pentagon, 14 May, Room 2D 921; 15 May 2D 921 and 1D 883

NAME	REPRESENTING	SECURITY	14 DATE AM	14 DATE PM	14 DATE EX	15 DATE AM	15 DATE PM	15 DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			X	X	X	X	X					
			X	X	X	X	X					
			X	X	X	X	X					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	X	X	X					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	✓	✓					
			✓	✓	✓	X	X					
			✓	✓	✓	✓	✓					
			X	X	X	X	X					
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			✓	✓	✓	✓	✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424												
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	14 DATE AM	14 DATE PM	14 DATE EX	15 DATE AM	15 DATE PM	15 DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)						✓						
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			✓	✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	14 DATE			15 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
[redacted]			✓	✓								
(b)(3):P.L. 86-36			✓									
			✓									
			✓									
			✓									
(b)(3):10 USC 424,(b)(6)			✓									
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	14 DATE AM	14 DATE PM	14 DATE EX	15 DATE AM	15 DATE PM	15 DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)												
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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

31 May 1968

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
14 - 15 MAY 1968

1. (U) GENERAL: A meeting of the DIA/SAC was held on 14-15 May 1968. The meeting on 14 May was convened at 0900 hours in Room 2D 921; subsequent use was made of Room 1D 883 and Room 1E 864, where the meeting for the first day was adjourned at 1815 hours. The meeting was reconvened on 15 May at 0900 hours in Room 2D 921 and adjourned at 1600 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. The meeting was opened by (b)(3):10 USC 424 with a presentation of extensive new material in his area. Further elaboration herein is prohibited by security considerations.

B.

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

EXCLUDED FROM AUTOMATIC REGRADING: DOD DIR. 5200.10 DOES NOT APPLY

31 May 88

~~SECRET~~

C. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

D. (b)(3):10 USC 424 presented a report on an extensive study, which is not yet fully completed, on naval defense against surface-to-surface missiles. He pointed out that there are 106 detailed recommendations that he did not go into individually. Rather he proceded to relate the approach taken in the study and the factors considered. He indicated that the study undertook to evaluate the strength and weaknesses of the various Soviet systems including the SS N-2, SS N-3, SSC-1B, AS-2 and SSC-2B. Also considered were other foreign missiles of the type which might be used against surface ships. The study then proceded to consider various classical alternatives for countering such surface-to-surface missiles, including the following: [redacted] He then discussed tactical and technical needs that must be met to facilitate each of the above alternatives, with greatest emphasis placed on the third alternative. He also stated that the final report would include a description of what the ultimate SAM should incorporate. In conclusion he outlined the recommendations to be presented in the final report.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

E. (b)(3):10 USC 424 described the [redacted] having a rather limited capability and expressed the opinion that it might be a prototype for a vehicle perhaps three times larger than the current one.

F. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

(b)(1),1.4 (c) He particularly asked that FTD make a terrain masking chart for all of the known [redacted] sites similar to the one which was presented for a selected eleven sites. [redacted] also requested that FTD show, for the SAC, the percent that would be populated area out of the total area receiving effects from the defensive nuclear bursts.

(b)(3):10 USC 424

G. [redacted] described the SA-3 missiles and the typical site characteristics and associated radars. He indicated that the [redacted] radar is held by some analysis to have a MTI capability and he discussed the mechanical and electrical characteristics of the [redacted] radar. He presented the trends for the SA-1, SA-2, and SA-3 capabilities, collectively, versus time. [redacted] expressed the desire that [redacted] and all of DIA strongly consider revising the NIE relative to the SA-3 by presenting its low altitude capability for: [redacted]

(b)(1),1.4 (c)

(b)(3):10 USC 424

(b)(1),1.4 (c)

H. [redacted] discussed various types of CW agents and indicated a general weakness in the area of warning and alarms against such agents. He discussed the use of protective garments against contact agents and reviewed the capabilities of the various decontaminates, both natural and man-made. He reviewed the decontamination assets of our current forces in Europe, the Pacific, SVN, and the CONUS, and described planned improvements. The SAC Chairman expressed concern with respect to U.S. preparations in this area.

I. [redacted] presented to the Committee a brief analysis that he had accomplished on the SOCs. It consisted of a matrix of observed SOCs characteristics versus possible purposes for a SOC. From this tabulation an evaluation was formed as to the likelihood of a SOC being intended for a given purpose. Because of the preliminary, or superficial, nature of his effort, the results were inclusive; and he suggested that DIA, with a larger data base, pursue further this analytical approach. [redacted] agreed to this follow-up action.

(b)(3):10 USC 424

J. Following adjournment to 1E-864, [redacted] made a presentation of the proposed program for [redacted] He discussed the proposed capabilities for the system, various program alternatives, and contemplated DIA reductions to the proposed Army program. This discussion was followed by a resumption of deliberations relating to the [redacted] as described above in Paragraph C.

(b)(1),1.4 (c)

K. The HAVE DONUT film presented a comparison of Soviet aircraft, particularly the Mig-21, with various U.S. combat aircraft.

(b)(3):10 USC 424,(b)(6),

L. [redacted] briefed the Committee on the FTD "Technological Threat Study." He discussed the growth of Soviet technical personnel and facilities and reviewed procedures and practices characteristic of the Soviet R&D and test programs. He showed the accumulated growth of Soviet

product types. Following discussion of [redacted] (b)(1),1.4 (c) Finally, he presented an overall assessment of the Soviet strategy in regard to aerospace technology. (b)(3):10 USC 424 took exception to the implications inherent in a number of the conclusions presented.

(b)(3):10 USC 424 M. [redacted] reviewed the development of the test facilities labeled [redacted] from 1963 to the present. He explained that the initial assessment that this was a [redacted] (b)(1),1.4 (c) He indicated that current evidence shows the possible presence of [redacted] However, it also appears that there are indications of an [redacted] (b)(1),1.4 (c) as would be needed for [redacted] Thus the evidence is inclusive, and there is a possibility that the site has a dual purpose. The Committee was able to provide no additional assessment.

N. [redacted] briefed on the [redacted] test facility showing that a number of indicators pointed to some activity [redacted] (b)(1),1.4 (c) The overall build-up of test facilities in this vicinity was reviewed and evaluated. The Committee could reach no definite conclusions to the significance of the reported observations. It was agreed that the DIAST report on this facility, being prepared [redacted] (b)(1),1.4 (c) Albuquerque on 21 May.

O. [redacted] briefed on a [redacted] (b)(1),1.4 (c) [redacted]. This signal was repeated every minute but one for 4 hours, [redacted]

P. [redacted] reviewed the concept of [redacted] and reported that bi-static detection of a missile had been accomplished. [redacted] gave a detailed explanation as to the factors assuring that the target seen was actually the missile in question. The Committee endorsed the [redacted] operation and requested to be kept up-to-date on future progress.

(b)(1),1.4 (c)

Q. In the Executive Session, [redacted] gave a brief report on [redacted] including a brief description of the field trip to Fairbanks, Alaska. [redacted] deferred till later. [redacted] reviewed the charter letter from General Carroll on the subject of trends in Soviet ICBM developments. Considerable discussion among Committee members followed. [redacted] summarized this question by saying that the issues are: (1) what are the Soviets likely to do? (2) how do we go about observing what the Soviets do? It was suggested that the study should be a joint DIA/SAC - DIA study. Some (b)(3):10 USC 424

(b)(1),1.4 (c)

discussion was held on [redacted] in relation to this study. [redacted] (b)(3):10 USC 424 expressed the belief that the Committee as presently constituted was not qualified [redacted] [redacted] stated that the vice chairman would have to take over the chairman's functions for the next few months, as he would be fully occupied in other ways. (b)(1),1.4 (c)

R. [redacted] summarized his recent [redacted] Study. He described the nature of the U.S. vulnerability and discussed the possible duration of [redacted] as well as corrective actions taken and underway. A number of problems and alternatives were discussed between [redacted] and the Committee.

S. [redacted] then reported on a recent review of our [redacted]

(b),1.4 (c)

(b)(1),1.4 (c)

T. The Committee met in final Executive Session; and [redacted] summarized his observations [redacted] which he anticipated presenting to [redacted] prior to 15 June and subsequently in a written report to General Carroll. He outlined alternatives for drastically altering the organizational structure relating [redacted] Five or six alternatives were proposed by [redacted] for the Committee's consideration. [redacted] noted that any consideration of re-organization or re-lignment should be closely tailored to a [redacted] He also expressed the thought that there is perhaps [redacted] intelligence in a separate and special operation different from all other technical intelligence collection. Both [redacted] and [redacted] observed [redacted] over-staffed but that their interests are simply to make it better able to accomplish its function. [redacted] observed that there is a need to work from a clear mission statement with the scope and limitations [redacted] clearly defined. It was concluded that [redacted] should prepare recommendations to be referred back to the DIA/SAC for review before going forward to [redacted] or General Carroll. (b)(1),1.4 (c) (b)(1),1.4 (c)

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

14 - 15 MAY 1968

REVISED AGENDA

Tuesday, 14 May 1968
Room 2D 921

		Current Intelligence	
0900 - 1000	A	PHOTINT	(b)(3):10 USC 424
1000 - 1045	B	(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)	NSA
1045 - 1145	C	Soviet ABM Radar	(b)(3):10 USC 424,(b)(6)
1145 - 1330	D	Defense Against SS-N-2	
1330 - 1410		LUNCH	
1410 - 1430	E	[redacted]	
		Product or Task Review	
1410 - 1510	F	[redacted] (b)(1),1.4 (c)	
1510 - 1550	G	SA-3 Capabilities	
		General Item	
1555 - 1630	H	U.S. Order of Battle for BW/CW Decontamination	
		Executive Session	
1630 - 1645	I	SOCs	
1645 - 1740	J	[redacted] Program Review	
1740 - 1815	K	Continued Discussion of [redacted]	

(b)(1),1.4 (c)

Review On 15 May 88

~~SECRET~~

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

Wednesday, 15 May 1968
Room 2D 921

(b)(3):10 USC 424,(b)(6)

0900 - 0930 A HAVE DONUT (Film)

Room 1D 883

0930 - 1100 B Technological Threat Study

Room 2D 921

New Developments

1110 - 1140 C PEANUTS (b)(1),1.4 (c)

1140 - 1200 D [redacted]

1200 - 1230 E

1230 - 1320 LUNCH

1320 - 1355 F [redacted]

Executive Session

1355 - 1445 G DIA/SAC Planning and Action

1. Charter for SAC Study of Soviet ICBM Trends
2. ASW Working Group
3. [redacted] (b)(1),(b)(6),1.4 (c)
4. Future Plans & Action

(b)(3):10 USC 424

Product or Task Review

1445 - 1510 H [redacted] Summary (b)(1),1.4 (c)

1510 - 1525 I Summary of Soviet CEP Review

Executive Session

1525 - 1600 J [redacted]

(b)(1),(b)(6),1.4 (c)

16 May 1968

SECRET

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

5 August 1968

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

22 JULY 1968

I. (U) GENERAL: A one-day meeting of the DIA/SAC was held in the Pentagon on 22 July 1968. The meeting convened at 0910 hours in Room 2D 921. Following the initial briefing, the meeting was adjourned to Room 3E 267 and was finally adjourned at 1700 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. The meeting began with a briefing by (b)(3):10 USC 424 covering the following three areas: the changing aspects of national intelligence imagery, allocation of resources for obtaining optimum coverage (cost/effectiveness), and camouflage. He presented a comparison of coverage annually from 1956 to the present of nationally directed effort. Various camera systems were compared, and the degree of intelligence detail revealed was discussed as a function of linear resolution. He discussed the procedure for control for assuring the desired coverage and treated three areas of utilization: search, base line, and surveillance. Camouflage was discussed under the general headings of deception, concealment and blending, and some specific information in this area was presented.

B. (b)(3):10 USC 424 described the proposed new Assistant Director for Intelligence System Development, within DIA. He reviewed the background motivation for establishment of the new directorate. Based on initial portions of the briefing, the DIA/SAC Chairman expressed the opinion that the alleged charter for the new directorate went beyond the scope of responsibility of DIA. (b)(3):10 USC 424 briefly restated the purpose of the new directorate to the effect that its function will be to determine what are the needs of the Director, DIA, for intelligence information in various areas. He proceeded to discuss in some detail the planned elements of the new directorate. These were listed as the following:

5 Aug 68

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Systems Analysis and Evaluation Office, System Development Plans Office, Support Systems Office, Intelligence Experimentation Center, ADP Operations Center, and a staff office for USIB Support. (b)(3):10 USC 424 was asked to discuss in further detail various questions relating to the Intelligence Experimentation Center. The Chairman of the DIA/SAC questioned generally the advisability of the contemplated new directorate together with its stated purpose. It appeared that there was a general lack of effective communication between the briefer and the Chairman of DIA/SAC.

C. Following brief introductory comments by (b)(3):10 USC 424 and the Chairman, (b)(3):10 USC 424 presented a briefing on the value of optical intelligence data to the Army ABM program. He presented optical intelligence requirements under three general headings: (1) mid-course detection and discrimination, (2) continuous surveillance to reveal new indicators and (3) assessment of [redacted] He then discussed the [redacted] and stated that
(b)(1),1.4 (c) [redacted] is not having the impact it should have on our intelligence and ABM efforts. He asserted that the problem falls into two categories (1) the sensor system is mismatched to today's job, (2) new sensor technology is not being applied. He stated that optical data gathering has been successful in connection with the flight of US reentry vehicles and concluded that data on [redacted] can be useful and
(b)(1),1.4 (c) that the [redacted] system could be upgraded beneficially.

D. Following a brief break for lunch, [redacted] presented a proposed program for the upgrading of [redacted] He reviewed [redacted] (b)(3):10 USC 424 general points with respect to requirements under the three headings mentioned above. He showed specific technical relationships that can make use of optical observables as inputs. He reviewed various work that has been done, including optical experiments from [redacted] (b)(1),1.4 (c) [redacted] He discussed the proposed upgrading of [redacted] in terms of five performance areas: (1) daylight acquistion system (2) high resolution, (3) daylight imagery, (4) optical aircraft position determination to an accuracy of 1000 feet (after the fact using the star background), (5) LWIR.

E. (b)(3):10 USC 424,(b)(6) FTD, presented an update briefing on the SA-5 system. He presented the most recent assessments of the missile and radar characteristics including new performance characteristics. He reviewed the performance characteristic of the deployed [redacted] (b)(1),1.4 (c) [redacted] He then described the wargaming of MINUTE MAN and Polaris missiles employed against key Soviet targets. Using "sure kill criteria", he presented [redacted] U.S. direction of attack, and U.S. warhead vulnerability. [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c) [redacted]

E. [redacted]

(b)(1),1.4 (c) [redacted] He then reviewed the contents of the report that he felt needed the full Committee's consideration and approval. He then described what the report presents as a "requirements" problem. He described this problem in some detail and advised a four step process in this regard. Based (b)(1),1.4 (c) [redacted] discussion of the draft, the Chairman authorized [redacted] to proceed to edit and publish the report, on the basis of mutual agreement on necessary minor changes.

(b)(3):10 USC-424

F. [redacted] briefly described new developments with respect to the SOCs. He identified a new location and described some newly reported activities.

G. The Chairman next addressed the subject of [redacted] earlier briefing. It was generally agreed that the technical comments made by [redacted] were highly optimistic and that additional development effort would be required to achieve the performance described and needed for an upgraded [redacted] The discussion then turned to [redacted] and its capabilities with respect to collecting data against Soviet targets. This led to a general consideration of collection means for determining developments of the [redacted] It was agreed that the next full SAC meeting should be devoted to (1) briefings on the various U.S. collection means employable against such [redacted] and (2) a discussion and formulation of collection recommendations by the DIA/SAC. This meeting is to be held in mid-September.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

H. [redacted] reported on the status of the joint DIAST - DIA/SAC ASW report already forwarded to General Carroll. [redacted] read his transmittal letter for the DIA/SAC report on "The Threat to Polaris Command and Control", briefly discussed the report, and signed the letter of transmittal to General Carroll.

(b)(1),1.4 (c)

I. [redacted] briefly reported on [redacted] on Soviet ICBM fuzing.

(b)(1),1.4 (d)

(b)(3):10
USC 424

J. [redacted] briefly discussed possibilities of the SAC undertaking to advise DIA on the general subject of jamming and spoofing of our intelligence data gathering means. This topic was discussed only briefly, and the meeting adjourned without reaching any specific conclusion on this matter.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

22 JULY 1968

REVISED AGENDA

Room 2D 921

New Developments

(b)(3):10 USC 424,(b)(6)

0910 - 1045	The Changing Aspects of Reconnaissance Activities
1045 - 1055	BREAK

Room 3E 267

1055 - 1200	Asst Director for Intelligence System Development (New)
1200 - 1315	ABMDA Requirements for Optical Intelligence
1315 - 1330	LUNCH
1330 - 1435	Proposed Upgrading of [redacted] (b)(1),1.4(c) [redacted]
1435 - 1440	BREAK

Product or Task Review

1440 - 1520	SA-5 Self Defense

~~CONFIDENTIAL~~

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

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Executive Session

(b)(1),1.4 (c)

1520 - 1600 [redacted]

1600 - 1605 Additional Information on SOC's

1605 - 1640 [redacted] & Sensors Discussion

(b)(1),1.4 (c)

1640 - 1650 ASW Reports Status

1650 - 1655 Note of [redacted]

(b)(1),1.4 (d)

1655 - 1700 Advice from SAC on Jamming and Spoofing

(b)(1),(b)(3):10 USC 424

Special access clearances required for all sessions except 1130 to 1400 hours.

29 July 1968

~~CONFIDENTIAL~~

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DIA SCIENTIFIC ADVISORY COMMITTEE

The Pentagon, Room 3E267
Friday, 22 July 1966

TENTATIVE AGENDA

(b)(3):10 USC 424

0830 - 0915 A Current Intelligence Review

B Selected Intelligence Subjects:

0915 1. Over-the-horizon radar

0945 2. (b)(1),1.4 (c) [redacted]

1000 3. [redacted]

1015 4. [redacted] (Memo 11-2)

1030 5. Review of evidence pertaining to Orbital Bombardment

1045 - 1100 C Review of Missiles Report 66-3

1100 - 1115 D 1. ASW Letter - (b)(3):10 USC 424

1115 - 1130 2. ASW Letter - (b)(3):10 USC 424 to General Carroll

1130 - 1300 E Discussion of future plans:

(b)(3):10 USC 424

1. China (8-9 September)

2. ASW Panel (China), 23 August

3. Nuclear Panel (China)

4. Missiles Panel (China)

5. SU-US Buildup Curves (15 November)

6. New Members for DIA/SAC

1300 - 1330 F LUNCH (Photograph of Committee with General Carroll and [redacted]

DIA SCIENTIFIC ADVISORY COMMITTEE

MEETING WITH DIRECTOR, DIA

Friday, 22 July 1966

1330 - 1630 Committee meeting with General Carroll:

1. Presentation of Missiles Report

2. Discussion of ASW Letter - (b)(3):10 USC 424 to General Carroll

3. DIA/SAC FY 66 Annual Report

4. Committee and Panel Plans and Objectives, FY 1967

5. Discussion of New Members for DIA/SAC, FY 1967

20 July 1966

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE - FIRST ANNUAL MEETING

Date of Meeting Friday, 22 July 1966 Time 0830 - 1600

Place The Pentagon, Room 1E 864

NAME	REPRESENTING	SECURITY	21 Jul* DATE AM	PM	EX	22 July DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
(b)(3):10 USC 424				✓	✓	✓	✓					
				✓	✓	✓	✓					
						X	X					No reply
						X	X					vacation
						X	X					other commitment
						X	X					
						✓	✓					
						✓	✓					
				✓		✓	X					
						✓	✓					
						✓	✓					
						X	X					
						X	X					Sick
					✓	✓	✓					
				✓	✓	✓	✓					
						✓	✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE - FIRST ANNUAL MEETING

Date of Meeting Friday, 22 July 1966 Time 0830 - 1600

Place The Pentagon, Room 1E 864

NAME	REPRESENTING	SECURITY	DATE			22 July DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424						✓	✓ (ABW)		partial			
						✓	✓					
						✓	✓					
						✓	✗					
						✓	✓					
						✓	✗					
						✓	✗					
						✓	✗					
						✓	✓					
						✗	✓					
						✗	✓					
						✗	✓					
						✗	✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 22 - 23 July 1968 Time 0900

Place 2D 921 and 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	22 Jul DATE			23 Jul DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓								
			✓	✓								
			✓	✓		✓	✓					
			✓	✓								
			✓	✓		✓	✓					
			✓	✓		✓	✓					
			✓	✓		✓	✓					
			✓	✓		✓	✓					
			✓	✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓			✓	✓					
			✓	✓								
				✓								
						✓	✓					
				✓								
						✓	✓					
				✓								
				✓								
			✓	✓		✓						

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)												
			✓	✓								
			✓									
							✓					
						✓						
						✓	✓					
				✓								
			✓	✓								
			✓	✓								
				✓								
			✓	✓								
						✓	✓					
				✓		✓	✓					
						✓	✓					
						✓	✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424.(b)(6)						✓	✓					
			✓	✓								
			✓	✓								
				✓		✓						
			✓	✓								
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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C., 20301

~~CONFIDENTIAL~~

6 March 1969

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

30 JANUARY 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 30 January 1969 in Room 3E 267, The Pentagon. The meeting convened at 0930 hours and adjourned at 1850 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. After a delay in starting because of transportation difficulties for the members, (b)(3):10 USC 424 opened the meeting with a presentation covering the DIAXX area. This was a comprehensive briefing, since the full Committee had not been briefed for several months. With respect to the Soviet Union he covered ICBM forces and developments, submarine forces and construction, ABM radars and systems developments and facilities, a (b)(1),1.4 (c) [redacted] tactical missiles and deployment, and aircraft deployments and facilities. With respect to China, he discussed (b)(1),1.4 (c) [redacted] CHICOM aircraft developments and the CHICOM SOCs.

B. (b)(3):10 USC 424 reviewed the [redacted] (b)(1),1.4 (c) program and posture. He discussed [redacted] (b)(1),1.4 (c) [redacted] He then discussed the significance [redacted] (b)(1),1.4 (c) and presented a schedule of assessed nuclear operational capability and capability growth with time.

C. (b)(3):10 USC 424 reviewed the CHICOM nuclear developments to date.

(b)(1),1.4 (c) [redacted]

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DOD DIR. 5200.10

(b)(3):10 USC 424

D. [redacted] discussed the Soviet SS-9 flights involving [redacted] tiple RVs. He pointed out that these tests [redacted] (b)(1),1.4 (c) [redacted] He presented an error budget for this [redacted] and estimated that the system tested was either of two extremes: either a [redacted] on the other hand, [redacted] (b)(1),1.4 (c) [redacted] The Committee had extensive discussion over the significance of known data. Questions were raised as to several aspects of the approach to the analysis and the merit of certain technical considerations.

E. Following lunch, [redacted] made a presentation on the unique data obtained on [redacted] (b)(1),1.4 (c) [redacted] He indicated that there was substantial uncertainty on some aspects of the data and that extensive analysis was still underway. [redacted] presented some detailed explanations of [redacted] (b)(1),1.4 (c) the data obtained. Certain deficiencies were noted in regard to collection capabilities, and [redacted] asked [redacted] to draft a letter to General Carroll regarding certain readily available improvements to counter the indicated collection deficiencies.

(b)(3):10 USC 424

F. [redacted] began the discussion of the use of satellites for [redacted] by reviewing the capabilities of the [redacted]

(b)(1),1.4 (c)

[redacted]

payloads in a synchronous satellite. These ranged in cost from 21 million to 28 million dollars. (b)(3):10 USC 424 [redacted] preference for the second one of the first three options, involving a cost of 14.2 million dollars. The Committee entered into substantial discussion on the validity of the need for collecting data from a satellite. At 1555 hours the Chairman asked that the meeting go into Executive Session.

G. In Executive Session the Committee continued the on-going [redacted] This discussion was terminated with [redacted] dictating for Committee comment the draft of a proposed letter to General Carroll on the question of [redacted] General Carroll then joined the meeting and [redacted] reviewed for him the discussions which the Committee had held during the day. This included the question raised by [redacted] the [redacted] vehicle discussion. Following this, the Committee members addressed a number of questions to General Carroll; and a general discussion ensued on strategic intelligence and the activities of DIA.

(b)(1),1.4 (c)

(b)(3):10 USC 424

(b)(1),1.4 (c)

(b)(1),1.4 (c)

H. Following General Carroll's departure, [redacted] discussed with the Committee members the proposed task for the SAC to advise DIA in the information sciences area. He also discussed a revised mode of operation for the SAC involving monthly full Committee meetings, with ad hoc working groups, as required, in lieu of the standing panels with which the Committee had been operating over the past year-and-a-half. He also suggested the need for the Committee to plow some new ground, that is, to get involved with a broader spectrum of the DIA activities. The Committee generally agreed on these proposals. In Conclusion [redacted] asked [redacted] to read the draft letter on improved collection capabilities, and the Committee concurred therewith. [redacted] expressed the desire to make appropriate checks with [redacted] on Friday and to be allowed to revise his draft letter if the new information he obtained warranted. [redacted] agreed, and the meeting adjourned at 1850 hours.

CERTIFIED BY:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

30 JANUARY 1969

REVISED AGENDA

Room 3E 267

Current Intelligence

(b)(3):10 USC 424

0930 - 1115 DIAXX

1115 - 1205

(b)(1),1.4 (c)

1205 - 1220

1220 - 1330 SS-9 [redacted]

(b)(3):10 USC 424

1330 - 1350 LUNCH

(b)(1),1.4 (c)

1350 - 1445 Possible ABM [redacted]

New Developments

1445 - 1555

(b)(1),1.4 (c)

Executive Session

(b)(1),1.4 (c)

(b)(3):10 USC 424

1555 - 1620 Discussion of [redacted] Recommendation Regarding Satellites

1620 - 1745 Discussion with General Carroll:

(b)(1),1.4 (c)

a. [redacted] Recommendation Regarding Satellites Reviewed
b. Earlier Briefings and SAC Reaction Thereto Reviewed.
c. General Discussion of Intelligence and DIA Activities.

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DOD DIR. 5200.10

1745 - 1810	Discussion of Information Sciences Tasking and Future SAC Modus Operandi	(b)(3):10 USC 424
1810 - 1815	Review and Approval of Letter on ABM Data Collection (drafted by (b)(3):10 USC 424	

4 February 1969

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

23 April 1969

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

27 MARCH 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 27 March 1969 in Room 3E 267, The Pentagon. The meeting convened at 0900 hours and adjourned at 1755 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was [redacted] (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. [redacted] (b)(3):10 USC 424 opened the meeting with a presentation of recent information obtained in his area on both the Soviet Union and the CPR. This was an update from 30 January of areas of primary interest to the DIA/SAC.

B. [redacted] (b)(3):10 USC 424 briefed the SAC on recent developments over a broad spectrum of Soviet radar efforts. He discussed the SA-2 radar (b)(1),1.4 (c) [redacted] of a site near Haipong, Vietnam, and discussed recently demonstrated ECCM capability. He next discussed briefly the [redacted] He then discussed the [redacted] (b)(1),1.4 (c) [redacted] as observed in East Germany and in certain test operations. He also discussed a [redacted] used with the [redacted] (b)(1),1.4 (c) He then reported on various new radars seen at Soviet airports; these were assessed to be for air traffic control purposes. He briefly discussed the probable fire control radar in the SA-5 system, [redacted] (b)(1),1.4 (c) (b)(1),1.4 (c) [redacted] He then reported new developments regarding the [redacted] (b)(1),1.4 (c) [redacted] The SAC urged that DIA not publish this assessment as firm yet.

C. [redacted] (b)(3):10 USC 424 summarized the draft ASW report, going over the conclusions one-by-one. Although there was general agreement, extensive discussion was held over the conclusions collectively. All conceivable implications of these conclusions were reviewed. A number

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NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

of modifications, mostly minor, were recommended for incorporation in the report. In particular, it was decided to recommend that the Navy carry out certain tests in regard to active sonar tracking. Admiral Lowrance was present and participated in the entire discussion. (b)(1),1.4 (c)

(b)(3):10 USC 424

D. After lunch [redacted] briefly [redacted] and said that he fully agreed with it, and the Committee concurred with the report. [redacted] requested [redacted] to draft a letter to [redacted] emphasizing two points: [redacted] (b)(1),1.4 (c)

(b)(3):10 USC 424

E. [redacted] summarized for the full SAC his findings as a result of the meeting on 19-20 March at FTD on the subject of Soviet [redacted] for the SS-9. He clearly indicated his assessment that this was a MIRV effort for the SS-9. General discussion of this question was held by the SAC. It was requested that [redacted] and [redacted] investigate to see whether it appears that the guidance system cut-off equations were applied individually to the release of each of the [redacted]

(b)(1),1.4 (c)

F. General Carroll then joined the meeting and the subject of the SS-9 [redacted] was discussed for his benefit. [redacted] summarized the SAC opinion, based on the earlier discussion, that the SS-9 multiple scheme could be made to have independent capability for each of the [redacted] but that, on the basis of the data presently available, the SAC did not know whether the Soviets now have that capability. Individual Committee members were then asked to add their own comment. [redacted] essentially agreed without reservation or significant added comment. [redacted] expressed concern over the fact that the [redacted] would make them highly vulnerable to a single [redacted] missile. He suggested that the tests we have observed are possibly prototypes to a capability to disperse more widely. [redacted] expressed the idea that the real problem is the accuracy of the [redacted] and that accuracy as compared to the accuracy of the single SS-9 RV. He expressed reservations regarding friction and other factors in deployment of a [redacted] He later suggested the merit of a laboratory type dynamic test model to be built and tested for confirmation of our intelligence evaluation. [redacted] expressed the thought that a better engineering model than those described by [redacted] could be designed to fit the data available. However he expressed the firm conviction that the Soviets are far down the road [redacted] [redacted] noted that the FTD meeting revealed three or four different possible mechanizations (models) with very little difference in results as regards [redacted] footprint. He considered this impressive. [redacted] enumerated a number of logical arguments and technical indicators suggesting that the SS-9 [redacted] to give the Soviets a first strike capability. He suggested that other Soviet measures would be addressed to POLARIS, POSEIDON, B-52's, etc. (b)(1),1.4 (c) (b)(3):10 USC 424 (b)(1),1.4 (c)

(b)(3):10 USC 424

G. Following a brief break, [redacted] reported on four suspected ABM tests at [redacted] and their relation to certain SS-4 flights into [redacted] He presented assessed SS-4 and ABM trajectories and intercept points for one such test. [redacted] then presented information in relation to this hypothesis. He stated that certain analyses positively precluded ABM "A" trajectories as described by [redacted] He also observed that [redacted] the interceptor if the intercept event were at the alledged location. The Committee then pondered somewhat the question of what the alledged [redacted] might have really been, without reaching any satisfactory conclusion.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

H. [redacted] then briefly considered the overall ICBM report in response to General Carroll's letter of 10 April 1968. He then focused on the draft report material prepared by [redacted] on Soviet ICBM observables and collection approaches against them. [redacted] collection recommendations were reviewed and discussed item-by-item. Discussion then centered on the question of [redacted] Various possibilities as between [redacted] upgrading were discussed in detail. [redacted] agreed to look further into all aspects of the limitations on ARIS upgrading, as an input to further consideration of [redacted] question.

(b)(1),1.4 (c)

I. The meeting was adjourned at 1755.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosure a/s

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

27 MARCH 1969

REVISED AGENDA

Room 3E 267

0900 - 1020	PHOTINT	(b)(3):10 USC 424
1020 - 1135	Soviet Radar Developments	
1135 - 1230	ASW Report Summary, Discussion and Recommended Revisions	
1230 - 1310		(b)(1),(b)(3):10 USC 424,1.4 (c)
1310 - 1320		
1320 - 1420	[redacted] Development and Test	(b)(3):10 USC 424
1420 - 1455	General SAC Discussion of the [redacted] Question	
1455 - 1600	SAC Discussion with General Carroll of [redacted]	
1600 - 1610	BREAK	
1610 - 1700	Recent Soviet ABM Testing	
1700 - 1715	Arrangements discussed for preparation of Reports on [redacted] and [redacted]	
1715 - 1755	Expected Observables and Collection Approaches Against [redacted] Discussed	

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

2 April 1969

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DOWNGRADED [illegible];
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

Date of Meeting 27 March 1969 Time 0900

Place 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓								
			✓	✓								
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
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			✓									
			✓									
			✓	✓								
				✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424				✓								
				✓								
			✓	✓								
			✓	✓								
				✓								
				✓								
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			✓	✓								
			✓									
			✓									

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
Adm Lawrence			✓									
Gen Cassidy				✓								

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

[redacted]

25 September 1968

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

18-19 SEPTEMBER 1968

I. (U) GENERAL: A meeting of the DIA/SAC was held on 18-19 September 1968. The meeting on 18 September was convened at 0915 hours in Room 1E 864 and adjourned at 1805 in Room 1E 872. The meeting was reconvened on 19 September at 0900 hours in Room 3E 267 and adjourned at 1535 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was [redacted]

(b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. ~~(S)~~ SUMMARY:

A. The meeting opened with a general discussion of the agenda for the two days and a review of the generation and distribution of DIA/SAC Report 68-3. The Committee spent some time reading briefly, or reviewing, Report 68-3. They subsequently discussed the meeting of [redacted] and [redacted] with Secretary Brown on certain aspects of arms limitation. [redacted] emphasized the Secretary's concern over the problems of (1) distinguishing between SAMs and ABMs and (2) inspection. In this connection [redacted] specifically mentioned the memo on the "Soviet ABM Capability" from [redacted] the Joint Staff. [redacted] briefly reviewed [redacted] points to Dr. Brown on the requirement for large radars in an ABM system. [redacted] noted that the Committee now appeared to owe Secretary Brown inputs on 3 topics: (1) inspection, (2) question of SAM as ABM, and (3) weapons and systems of strategic significance not covered in SAC Report 68-3 (promised in the report).

B. The SAC then spent 30 minutes in discussion with [redacted] and [redacted] Air Weather Service. The discussion centered around weather conditions and photographic capabilities with respect to the far northern regions of the Soviet Union. The Committee then spent 40 minutes in discussion with [redacted] concerning our intelligence on the [redacted]

(b)(1).1.4(c)

[redacted] expressed general agreement with the content of the Report 68-3; however he noted omission of treatment in the report of cruise missiles with substantial increase in range, which

[redacted]

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DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

he felt could have a major strategic impact. Possibilities and various indicators relating to Soviet [redacted] were discussed briefly.

(b)(1),1.4 (c)

(b)(1),1.4 (c) C. Following a break, the Committee read and discussed a draft report on possible Soviet [redacted] efforts, prepared by [redacted] It was generally agreed that the available evidence strongly indicates a Soviet [redacted] program. [redacted] emphasized three points: (1) the evidence clearly allows such a program, (2) [redacted] are simple to achieve, and (3) pay-off to the Soviet Union for [redacted] is great in view of the U.S. defense posture. [redacted] therefore, concluded that we must assume that the Soviets are pursuing such a program, and the Committee agreed. The draft report was reviewed line-by-line, and detailed corrections were entered in accordance with full Committee agreement.

(b)(3):10 USC 424

D. A similar review and discussion followed on the draft CEP Report, also prepared by [redacted] It too, was reviewed line-by-line, and corrections or modifications were introduced in accordance with general SAC agreement.

E. Following lunch, [redacted] presented a detailed briefing generally covering radar capabilities for characterizing foreign reentry bodies. He discussed the source of information for determining the presence of more than one RV on a given launch. He then discussed new systems for gathering information [redacted] etc. He explained a [redacted] He then presented his recommendations on the most promising observations for determining the presence of [redacted] He concluded with discussion of the most promising systems for detecting and identifying [redacted] The [redacted] system was strongly endorsed by [redacted] and the Committee in general. The SAC again expressed the strong consensus reached on 4 June that the [redacted] should have [redacted] installated. [redacted] agreed to check on the program for installation of such a device.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

F. [redacted] then discussed the use of [redacted] identification and evaluation. He spoke in summary of a draft paper which he had prepared on that subject and emphasized that the things that were recommended were things which have already been done with [redacted] He indicated that his paper attempted to point out three things: (1) what contributions can be made by [redacted] (2) on what platforms are each of the devices most appropriate, and (3) what unique contributions can be made [redacted] In summary he endorsed the use of a [redacted] on [redacted] to provide details of [redacted] from flights into the Pacific. He also discussed a [redacted] to be installed on [redacted] for obtaining [redacted] He emphasized that his analysis utilized

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

two primary selection criteria: (1) the endorsed equipment must be existing harware and (2) the data obtainable must be of substantial use in [redacted]

G. (b)(3):10 USC 424,(b)(6) FTD, presented a discussion of Soviet [redacted] (b)(1),1.4 (c) events of 23 August and subsequent dates. He reviewed the data obtained, and that missed, and presented an evaluation and assessment of the Soviet activities. Because of the recent nature of the events, all data obtained were not available to his analysis; and he emphasized that the results were therefore preliminary.

H. In conclusion of the first day's meeting (b)(3):10 USC 424,(b)(6) discussed the significant background factors in the original acquisition of the [redacted] in their current form. He related a number of these factors to the deficiencies which we note today and which are identified in some detail in his following discussion. He presented a matrix showing the requirements of various Government agencies, services and offices for various radar characteristics to be incorporated in an [redacted] and discussed the reason, that is the basic desire, behind each of the identified requirements. He spent some time discussing the question of reliability as it pertains to the upgraded ARIS capability. In conclusion, he presented the proposed upgrading program, showing the principal elements of that program and the respective costs, adding up to a total three year cost of 25.6 million dollars.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

I. On 19 September 1968 the meeting began with the current intelligence briefing by (b)(3):10 USC 424

J. (b)(3):10 USC 424,(b)(6) FTD, briefed the Committee on the [redacted] (b)(1),1.4 (c) equipment of [redacted] He described the installed equipment and the data obtained using the [redacted] Some of the operating considerations and problems were briefly discussed.

K.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

L.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

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[redacted]

[redacted]

(b)(3):10 USC 424, (b)(6)

M. [redacted] discussed the proposed [redacted] system. He described the planning and study program to date and the proposed configurations advocated by the [redacted] He discussed various aspects of the [redacted] including the requirements for [redacted] the capabilities of [redacted] etc. The Committee raised questions regarding the source of requirements for [redacted] and expressed uncertainty as to the requirement for [redacted] It was suggested that [redacted] coordinate with the intelligence community on the requirement. (b)(1),1.4 (c) ~~(b)(1),~~1.4 (c)

N. [redacted] introduced [redacted] who described the Navy's proposal for use of [redacted] instead of [redacted] collection purpose. The proposal involves [redacted] that the [redacted] for lack of funds for FY 1969. Thus for $4,000,000 the intelligence community could have [redacted] for the remainder of FY 1969. Additional resources required would be [redacted] The ships already incorporate all [redacted] required. Hopefully, the necessary funds for the [redacted] would be back on the budget for FY 1970 and subsequently. The annual operating cost [redacted] was reported to be $3,000,000. The Committee reserved judgment on the proposal and expressed the desire to hear a positive proposal for the [redacted] in order to make a valid comparison between the two alternatives. (b)(1),1.4 (c) (b)(1),1.4 (c) (b)(1),1.4 (c)

O. Following lunch, an executive session was convened with [redacted] acting as chairman. The Committee first discussed the future role and mode of operation of the DIA/SAC; they proceded to itemize on the black board current and proposed new tasks for the DIA/SAC. These different tasks were discussed and compared in some detail. [redacted] joined the session and stated that he felt that there were two classes of possible DIA/SAC activity: (1) to do in a substantive manner specific parts of the DIA overall technical intelligence job, (2) to review, or audit, the effectiveness with which the elements of DIA are accomplishing specific tasks for the Director. A brief discussion was held on the memo for the record prepared by [redacted] on 19 September 1968 on the subject: Meeting with the Secretary of the Air Force on Arms Limitation (U). In conclusion of the discussion of the various possible tasks for the DIA/SAC, [redacted] requested the secretary to prepare a memo to each of the Committee members asking, with respect to each identified task, two questions: (1) Is the member willing to have the full SAC undertake the task? (2) Is the member interested in working on an ad-hoc group to address the task?

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[redacted]

P. Several additional items were briefly discussed. [redacted] ask for the next meeting that a half hour briefing be presented on large-scale tactical warning (as would relate to the Soviet occupation of Czechoslovakia). [redacted] summarized, for [redacted] and other members not present on 18 September, the Committee's deliberations on [redacted] and collection systems, existing or proposed. [redacted] suggested that a DIA/SAC report be assembled in draft form on the basis of [redacted] presentation on the subject of collecting data and information against [redacted] programs and that comments be prepared by the DIA staff in regard to the draft SAC report. Both the draft report and the staff comments would be presented at a future SAC meeting. It was suggested with respect to the question of arms limitation that the SAC should undertake to study only the inspection problem and that a report could not be done quickly but would require a minimum of two months. It was agreed that a letter of appreciation should be prepared from the SAC, signed by all members, to [redacted] for his briefings to the SAC over the past few years. [redacted] suggested that it would be desirable to ask [redacted] to talk to the SAC on SEA upon his return. The meeting adjourned at 1535 hours.

(b)(3):10 USC 424

(b)(1),1.4(c)

(b)(3):10 USC 424

CERTIFIED BY:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

18-19 SEPTEMBER 1968

REVISED AGENDA

18 September 1968
Room 1E 864

(b)(3):10 USC 424,(b)(6)

0915 - 1000	Read & Discuss DIA/SAC Report 68-3
1000 - 1110	Additional Data inputs for Supplement to Report 68-3
1110 - 1125	Break
1125 - 1215	Review/Discuss [redacted] Draft
1215 - 1245	Review/Discuss [redacted] Draft
1245 - 1345	LUNCH
1345 - 1515	Data & Information Requirements [redacted] Efforts; Interaction of Current Radar Collection: FPS - 17,79,80; [redacted] etc; and Recommended Approaches
1515 - 1540	The Use of [redacted] Characterization
1540 - 1550	BREAK
1550 - 1705	[redacted]
1705 - 1805	Description of [redacted] Current and Proposed Update

(b)(1),1.4(c)

(b)(1),1.4(c)

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NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

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~~[redacted]~~

19 September 1968
Room 3E 267

(b)(3):10 USC 424,(b)(6)

0900 - 1015 Current Intelligence - PHOTINT

1015 - 1030 (b)(1),1.4 (c) [redacted]

1030 - 1045 [redacted] (b)(3):10 USC 424

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

1045 - 1145 [redacted]

(b)(3):10 USC 424

1145 - 1215 [redacted] Proposed Capability

1215 - 1235 [redacted]

1235 - 1320 LUNCH

1320 - 1535 Executive Session

1. Discussion of future SAC Tasks, generally, and SAC mode of operation.
2. Discussion by SAC on Collection Approaches Against [redacted] (b)(3):50 USC 403-1(i) (b)(1),1.4 (c)
3. Discussion relating to arms limitation.

24 September 1968

~~SECRET~~

~~[redacted]~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 18-19 September 1968 Time 0900

Place 1E 864, 1E 872, and 3E 267

NAME	REPRESENTING	SECURITY	18 DATE AM	18 DATE PM	18 DATE EX	19 DATE AM	19 DATE PM	19 DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424						✓	✓					
			✓	✓		✓	✓					
			✓	✓		X	X					
			X	X		X	X					
				✓			✓					
			✓	✓		X	X					
			✓	✓		✓	✓					
						✓	✓					
			✓	✓		✓	✓					
				✓			✓					
				✓		✓	✓					
				✓		✓						
			✓	✓		✓	✓					
			X	X		X	X					
				✓		✓	✓					
			✓	✓		✓	✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Committee (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	18 DATE			19 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424						✓						
				✓								
				✓		✓						
						✓						
						✓						

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	18 DATE AM	18 DATE PM	18 DATE EX	19 DATE AM	19 DATE PM	19 DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
(b)(3):10 USC 424,(b)(6)												
						✓						
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				✓		✓						
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						✓						
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				✓								
						✓						
						✓						
	NSA	S/TK										

(b)(3):P.L. 86-36,(b)(3):50 USC 403

(b)(3):P.L. 86-36

S

SA SI/TK

SA

NSA - SI only

USA

(b)(3):10 USC 424,(b)(6)

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

~~CONFIDENTIAL~~

8 May 1969

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

1 MAY 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 1 May 1969 in Room 3E 267, The Pentagon. The meeting convened at 0900 hours and adjourned at 1700 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. (S) SUMMARY:

A. (b)(3):10 USC 424 opened the meeting with an update, since the SAC meeting of 27 March, on the information in his area of primary interest to the DIA/SAC. He addressed primarily the S.U. and generally covered the following topics: new developments, radars, missiles, tactical deployment and equipment, and submarines.

B. (b)(3):10 USC 424 then discussed the suspected ABM series at [redacted] (b)(1),1.4 (c) [redacted] He showed and discussed at some length the schedule of SS-4 flights into [redacted] and the suspected ABM test flights from July thru December 1968. (b)(3):10 USC 424 presented a number of comments on indications from the [redacted] A general Committee discussion ensued over the suspected ABM flights and what we can discern from them. (b)(3):10 USC 424 then discussed the boost characteristics associated therewith.

(b)(1),1.4 (c)

C. The next item was a briefing and extended discussion of the Soviet SS-9 Multiple RV flights. Data from the 4 flights in 1968 w reviewed by (b)(3):10 USC 424 He discussed the general flight charact and assessed mechanization of Multiple RV deployment. He furt cussed characteristics of [redacted] and presented some such data. Separation times were shown and discus discussion centered around the variation of main engine

(b)(1),1.4 (c)

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~~SEC~~

(b)(3):10 USC 424

duration of the average deployment time of the [redacted] (b)(1),1.4 (c) for the first 4 missile flights. [redacted] suggested that the Committee draft a letter to General Carroll on this subject. At this point [redacted] introduced the assessment that the [redacted] serves to maximize the possible [redacted] allowing a variation as great as [redacted] He also noted the [redacted] noted that he expected to see on the next flight tests an increase in the [redacted] He noted that this should be easy and hence that the Soviets need not be far from an IOC. [redacted] requested [redacted] to withdraw from the main meeting and draft a letter to General Carroll.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

D. The next topic considered was the joint DIAST - DIA/SAC proposed report on ASW. [redacted] had met earlier with [redacted] and read the report. He stated that the suggested changes from the previous SAC meeting had been incorporated, per his belief, and that he desired to discuss in detail only pages 20 and 24. Considerable discussion evolved covering a certain acoustic signal related to our submarines. [redacted] decided that the Committee should take no further action on the report at the meeting and referred it back to the ASW Working Group. He felt that the new presentation of data might have a large effect on the conclusions of the report.

E. The meeting broke for the Committee members to obtain lunch, which was then eaten in the conference room during a film presented by [redacted] on a missile which can be launched from an aircraft [redacted] The film showed the missile transition through zero air speed and then [redacted] Although the missile was not designed for air defense purposes, it was considered as having possible application to defense of airborne platforms, such as the EC 121.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

F. Following lunch, [redacted] led a brief discussion on two points relating to the SS-9 [redacted] The first point considered the possibility of the [redacted] The Committee concluded that the [redacted] was the most likely. [redacted] then expressed the thought that the assessed, limited range (5100 nm) of the SS-9 was an enigma because it did not fully cover the MINUTEMAN force from [redacted] No hard conclusion was reached on this point, but it was noted that some tolerance exists on our range assessment.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(3):10 USC 424

G. [redacted] presented to the Committee a review of the force build-up for the Soviet SS-9 and SS-11 missiles. Much discussion was held centering around the question of trends and Soviet intent discernible from the [redacted]

(b)(1),1.4 (c)

(b)(3):10 USC 424

H. The draft recommendations prepared by [redacted] for the ICBM Observables and Collection Approaches Report were read by the Committee members. In the discussion that followed, [redacted] requested a specific briefing which [redacted] recommended be deferred for a few months for non technical reasons. Then the draft recommendations were discussed in detail, particularly that portion relating to the recommendation for a [redacted] It was agreed that [redacted] would get together and rewrite this portion of the recommendations. Additional detailed rewordings were also suggested.

(b)(1),1.4(c)

I. [redacted] and [redacted] returned to the main meeting, and [redacted] read the draft letter which they had prepared. Discussion of this draft continued until [redacted] and [redacted] departed at 1600 hours. [redacted] then left the main meeting to restructure one part of the draft letter in accordance with the previous Committee discussion. [redacted] acted as chairman to continue the discussion and revision of the remainder of the draft letter. [redacted] returned, presented his revised portion and continued the discussion and structuring of the proposed letter. An integrated revised draft was completed and turned over to the Secretary for editing and typing in a consolidated draft.

J. The meeting adjourned at 1700 hours.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

[redacted]

Secretary, DIA/SAC

3 Enclosures a/s

(b)(3):10 USC 424

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

1 MAY 1969

REVISED AGENDA

Room 3E 267

Current Intelligence

0900 - 0940 PHOTINT

0940 - 1015 ABM Tests

New Developments & Product Review

1015 - 1130 [redacted] Analysis and Discussion

1130 - 1215 ASW Report: Review & Recommendations

1215 - 1250 Lunch and Film on [redacted]

1250 - 1310 Continued Discussion of [redacted]

1310 - 1410 Soviet Missile Force Build-up

(b)(1).1.4 (c)

Executive Session

1410 - 1530 ICBM Observables & Collection Report Recommendations: Review & Approval

1530 - 1700 Interim Report on [redacted] Draft Read and Discussed

(b)(3):10 USC 424

7 May 1969

~~SECRET~~

Review On 1 May 81

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

Date of Meeting 1 MAY 1969 Time 0900

Place 3E 267 and 1D 883, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			X	X								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
			X	✓								
			✓	X								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE MEETING (continued)

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			X	X								
			X	X								
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			X									
			X									
			✓									
			✓									
			X									
			X									

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

~~CONFIDENTIAL~~

18 June 1969

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

29 MAY 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 29 May 1969 in Room 3E 267, The Pentagon. The meeting convened at 0900 hours and adjourned at 1545 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424.

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. (S) SUMMARY:

A. [redacted] opened the meeting with a presentation of current intelligence. He presented information on the SS-9, 11, and 13 and the SCALEBOARD MRBM. He then discussed [redacted] (b)(1),1.4 (c) He also reported on several Soviet aircraft, including the FOXBAT and modified BEAR and deployment of the FLAGON and FIDDLER.

B. The draft report prepared by [redacted] on "The [redacted] (b)(3):10 USC 424 (b)(1),1.4 (c) [redacted] Characterization" was reviewed briefly on the basis of oral comments by (b)(3):10 USC 424. The recommendations were reviewed and discussed individually. It was agreed that [redacted] would incorporate some minor changes in the recommendations and then the complete report would be mailed to each member for thorough review with a view to comments and/or approval at the next DIA/SAC meeting. It was also agreed to mail to members the draft report on [redacted] (b)(1),1.4 (c) in Relation to Soviet ICBM Developments", for similar review and comment and/or approval at the next meeting.

C. [redacted] FTD, presented a briefing, which he had delivered the previous day in the Pentagon, on the Soviet SS-9 [redacted] and FTD's evaluation thereof. He summarized the character of the

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NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

(b)(1),1.4 (c) [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c) [redacted] It was agreed that a follow-on meeting on the SS-9 footprint capability - demonstrated and required for MM targeting - would be held in the Pentagon on 5 June 1969. [redacted] discussed the pros and cons of various possible ways for the Soviets to achieve controlled footprint variation and, then, certain indications of improved SS-9 accuracy. In the [redacted] data presented, [redacted] asserted that he felt that too large a value was allocated to the cross-range error. [redacted] The accuracy consideration was followed with a discussion of "damage probability" for a given [redacted]

(b)(3):10 USC 424

(b)(1),1.4 (c)

(b)(3):10 USC 424

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),1.4 (c)

D. Following lunch, a brief discussion was held on arms limitation and the relation thereof to [redacted] Then the DIA/SAC considered the SA-5 system briefly and discussed its characteristics in relation to the question of its role as anti-aircraft or ABM or both.

(b)(1),1.4 (c)

E. The discussion returned to the [redacted] with [redacted] providing the lead by presenting areas where CIA would take issue with the DIA/SAC Report 69-2. Many specific points were discussed where CIA felt that questions could be raised in regard to statements in Report 69-2. [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

F. The next full DIA/SAC meeting date was set as 27 June 1969, and this meeting adjourned at 1545 hours.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

3 Enclosures a/s

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

29 MAY 1969

REVISED AGENDA

Room 3E 267

Current Intelligence

0900 - 0955 PHOTINT

(b)(3):10 USC 424,(b)(6)

Report Reading, Discussion & Approval

0955 - 1030 "The [redacted] Characterization"

New Developments

1030 - 1245 SS-9 Multiples [redacted]

(b)(1),1.4 (c)

1245 - 1330 LUNCH

1330 - 1400 Arms Limitation Discussion

1400 - 1445 SA-5 System Discussion

1445 - 1540 [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424

1540 - 1545 Executive Session

Next Meeting Date - 27 June 1969

~~[illegible]~~

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NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 29 MAY 1969 Time 0900

Place 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			X	X								
			X	X								
			✓	✓								
			X	X								
			X	X								
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE MEETING (continued

Date of Meeting 29 May 1969 Time 0900

Place 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	X								
			✓	✓								
			✓	✓								
			X	X								
			X	X								
			X	X								
			X	X								
			✓	✓								
			✓	✓								
			X	X								
			✓	✓								
			X	X								
			✓	✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE MEETING (continued)

Date of Meeting 29 May 1969 Time 0900

Place 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			X	X								
			X	X								
			X	X								
			✓	X								
			✓	✓								

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

29 July 1969

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

27 JUNE 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 27 June 1969 in Room 3E-267, The Pentagon. The meeting convened at 0900 hours and adjourned at 1630 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. (S) SUMMARY:

A. (b)(3):10 USC 424 opened the meeting with a presentation updating the Committee in his special area of activity. He gave consideration to Soviet ICBMs, MRBMs, submarines, ships, ABM and aircraft. He also discussed certain CHICOM manufactured aircraft [redacted]

(b)(1),1.4 (c) [redacted]

B. (b)(3):10 USC 424 then presented an informal report on [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

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C. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403(g),1.4 (c)

D. Following [redacted] presentation, the Committee briefly considered the draft [redacted] report which had previously been mailed to the members. The Committee observed that this draft report had to some extent been overtaken by events, particularly recent study of the SS-9, and also that the draft report reflected too much the U.S. approaches. The Committee further noted that Recommendation 8 of the DIA/SAC Report 69-2, on the SS-9 multiple capability, called for ad hoc study of Soviet ICBM accuracy by a top level panel of guidance experts. It was felt that this study would provide a better and more appropriate basis for publishing an accuracy assessment. In conclusion it was agreed that the DIA/SAC should drop the [redacted] report at this time.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

E. Following lunch the Committee considered the draft report on, "The Use of [redacted] System Characterization" prepared by [redacted] which had been mailed to the members prior to the meeting. After much discussion, the Committee focused on the problem of the DIA/SAC's publishing a report prepared by a single member, especially when that report went into substantial detail in a rather narrow area. It was decided to publish this report as one authored by a member of the DIA/SAC, rather than as a Committee report. [redacted] indicated that he would prepare a transmittal to the Director, DIA, stating that it was a report prepared by an individual member of the SAC and suggesting that the Director use it as he see fit.

(b)(3):10 USC 424

F. The Committee next considered the recommendations of the draft report on, "Expected Observables from and Collection Approaches Against Soviet ICBM Improvement Programs"; detailed consideration was

given to each of the recommendations. A number of the proposed recommendations were revised and a number were deleted. With the changes, the Committee endorsed the report for transmittal to the Director.

G. The Chairman then introduced a brief consideration of the proposed AWACs aircraft as a possible means of substituting for the destroyed [redacted] This was briefly discussed with a number of doubts and difficulties being expressed by different members. The discussion quickly concluded with the thought that the DIA/SAC should be offered the chance to review and proposal for a replacement or substitute for the [redacted] This review should include presentation of all the options considered and should allow the Committee to evaluate the recommendation in the light of all related factors, such as other collection systems. Following a brief break [(b)(3):10 USC 424] was asked to report to the Committee on the existing efforts relative to a [redacted] replacement. He did this and was made aware of the Committee's desire to review any recommendations or proposed course of action resulting from the current studies.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

H. The Committee went into executive session, and [(b)(3):10 USC 424] briefly reported on the utilization of the DIA/SAC Report 69-2, and the status of follow-up efforts in accordance with the recommendations of that report. [redacted] then presented a 20 minute dissertation on a study which had been done by [redacted] personnel on the possible use of the SA-2 as a Soviet ABM. It was generally shown that properly deployed the SA-2 would have a limited ABM capability of the "bloody nose", point-defense type. Following a brief discussion of the ASW report, the meeting was adjourned with the provision that everyone had the following week to review and comment on the ASW report draft.

(b)(1),1.4 (c)

CERTIFIED:

[(b)(3):10 USC 424,(b)(6)]

Secretariat, DIA/SAC

4 Enclosures
1. List of Attendees
2. Tentative Agenda
3. Revised Agenda
4. Meeting Notice

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IA SCIENTIFIC ADVISORY COMMITTE
THE PENTAGON WASHINGTON, D.C.

27 JUNE 1969

REVISED AGENDA

Room 3E 267

Current Intelligence

0900 - 0955	PHOTINT
0955 - 1055	[redacted]

New Developments

1055 - 1210	Analysis of SS-9 Accuracy Data

Report Reading, Discussion, and Approval

1210 - 1215	"Accuracy and [redacted] in Relation to Soviet ICBM Developments" (Notebooks)
1215 - 1300	LUNCH
1300 - 1400	"The [redacted] System Characterization" (Back of Notebooks)
1400 - 1515	"Recommendations" from Report on Expected Observables and Collection Approaches Against ICBMs (Notebooks)

New Developments

1515 - 1525	Discussion of Possible Relation between AWACS [redacted] Replacement
1525 - 1535	BREAK
1535 - 1545	R.A. Follow-on Planning

Executive Session

1545 - 1600	SS-9 Multiples Status
1600 - 1620	SA-2 as Possible ABM
1620 - 1630	ASW Report Discussion

(b)(3):10 USC 424

(b)(1),1.4 (c)

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NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 27 June 1969 Time 0900

Place Room 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓	✓							
			✓	✓	✓							
			X	X	X							
			X	X	X							
			✓	✓	✓							
			✓	✓	✓							
			✓	✓	✓							
			✓	✓	✓							
			✓	✓	✓							
			✓	✓	✓							
			✓	✓	X							
			✓	✓	✓							
			✓	✓	✓							
			X	X	X							
			X	X	X							
			✓	✓	✓							
			✓	✓	✓							

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 27 June 1969 Time 0900

Place Room 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			X	X								
			✓	✓								
			X	X								
			X	X								
			X	X								
			✓	✓								
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			X	X								
			✓	X								
			X	X								
			X	X								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 27 JUNE 1969 Time 0900

Place Room 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			X	X								
			X	X								
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			✓	✓								
			X	X								
			✓	✓								
			X	X								
			X	X								

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

12 September 1969

S-234/AC

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

28 AUGUST 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 28 August 1969 in Room 3E-267, The Pentagon. The meeting convened at 0900 hours and adjourned at 1700 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. (S) SUMMARY:

A. (b)(3):10 USC 424 began the meeting with some introductory remarks to the effect that he had suggested ABM as a topic for this meeting because he felt that it was appropriate for the Committee to get updated on this topic in order to properly discharge their advisory responsibility to the Director, DIA. He emphasized that as far as he was concerned it was coincidental that the revision of was in process (b)(1),1.4 (c) at this time. However, he noted that was interested in getting committee evaluations in relation to the then reviewed the documentation schedule, and in view of this, (b)(3):10 USC 424 the follow-on committee meeting on ABM was set for 16 September 1969.

B. (b)(3):10 USC 424 then briefed the committee in his area of activity on Soviet efforts, with respect to air defense, space, ICBMs, and aircraft production. He also discussed certain Chinese nuclear activity.

then made a brief presentation on the results from the rough, manual analysis of the SS-9 multiples system capability for targeting MINUTEMAN silos, as a function of assumed (b)(1),1.4 (c) capabilities of varying size and shape.

(b)(3):10 USC 424,(b)(6) then presented the detailed tar- (b)(1),1.4 (c) geting analysis of the SS-9 against MINUTEMAN requested by the DIA/SAC working group at its meeting on 5 June 1969. He carefully reviewed

Review On 12 Sep 1990

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DOD DIR. 5200.10

the input parameters and assumptions and the procedures followed in the analysis and their relationship to the assumptions employed. The study showed that using the DIA/SAC given parameters, the SS-9 [redacted] could target 95 percent of the MINUTEMAN silos in Wings I and IV using only 10 percent more than the ideal number of SS-9 launchers, that is, one-third the number of MINUTEMAN silos. He also showed that [redacted] (b)(1),1.4 (c) [redacted] for attacking MINUTEMAN silos. He then proceeded to present histograms of the various parameters used in the targeting analysis. He thus provided a basis for comparing the range of values needed by the Soviets for each of these parameters against the [redacted] (b)(1),1.4 (c) This comparison also indicated areas where we should expect to see in future Soviet flight tests values of certain parameters different from those [redacted] The study showed that we should particularly look for demonstration of (1) [redacted] (b)(1),1.4 (c) and (2) greater difference in the [redacted]

C. The attention of the meeting now turned to the subject of Soviet ABM and the relation of the Committee evaluation to the remainder of the ongoing efforts [redacted] emphasized that the committee assessments and evaluations should be made in relation to the actual threat to the Soviet ABM, that is, the specific characteristics of the U.S. ICBM force. These include [redacted] (b)(1),1.4 (c) etc. (b)(3):10 USC 424 stated that these considerations should also be included in all deliberations relating to or supporting SALT efforts.

(b)(3):10 USC 424 then briefly discussed the Soviet command and control net as it would relate to the ABM question. Although he indicated we had little specific data, he discussed briefly the Soviet command structure, communication system, and data processing capabilities.

(b)(3):10 USC 424 then briefly discussed the Soviet acquistion and tracking net. He discussed the [redacted] (b)(1),1.4 (c) and some new information on these and other large radars. He presented several considerations relating to the [redacted] (b)(1),1.4 (c)

(b)(3):10 USC 424 discussed briefly the ABM-1 system and the fact that certain [redacted] and further stated that the [redacted] (b)(1),1.4 (c) a maximum unambiguous range of 900 miles.

(b)(3):10 USC 424 then discussed the SA-5 system. Although he emphasized that our assessments on this system are uniquely soft, he proceeded to discuss in some detail the missile and radar characteristics estimated.

He also considered the SA-5 deployment in its relation to the SA-3. In conclusion he presented charts showing vulnerabilities of the SA-5 to all the existing and programmed MINUTEMAN and POLARIS/POSEIDON [redacted] (b)(1),1.4 (c)

Following lunch, (b)(3):10 USC 424 presented the IDA study on the SA-2 and SA-5 ABM potential. He emphasized that this study was requested by DDR&E in relation to the SALT efforts and was concerned with the possibility of upgradings of the SA-2 and/or SA-5. He made some comparison of the IDA efforts to the similar [redacted] study on the SA-2. In the latter, he indicated that [redacted] gave deeper consideration to the missile dynamics and operator actions and allowed only up-range intercept of [redacted] (b)(1),1.4 (c)

He indicated that the IDA study was more limited to the kinematics of the problem and that the SA-2 considered [redacted] (b)(1),1.4 (c) [redacted] As conclusions from the study, he discussed modifications that were deemed necessary for the SA-2 to play an ABM role. In the discussion following the presentation (b)(3):10 USC 424 suggested that he would like to have MID present the conclusions of its similar study effort to the DIA/SAC at the meeting of 16 September 1969.

(b)(3):10 USC 424 then discussed in some detail a comparison of the [redacted] analysis and findings with those of the IDA study just briefed. He emphasized that the [redacted] study appeared to be more conservative, in a number of respects, than the IDA analysis. He then presented to the committee some new findings from the [redacted] effort relating to particular detailed characteristics of [redacted] operational and programmed. (b)(1),1.4 (c)

(b)(3):10 USC 424 presented a detailed presentation of new developments in the Soviet ABM area. He reviewed [redacted] using SS-4 target vehicles [redacted] during 1968–1969. [redacted] were noted and discussed in some detail. [redacted] were discussed, as was the intercept geometry in space and time. He then reviewed our assessments of the GOLASH and the SA-5 missile fly-out characteristics. (b)(1),1.4 (c)

(b)(3):10 USC 424 briefly discussed certain [redacted] Alternative interpretations of the signatures were briefly discussed. (b)(1),1.4 (c)

At this time (b)(3):10 USC 424 joined the meeting. (b)(3):10 USC 424 introduced him to the committee members and summarized for him the earlier discussions of the meeting.

(b)(3):10 USC 424,(b)(6) then reported on [redacted] He presented the [redacted] including discussion of [redacted] (b)(1),1.4 (c)

[redacted] an SS-4 target vehicle and an ABM type interceptor flight. The information derived from a preliminary analysis accomplished by the time of the meeting was reviewed. It was indicated that the analysis in relation [redacted] was incomplete at the time of the meeting. [redacted] emphasized that upon completion of the analyses, based on the different information sources, they should be carefully compared for consistency and validation of the conclusions reached. He requested that this sort of comparison be presented to the DIA/SAC in the near future.

(b)(1),1 4 (c)

The committee went into executive session briefly and considered some alternative dates for the next meeting, but finally confirmed 16 September 1969. A number of discussion points were raised in regard to content and approach for the next meeting. It was emphasized that the assessed capability of the current Russian ABM resources should be made against [redacted] and not against those programmed for the future. The meeting concluded abruptly at 1700.

(b)(1),1 4 (c)

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

5 Enclosures
1. List of Attendees
2. Tentative Agenda
3. Revised Agenda
4. Meeting Notice
5. Memo to DIA/DR from S&T

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

28 AUGUST 1969
ROOM 3E-267

REVISED AGENDA

(b)(3):10 USC 424,(b)(6)

0900 - 0905	Opening Remarks
0905 - 0925	Current Intelligence
0925 - 0940	SS-9 Targeting of MM Silos
0940 - 1105	SS-9 System Target Analysis
1105 - 1130	Schedule for [redacted] and Primary Issues (b)(1),1.4(c)
1130 - 1140	ABM Data Base - Update Command and Control Net
1140 - 1205	Acquisition and Tracking Net
1205 - 1215	ABM-1 System - Characteristics and Deployment
1215 - 1300	SA-5 System - Characteristics and Deployment
1300 - 1315	Lunch
1315 - 1445	SA-2 and SA-5 ABM Capability Considerations IDA & [redacted] Studies (b)(1),1.4(c)
1445 - 1540	New Developments a. Interceptors b. Radars
1540 - 1550	Summary for [redacted]
1550 - 1640	Report on Data Requirements and New Collection Efforts for ABM
1640 - 1700	Primary Topics for Advice to DIA and Plans for Follow-on Meeting

Review On 28 Aug 1990

SECRET

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NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 28 August 1969 Time 0900

Place Room 3F-267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓								
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			✓	✓								
			✓	✓								
			✓	✓								
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			✓	✓								
			✓	X								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE MEETING (continued)

Date of Meeting 28 August 1969 Time 0900

Place Room 3E-267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓								
			✓	✓								
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			X	✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 28 August 1969 Time 0900

Place Room 3E-267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			X	✓								
			✓	✓								
			X	✓								
			X	X								
			X	✓								
			X	✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA SCIENTIFIC ADVISORY COMMITTEE

Date of Meeting 28 August 1969 Time 0900

Place Room 3E-267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			X	X								
			✓	✓								
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			✓									
			✓	X								
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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

19 September 1969

TS-244/AC

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

16 SEPTEMBER 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 16 September 1969 in Room 3E-267, The Pentagon. The meeting convened at 0900 hours and adjourned at 1600 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424 [redacted]

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. (S) SUMMARY:

A. (b)(3):10 USC 424 made a presentation with respect to his area of interest on the following Soviet efforts: aircraft, submarine construction, ICBMs, ABM development, large ABM-type and space-track radars, and space efforts. He also reported on certain Chinese missile efforts.

B. (b)(3):10 USC 424 discussed in detail an analysis of the SA-2 capabilities relative to ABM. He specifically considered the GUIDELINE missile [redacted] He showed what was assessed to be the best possible defended zone of the SA-2 system working against the MINUTEMAN [redacted] This evaluation took detailed account of the SA-2 system characteristics and the changes in the [redacted] at approximately [redacted] upon reentry. The analysis assumed reentry trajectories along [redacted] inclinations. The analysis showed a capability to defend a radius of [redacted] (b)(3):10 USC 424 discussed in detail the characteristics and function of the [redacted] in the SA-2 system. He also discussed the [redacted] (b)(1),1.4 (c)

(b)(1),1.4 (c)

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DECLASSIFIED

(b)(3):10 USC 424 emphasized that because of the limited defended area, the SA-2s would need to be very close to the defended target and in specific relation thereto. He indicated that he believed the SA-2 [redacted] (b)(1),1.4 (c) He indicated that the best change to be made in the SA-2 system, [redacted] (b)(1),1.4 (c)

C. (b)(3):10 USC 424 then made a brief presentation using a blackboard diagram of specific considerations [redacted] (b)(1),1.4 (c) Soviet ABM type [redacted]

D. (b)(3):10 USC 424 of TRW next discussed, in some detail, the characteristics of the MINUTEMAN forces at present and over the next five years. He indicated the force now consists of about 500 MINUTEMAN I and 500 MINUTEMAN II missiles. In 1974 the force will be about 500 MINUTEMAN II and 500 MINUTEMAN III missiles. He then discussed in detail the characteristics of the [redacted] (b)(1),1.4 (a)

E. Following lunch the committee went into a general discussion and consideration of the questions and draft responses prepared by DIAST prior to the meeting. In the course of this discussion and as a result of questions arising from it, (b)(3):10 USC 424 presented a number of vugraphs and considerable discussion of siting considerations and characteristics of the SA-2 system, [redacted] (b)(1),1.4 (c). Based on summary statements presented by (b)(3):10 USC 424 it was agreed by the committee members that (b)(3):10 USC 424 would, following the meeting, prepare draft statements summarizing the members considerations and assessments relating to both the SA-2 and the SA-5 systems. The undersigned's summary of the members' positions as expressed at the meeting are attached as Enclosure 5 and 6.

F. The meeting concluded by discussion of the data and information available and not available on the SA-5 system. Some consideration was given to previous committee analyses and reporting on ABM collection approaches and recommendations.

This general subject was identified as one appearing appropriate for future committee consideration. Following a brief discussion of other future committee activity, a tentative meeting date of 14 October 1969 was set. The meeting adjourned at 1600 hours.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

6 Enclosures
1. Meeting Notice
2. Tentative Agenda
3. Revised Agenda
4. List of Attendees
5. DIA/SAC Members Position on the SA-2 System (U),TSECRET WORKING PAPER, 18 Sep 69
6. DIA/SAC Members Position on the SA-5 System (U), T SECRET WORKING PAPER, 18 Sep 69.

(b)(3):10 USC 424

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

16 SEPTEMBER 1969
ROOM 3E-267

TENTATIVE AGENDA

0900 - 0930	Current Intelligence	(b)(3):10 USC 424
0930 - 1030	Discussion of SA-2 Characteristics and Possible Capabilities in Relation to ABM Roles	
1030 - 1230	Discussion and Evaluation of Questions and DIAST Drafted Responses Critical to Current Assessment of Soviet ABM Capabilities for Present and Future.	
1230 - 1300	Lunch	
1300 - 1700	Discussion and Evaluation cont"d	

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DOD DIR. 5200.10

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Enclosure 2 (TS-244/AC)

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

16 SEPTEMBER 1969
ROOM 3E-267

REVISED AGENDA

0900 - 0935	Current Intelligence	(b)(3):10 USC 424
0935 - 1120	Discussion of SA-2 Characteristics & Possible Capabilities in Relation to ABM Roles	
1120 - 1135	Break	
1135 - 1145	Indications from a Recent Test Event	
1145 - 1240	MINUTEMAN Missile [redacted] Versus Time (b)(1),1.4 (c)	
1240 - 1315	Lunch	
1315 - 1535	Discussion & Evaluation of Questions & DIAST Drafted Responses Critical to Current Assessment of Soviet ABM Capabilities for Present and Future.	
1535 - 1600	Discussion of ABM Data Collection & Future SAC Activity.	

12 YEAR INTERVALS;
AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

~~SECRET~~

Enclosure 3 (TS-244/AC)

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 16 September 1969 Time 0900-1700

Place Room 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			X	X								
			✓	✓								
			X	X								
			✓	✓								
			X	X								
			X	X								
			X	X								
			X	X								
			X	X								
			X	X								
			X	X								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	X								
				✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 16 September 1969 Time 0900-1700

Place Room 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	X								
			X	X								
			X	X								
			X	X								
			X	X								
			X									
			✓	✓								
			✓									
			X									
			✓	✓								
			X	X								
			✓	✓								
			X									
			✓									
			X									
			X	X								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 16 September 1969 Time 0900-1700

Place Room 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			X	X								
			X	X								
			X									
			✓	X								
			X	X								
			X	X								
			X	X								
			✓	X								
			X	X								
			✓	X								
			✓	✓								
			✓	✓								
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								

(b)(3):10 USC 424,(b)(6)

81

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

24 October 1969

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

14 OCTOBER 1969

I. (U) GENERAL: A meeting of the DIA/SAC was held on 14 October 1969 in Room 1E 864 and Room 3E 267, The Pentagon. The meeting convened at 0850 hours and adjourned at 1610 hours.

II. (U) ATTENDEES: A list of attendees is enclosed. The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agenda are enclosed.

IV. (S) SUMMARY:

A. The meeting opened in Room 1E 864 with brief comments on very current intelligence by (b)(3):10 USC 424 The first formal briefing was presented by (b)(3):10 USC 424 regarding his area of special activity. The topics covered in relation to the Soviet Union included the following: aircraft, SSBM construction, IRBMs and certain relationships to the SS-11 missile, ICBMs and the force growth, space efforts, ABM, and several other items. The meeting then adjourned to the Command Conference Room, where the Committee met for the first time with the new Director, LtGeneral Bennett.

B. General Bennett opened his discussion by stating that the mission of DIA is stated to be to produce intelligence but that for him this is insufficient, because the question must be answered: "For what are we producing the intelligence?" He indicated that in his initial tenure with DIA he was trying to get this aspect of the mission in focus. As a part of this consideration, he indicated that there was a need for priority lists. Further, he stated that the requirements against which DIA works need clarification and better definition. Continuing, he stated that he sees a lack of system in the processing of data and information to produce intelligence to be evaluated against the requirements. This, he said, results in gathering excess data against easy targets and leaving gaps where collection is difficult. (b)(3):10 USC 424 indicated his strong concurrence and stated that he has often said that we collect information because we "can" rather than because we "need to know." Following General Bennett's departure the Committee met in Executive Session for about 30 minutes and discussed possible future Committee activities.

[redacted]

C. The Committee next considered the question of collection against Soviet ABM efforts. The first presentation was made by [redacted] He discussed the types of data and information obtained to date, the expected additional data to be obtained, and planned methods of employment of this collection means. [redacted] then discussed [redacted] and its indicated capabilities, [redacted] then discussed certain [redacted] and the possible relationship to test [redacted] then discussed state-side over-the-horizon experiments including both back-scatter radar and forward scatter detection systems. Following these briefings [redacted] requested an all-source review of the data and information collected against the two, recent, suspect ABM [redacted] He indicated that this review should provide a comparison of the information obtained from all the different sources, with a view to revealing redundancy and gaps in the data [redacted] then made a brief presentation on the results obtained and the operating procedures associated with the bi-static RADINT efforts against ABM.

(b)(3):10 USC 424,(b)(6)

(b)(1),1.4 (c)

(b)(1),~~1.4 (e)~~

(b)(1),1.4 (c)

D. [redacted] then made an expedited presentation on the operational test of a new [redacted] installed on one of the destroyer escorts. The particular test involved [redacted] in the Pacific [redacted] He concluded that the subject [redacted] was a good improvement over the hand held and other improvised [redacted] previously used. On questioning from the Chairman, he indicated that you could get from such [redacted] Upon further questioning he indicated that it was his opinion that [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

E. Following lunch, [redacted] discussed a number of observations deriving from his recent trip around the world. First he observed that in [redacted] significant advantage. In contrast, he noted that much of this sort of activity was being utilized in Viet Nam. He then stated that the establishment [redacted] Accordingly, countering such action was one of the principal problems today [redacted] He then made the generalization that little resembling effective operations analysis is done anywhere in the world in connection with U.S. military forces. He briefly enumerated some examples of this situation.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

At this point, [redacted] noted that he had long been concerned by the lack, at the operational level, of an effective interface between the intelligence data base and tactical operations and personnel involved therein. Finally, [redacted] noted that there is an area lying between classical intelligence and psychological operations which is terribly neglected by the U.S.; whereas he found that the North VietNamese are very adept and very busy in this area.

F. The Committee's attention next returned to a discussion of ABM and a draft letter on the SA-2 and SA-5 systems prepared on the basis of information presented at the past two meetings. [redacted] disputed the assessments on the SA-2 contained in that letter. He questioned the assumptions and the thoroughness of the study and analysis effort on the basis of which the letter was structured. In the course of the following discussion, he specifically requested an historical correlation of the SA-2 and SA-5 missile [redacted] After substantial discussion, it was noted that some alleviation of the indicated ABM data void might well be forth coming in the near future, in view of the advent of new collection approaches. In conclusion, it was agreed that, since the urgency for a position on ABM had decreased with the conclusion of the [redacted] for this year, there was no need to formulate a quick statement from the Committee. Further, it was agreed that, since a number of the Committee members had not been exposed to the information on which the draft letter on ABM was based, the rest of the group should hear that information, along with any new data that can be provided on the subject, before the Committee formulates any conclusions or recommendations.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

G. The next item on the Agenda was a presentation by [redacted] on Soviet submarine developments. He indicated that there is [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c) [redacted]
(b)(1),1.4 (c) [redacted] He concluded his presentation with a dis- [redacted] He indicated that we believe [redacted] 1.4 (c) 1.4 (c) [redacted]

H. The Committee then went into Executive Session. [redacted] asked [redacted] (b)(3):10 USC 424 to get together and prepare a joint statement of known facts on the SA-2 and SA-5 systems as of 14 October 1969. This presentation of information should not attempt to draw any conclusions but constitute a bare statement of facts. It was agreed that the next Committee meeting be set for the days of 18 and 19 November. [redacted] then suggested that the next DIA/SAC endeavor be [redacted]
(b)(1),1.4 (c) [redacted] including their weapon system capabilities. [redacted] suggested that any look at Soviet submarines should consider them not just as tactical weapons but as strategic systems in the larger strategic context. In this connection, he added the thought that the role of the MOSKVA should be considered jointly with the study of submarines. [redacted] concluded the discussion by defining the purposes of the study to be as follows:

a. Evaluating the capabilities of the Soviet submarines

b. Comparing Soviet capability with the similar capability of the U.S.

c. Suggesting the new methods of collection

d. Examining the vulnerability of the Soviet systems

The final Committee discussion centered around the question of collection of data and information against known and potential Soviet ABM systems. It was noted that the second meeting hence would provide a presentation to the Committee of the all-source data comparison for the two Soviet [redacted] It was also recommended that that presentation include discussion of possible reasons for the [redacted] The meeting adjourned at 1610 hours.

(b)(1),1.4 (c)

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

3 Enclosures a/s

Secretary, DIA/SAC

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

14 October 1969

REVISED AGENDA

Room 1E 864

0850 - 0855 Introductory Comments and Intelligence

0855 - 0940 Current Intelligence

0940 - 0955 BREAK

Room 3E 267

0955 - 1025 Executive Session - Meeting with LtGen Donald V. Bennett

1025 - 1100 Executive Session - DIA/SAC Duscussion

1100 - 1210 ABM Collection: [redacted]
OTH Radar
Special Item

(b)(1),1.4 (c)

1210 - 1230 [redacted]

1250 - 1330 Executive Session - Observations from Trip Around the World

1330 - 1430 Executive Session - DIA/SAC Position on Soviet ABM Discussed

1430 - 1530 [redacted]

(b)(1),1.4 (c)

1530 - 1610 Executive Session - Future Plans

(b)(1),(b)(3):10
USC 424,(b)
(6),1.4 (c)

~~SECRET~~

~~DOWNGRADED AT 12 YEAR INTERVALS;~~
~~NOT AUTOMATICALLY DECLASSIFIED~~
~~DOD DIR 5200.10~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14 October 1969 Time 0900-1700

Place Room 1E 864 and 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
(b)(3) 10 USC 424			AM	PM	EX	AM	PM	EX	AM	PM	EX	
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			X	X								
			X	X								
			✓	✓								
			X	X								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
				✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14 October 1969 Time 0900-1700

Place Room 1E 864 and 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			X	X								
			✓	X								
			✓	✓								
			✓	✓								
			X	X								
			X	X								
			X	X								
			X	X								
			X	✓								
			X	X								
			X	X								
			✓	X								
			X	X								
			X	X								
			X	X								
			X	X								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14 October 1969 Time 0900-1700

Place Room 1E 864 and 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			X	X								
			X	X								
			X	✓								
			✓	X								
			X	X								
			✓	X								
			X	X								
			✓	✓								
			✓	X								
			X	X								
			✓	X								
			X	X								
			✓	X								
			X	✓								
			✓	X								
(b)(3):P.L. 86-36			X	X								
			✓	X								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14 October 1969 Time 0900-1700

Place Room 1E 864 and 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
(b)(3) P.L. 86-36			AM	PM	EX	AM	PM	EX	AM	PM	EX	
			✓	X								
			✓	X								
(b)(3) 10 USC 424, (b)(6)			✓	✓								
			✓	✓								
			✓	✓								
			✓	✓								
			✓	X								
			✓	X								
			✓	X								
			✓	X								
			✓	X								
			✓	X								
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			✓	X								
			✓	X								
			✓	X								
			✓	X								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 14 October 1969 Time 0900-1700

Place Room 1E 864 and 3E 267, The Pentagon

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)			✓	X								

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

10 February 1970

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

22-23 JANUARY 1970

I. (U) GENERAL: A meeting of the DIA/SAC was held on 22-23 January 1970 in Room 1E 864 and Room 3E 267, the Pentagon. The meeting convened at 0900 hours on 22 January and finally adjourned at 1540 hours on 23 January.

II. (U) ATTENDEES: A list of attendees is attached as Enclosure 1. The DIA/SAC Secretariat representative was [redacted] (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and revised agendas (Enclosure 2 & 3) are enclosed. A social event in honor of the members of the DIA/SAC was hosted by General Bennett from 1800-2000 hours on 22 January 1970. The planned attendees are indicated on Enclosure 4.

IV. (S) SUMMARY:

A. [(b)(3):10 USC 424] opened the meeting with the customary update from the [redacted] He covered topics relating to both the Soviet Union and China. Before the move to Room 3E 267, all members present were provided the security orientation associated with access to [redacted] information. (b)(1),1.4 (c)

B. In Executive Session, the Committee deliberated on its modus operandi. The discussion was begun by considering [redacted] letter of 15 January to General Bennett. The role of [redacted] in the intelligence area was discussed briefly. [redacted] noted that a vacuum doesn't exist long in the Pentagon and that [redacted] would fill any vacuum in the intelligence area that might be left by DIA. He further suggested that there are two basic modes of operation for a Committee like the SAC: (1) It can do a technical audit of major projects and/or (2) It can get involved with DIA in the mainstream activities. [redacted] indicated he definitely tends toward the audit mode of operation. [redacted] emphasized that intelligence would be of maximum utility to the recipient, particularly in the (b)(3):10 USC 424

(b)(3):10 USC 424

~~DOWNGRADED AT 12 YEAR INTERVALS;~~
~~NOT AUTOMATICALLY DECLASSIFIED~~
~~DOD DIR. 5200.10~~

~~SECRET~~

case of DDR&E, if it included an indication of the uncertainties or tolerances involved. Further, he indicated that DDR&E would like the information presented in such a way that the recipient could introduce his own judgments in key areas where assumptions and judgment are required. [redacted] introduced the thought that the SAC should have a knowledge of how well it is doing in support of the intelligence mission. He suggested that one measure is the degree of acceptance of the Committee reports and recommendations. Against the criteria of acceptance of recommendations, he indicated that he did not feel the Committee had been doing very well. [redacted] and others indicated that they felt that that criteria was too restrictive. [redacted] stated that he would rather measure the Committee's performance on the basis of how well it is helping DIA do its job. [redacted] indicated his belief that an advisory group such as the SAC can be operated in three desirable ways: (1) As an adjunct to the in-house staff, (2) In an audit role, or (3) As a management consultant. He further indicated that in the past the SAC has often undesirably become an alternate to the staff rather than truly an adjunct. For this reason he felt there was some need for the SAC to function as a management consultant to DIA. [redacted] disagreed with this latter point and strongly suggested that the Committee not attempt to function as a management consultant to DIA. He noted that one of [redacted] primary responsibilities relates to the management procedures. In conclusion of the Executive Session, [redacted] noted for the benefit of all the members that, at the end of the two-day meeting, he wanted to write down at least three or four main points deriving from the meeting and forward these to General Bennett.

(b)(3):10 USC 424

C. The meeting continued with a presentation on the defense scientific and technical intelligence program by [redacted] He outlined the missions of scientific and technical intelligence, and briefly discussed the organization of DIAST. He also reviewed the organizational relationships of the field agencies tasked by DIAST for S&T intelligence production. He discussed the substantive tasks of S&T intelligence production by DIA, and reviewed the intelligence cycle including: user requirements, data and information requirements, data collection, data processing, intelligence production, and intelligence dissemination. He then discussed a number of specific items in relation to the execution of this intelligence cycle. The specifics included: the DAIR system, data sources as a basis for intelligence production, and various S&T intelligence support categories.

D. Following lunch a brief ceremony was held at which General Bennett presented the DIA Exceptional Service Medal to [redacted] Pictures were taken, and [redacted] expressed his gratitude.

E. General Bennett then presented a number of observations to the Committee. He expressed appreciation for [redacted] letter of 15 January. He then outlined his multiple responsibilities as Director, DIA, and discussed the question of intelligence priorities. In this context, he mentioned the JSOP Annex "A" and the trade-off between areas of existing threat and areas of potential threat. He noted that the reorganization question was still under study within DIA and that twelve specific panels were working on that question. He then addressed the question of how the Committee might most advantageously interact with the Director, DIA. He indicated that he might spend some time at the next meeting discussing this point, and also, that he would put some ideas down on paper and forward them to the Committee prior to the next meeting. (b)(3):10 USC 424

(b)(1),1.4 (c) F. With a view to resolution of the issue reflected in the [redacted] made a presentation on the information required to definitively establish the role of the SA-5 system. He noted that there is general agreement (100% confidence) that the SA-5 has a SAM capability and that there is substantial variation of assurance that the system has an ABM capability. After reviewing a variety of factors he asserted that for high assurance [redacted] (b)(1),1.4 (c) [redacted] The Chairman questioned [redacted] with respect to where we are today and what we need to do to obtain the needed data and information. In this connection, the [redacted] were mentioned as a (b)(1),1.4 (c) key item of information, as was a good knowledge of any [redacted] The discussion was not conclusive, and the question was taken up later in the Friday afternoon Executive Session.

G. [redacted] made a presentation on the [redacted] pair of Soviet ABM [redacted] (b)(1),1.4 (c) (b)(1),1.4 (c) [redacted] He then attempted to answer [redacted] the following questions: (1) Does the collector provide some capability? (2) Is that collection capability useful or redundant? (3) If it is useful, can the system be improved? The briefing and discussion were fairly detailed, and the Committee offered a number of suggestions for sharpening up the analysis presented in the briefing.

(b)(1),1.4(c) [redacted]

(b)(1),1.4 (c)

I. (b)(3):10 USC 424 reviewed the SS-11 from 1965 to the present.

(b)(1),1.4 (c)

It was noted that

(b)(1),1.4 (c)

In response to a question, it was suggested by the briefer that

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

K. The DoD Net Technical Assessment Program was discussed by

(b)(3):10 USC 424,(b)(6)

It was noted that a long-range threat assessment (20 years) was being considered. discussed the LRTIA briefly. It was noted that now has the DDR&E responsibility for Net Technical Assessment.

L. made a summary presentation to the Committee on capabilities and accomplishments.

(b)(1),1.4 (c)

Known Russian practices, certain Czechoslovakian R&D, and Soviet laser work were reviewed. Several Soviet [redacted] devices and [redacted] were reviewed. It was noted that the Soviet army places a heavy emphasis on capability for night warfare, including such equipments as low-light-level viewers, IR detectors, and laser illuminators. A number of specific equipments were discussed, including: [redacted] and others. Various [redacted] intelligence gaps were discussed. A rather extended discussion, including participation by [redacted] was held on our knowledge of the [redacted] and various data and information gaps in regard to the [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

M. Following lunch the Committee met in Executive Session to formulate conclusions and recommendations on the items previously discussed during the meeting. The resulting conclusions and recommendations are attached as Enclosure 5. It was agreed that the [redacted] should be included on the agenda for the next meeting, 26-27 March 1970.

(b)(1),1.4 (c)

N. The meeting concluded with a presentation by [redacted] on the MOSKVA (and LENINGRAD) Soviet carriers. The radar, missile, gun, and [redacted] equipments on the MOSKVA, and certain cruisers and destroyers, were discussed. The MOSKVA ASW systems were then considered, including the [redacted] HORMONE helicopter, ASW torpedos, and forward missile launcher. He then covered in some detail the [redacted] the MOSKVA, and various aspects of its mode of operation, including, a clear indication of bi-static sonar operations. Data and information gaps in relation to the MOSKVA were identified, and US assets available for collection were reviewed. Conclusions resulting from the ensuing DIA/SAC discussion are included in Enclosure 5.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

CERTIFIED:

[redacted]

5 Enclosures a/s

Secretary, DIA/SAC

[redacted]

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

22-23 January 1970

TENTATIVE AGENDA

22 January- Rm 1E 864 until 1030; then Rm 3E 267

(b)(3):10 USC 424

0900-1015 SAO Update

1015-1130 Executive Session

1130-1230 Defense Scientific & Technical Intelligence Program

1230-1330 Lunch

1330-1345 Meeting With Director, DIA

1345-1430 Data & Information Required to Clearly Establish SA-5 Role

1430-1530 All Source Evaluation re ABM Data

(b)(1),.,1.4 (c)

1530-1600 [redacted]

1600-1630 SS-11 [redacted]

1630-1715 MOSKVA

1715-1800 Transportation to Naval Gun Factory Officer's Club

1800-2000 Social Event in Honor of DIA/SAC

23 January- Rm ~~1E 864~~ 3D 921 until ~~1000~~ 1200; then Rm 3E 267

0900-1000 [redacted] Program and Status

(b)(3):10 USC 424,(b)(6)

1000-1030 Net Technical Assessment

1030-1115 [redacted]

1115-1200 SU [redacted]

1200-1300 Lunch

1300-1600 Executive Session

~~SECRET~~

~~DOWNGRADED AT 12 YEAR INTERVALS;~~
~~NOT AUTOMATICALLY DECLASSIFIED~~
~~DOD DIR. 5200.10~~ [redacted]

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D.C.

22-23 January 1970

REVISED AGENDA

22 January - Rm 1E 864 until 1010; then Rm 3E 267

0900-1010	SAO Update	(b)(3):10 USC 424 [redacted]
1020-1210	Executive Session - Modus Operandi	
1210-1255	Defense Scientific & Technical Intelligence Program	
1255-1325	Lunch	
1325-1330	DIA Exceptional Service Medal to (b)(3):10 USC 424 [redacted]	LTG Bennett
1330-1400	Meeting with Director, DIA	LTG Bennett
1400-1445	Data & Information Required to Clearly Establish SA-5 Role	(b)(3):10 USC 424.(b)(6) [redacted]
1445-1545	All Source Evaluation re ABM Data	
(b)(1).1.4 (c) 1545-1625	[redacted]	
1625-1730	SS-11 (b)(1).1.4 (c) [redacted]	
1735-1800	Transportation to Naval Gun Factory Officer's Club	
1800-2000	Social Event in Honor of DIA/SAC	

23 January - Rm 3E 267

0900-1020	(b)(1).1.4 (c) [redacted] Programs and Status	(b)(3):10 USC 424.(b)(6) [redacted]
1020-1045	Net Technical Assessment	
1045-1230	SU (b)(1).1.4 (c) [redacted]	
1200-1300	Lunch	
1300-1430	Executive Session	
1430-1540	MOSKVA	

~~DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED DOD DIR 5200.10~~

9 FEB 70

~~SECRET~~

SOCIAL EVENT ATTENDEES

DIA/SAC MEMBERS

(b)(3):10 USC 424

DIA

LGEN Donald Bennett

LGEN Jamie Philpott

(b)(3):10 USC 424

DOD (not DIA)

Mr. Robert Froehlke, AssSec Def (A)

VADM Harold G. Bowen, Jr., DepAsst Sec Def(

(b)(3)

~~SECRET~~

SAC EXECUTIVE SESSION
CONCLUSIONS & RECOMMENDATIONS

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36.1.4 (c)

I. [redacted]

A. [redacted] made the following generally accepted three-point recommendations:

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36.1.4 (c)

[redacted]

3. As second priority, DIA should strongly endorse the [redacted] system in principle.

(b)(1),1.4 (c)

B. The full Committee agreed that it was desirable for the DIA/SAC to review in some detail the planned technical design and resultant capabilities for the [redacted] aircraft.

II. On SS-11 Guidance

(b)(3):10 USC 424 recommended that the Committee closely investigate the SS-11 guidance capability, and its assessed accuracy. This was considered important in view of the [redacted] The full Committee agreed.

(b)(1),1.4 (c)

III. On the [redacted]

This was considered a possible SAC action item. The question was raised as to [redacted] actual, intended, or possible mission -- e.g., missile instrumentation, space track, Chinese test monitor, or US test monitor. The SAC concluded that a prompt effort should be mounted to collect particular data and information, [redacted] to reveal specifics of Soviet intended usage and, thence possibly, characteristics of future Soviet missile effort. It was noted that the [redacted] appears to represent the first Soviet capability for [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

IV. On Soviet [redacted]

A. (b)(3):10 USC 424 emphasized the need to understand the Soviet [redacted] capability, in conjunction with the Soviet radar capability, if penetration of sophisticated Soviet defenses (as in N. Vietnam or N. Korea) is still considered important.

(b)(1),1.4 (c)

~~DRAFT~~

~~DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED DOD DIR. 5200.10~~

B. (b)(3):10 USC 424 expressed substantial uncertainty as to the nature of the Soviet [redacted] threat. It was agreed that the whole picture was quite unclear and that the SAC had not reached a point where it could make specific recommendations on a collection program or other efforts. (b)(1),1.4 (c)

C. A two-man panel was named, consisting of (b)(3):10 USC 424 (b)(3):10 USC 424 As a start, the panel was tentatively to review the planned Navy actions in relation to the [redacted] and the [redacted] (b)(1),1.4 (c) area generally. It was then to report back to the full Committee, at the March meeting, on recommended future action by the SAC.

V. On New Soviet ABM Capabilities

It was noted that the new, or second generation, Soviet ABM capability is designated the SH-1. This system includes the revised radars and probably involves the more recently observed Soviet ABM testing. A three-man panel was named to look into this matter, consisting (b)(3):10 USC 424 (b)(3):10 USC 424 It was suggested that they prepare a staff paper, or guide the assessment and preparation of a paper, on this item, perhaps after additional updating briefings. (b)(3):10 USC 424 indicated that before they started to draft anything he, at least, wanted to arrange to spend half a day at NPIC.

VI. On SA-5 ABM Capability

After detailed discussion of this item, it was concluded that substantial matters bearing on this question were not addressed in the briefing. It was suggested that a good DIA report should be prepared on this system's capability in relation to an ABM role. To assist DIA in this matter an ad hoc panel was named, consisting of (b)(3):10 USC 424 (b)(3):10 USC 424 suggested that a good starting point might be a concise DIAST briefing on the SA-5 system. (b)(3):10 USC 424 suggested that the panel, after appropriate orientation by DIA and with the approval of General Bennett, should visit the Board of National Estimates on this matter. It was further suggested that in defining the ABM capability of this system, a clear split should be made in addressing the capability for area defense and the capability for self-defense. It was agreed that this was a good procedure, and it was felt by some to be a substantial help in eliminating the [redacted] (b)(1),1.4 (c)

VII. On the MOSKVA ASW Capability

It was agreed DIAST should prepare a paper on the MOSKVA with emphasis on the nature and extent of the ASW capability and that this

would be reviewed by an ad hoc group of the SAC identified to include: (b)(3):10 USC 424 It was also agreed that DIAST would prepare a letter including a note from [redacted] to the skipper of the JFK asking about the [redacted] with which [redacted] was associated.

(b)(3):10 USC 424

(b)(1),1.4 (c)

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 22-23 January 1970 Time 0900-1715

Place Room 3E 267, 1E 864

NAME	REPRESENTING	SECURITY	22 JAN DATE AM	PM	EX	23 Jan 70 DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
(b)(3)-10 USC 424												
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			✓	✓		✓	✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 22-23 January 1970 Time 0900-1715

Place 1E 864, 3E 267

NAME	REPRESENTING	SECURITY	22 Jan 70 DATE			23 Jan 70 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
[redacted]			✓	✓								
			✓	✓		✓	✓					
				✓								
						✓	✓					
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			✓	✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 22-23 January 1970 Time 0900-1715

Place 1E 864, 3E 267

NAME	REPRESENTING	SECURITY	22 Jan 70 DATE			23 Jan 70 DATE			DATE			REMARKS
(b)(3)-10 USC 424			AM	PM	EX	AM	PM	EX	AM	PM	EX	
				✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 22-23 January 1970 Time 0900-1715

Place 1E 864, 3E 267

NAME	REPRESENTING	SECURITY	22 Jan 70 DATE			23 Jan 70 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)						✓						
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						✓						
				✓								
				✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee

Date of Meeting 22-23 January 1970 Time 0900-1715

Place 1E 864, 3E 267

NAME	REPRESENTING	SECURITY	22 Jan 70 DATE			23 Jan 70 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3) 10 USC 424, (b)(6)				✓								
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			✓	✓								
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~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

MINUTES OF DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

26-27 MARCH 1970

I. (U) GENERAL: A meeting of the DIA/SAC was held on 26-27 March in Room 3E267 in the Pentagon. The meeting convened at 0900 hours on 26 March and adjourned at 1600 hours on 27 March.

II. (U) ATTENDEES: A list of attendees is attached (Encl. 1). The DIA/SAC Secretariat representative was [redacted] (b)(3) 10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agendas are attached (Encls. 2 and 3).

IV. (S) SUMMARY:

A. The meeting proceeded as indicated on the "Actual Agenda" (Encl. 3). [redacted] (b)(1),1.4 (c) moved up to accommodate Gen Bennett's attendance at the earlier time. In addition to the findings of the [redacted] (b)(1),1.4 (c)

B. The conclusions and recommendations indicated by the Committee members in Executive Session are presented in Encl. 4.

C. A letter reporting on the findings of the Committee was prepared by the Chairman and forwarded on 10 April to the Director, DIA. It is attached as Enclosure 5.

Review On ~~24 Mar 1996~~

Review On ~~26 Mar 1998~~

~~SECRET~~

An additional product of the meeting was a memorandum from the Chairman to the Assistant Director for Scientific and Technical Intelligence, indicating five items suggested for reveiw by the DIA/SAC at the next or later Committee meetings (Encl. 6).

D. The Executive Session concluded at 1600 hours, 27 March 1970.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

6 Enclosures a/s

Secretary, DIA/SAC

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D. C.

26-27 March 1970

ACTUAL AGENDA

26 March 1970, Room 3E 267

(b)(3):10 USC 424.(b)(6)

0900-0905	SAO Update
0905-0945	(b)(1),1.4 (c)
0945-1040	SAO Update continued
1040-1050	Break
1050-1140	SS-11 Accuracy Report and Multi-Purpose Considerations
1140-1245	New Soviet ABM Developments
1245-1305	New Soviet ABM Ad Hoc Panel Status
1305-1335	Lunch
1335-1345	Possible Soviet ABM Test Trajectories
1345-1500	SA-5 ABM Capabilities
1500-1520	PL-1 Missile
1520-1550	MOSKVA/ASW
1550-1610	Soviet [redacted] Ad Hoc Panel Report
1610-1710	SS-N-6 and SS-NX-5

27 March 1970, Room 3E 267

0805-0825	Current Intelligence and Introduction to C&C
0825-0925	Soviet C&C
0925-1025	[redacted]
1025-1035	Break

Review On ~~26 Mar 1990~~

~~SECRET~~

(b)(3):10 USC 424.(b)(6)

1035-1045	New SAO Data
1045-1115	(b)(1),1.4(c) [redacted]
1115-1235	Soviet Early Warning and New ABM Radar Developments
1235-1250	Lunch
1250-1350	Processing, Analysis, and Reporting of Past [redacted] Data
1350-1440	(b)(1),1.4(c) [redacted] Proposed Programs
1440-1600	Executive Session

Conclusions and Recommendations from
DIA Scientific Advisory Committee
26-27 March 1970

(b)(1),1.4 (c)

[redacted]

(b)(1),1.4 (c) [redacted]

~~(S)~~ Unless the U.S. needs discriminant data - which is frequency sensitive - for ABM development, DIA does not need [redacted] if it has [redacted] with the capabilities identified in 1. through 4. above. If [redacted] is to be justified by the need for discriminant data by [redacted] and the advanced ABM development program, then DIA needs a definitive statement of data requirements from the Army. If data on [redacted] is important, much of this can be obtained from ground radar at Shemya. (b)(1),1.4 (c) (b)(1),1.4 (c)

SHEMYA RADAR

~~(S)~~ A multi-object radar tracking capability is required at [redacted] to get [redacted] (b)(1),1.4 (c)

Review On ~~[illegible]~~

SA-5 ABM CAPABILITY

~~(S)~~ In providing an assessment of the SA-5 ABM capability, the assessed performance should in each case be determined for a specific engagement, i.e., a specific incoming warhead, on a specific trajectory, with a specific mode of operation of the Soviet ABM. Also more quantitatively definitive descriptions of threat and performance should be devised than qualitative terms such as: "significant", "limited", "substantial", etc. The above two ideas should be incorporated in a revision of the draft report prepared by [redacted] and that revision should be reviewed by the SAC. As part of this action, DIAST should carefully consider a report on the C&C requirements for a point-in-space-and-time ABM intercept mode, prepared by [redacted]

(b)(1),1.4 (c)

Chinese Chemical Industry and Missile Development.

~~(S)~~ The Committee should review at its next meeting the current knowledge of the Chinese propellent related manufacturing capability and the general missile development situation. Specifically considered should be the cryogenics and the storable liquid fuel capabilities.

Possible MIRV and High β Limitations in SALT

~~(S)~~ The DIA should investigate the possibility of MIRV and high β restrictions in a SALT agreement. Inherent in this question is a determination of the amount and kind of testing that would be necessary before the Soviets would go operational with an increased capability - in the context of a SALT. A need was suggested for a careful comparison by DIA of MINUTEMAN and SS-11 test histories.

MOSKVA/LENNINGRAD ASW Capabilities

~~(S)~~ The defense intelligence community should accomplish a careful evaluation of whether or not the MOSKVA is testing [redacted] for ASW. This should include a thorough collection effort against the MOSKVA procedures and methods.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

[redacted]

~~(S)~~ Based on the ad hoc panel report, the Committee agreed that a standing [redacted] Panel should be formed. Priority topics for this Panel include:

1. Soviet countermeasures against U.S. IR missiles (both anti-tank and anti-aircraft).

(b)(1),1.4 (c)

2. Soviet [redacted] capabilities.

3. Soviet [redacted] equipment aboard ships such as the MOSKVA.

Collection Against the SS-NX-5 and SS-N-6.

(b)(1),1.4 (c) ~~(S)~~ The DIA/SAC should emphasize the inadequacy of the RADINT collection [redacted] and ask for a briefing on [redacted] by the responsible Project Officer at the next SAC meeting.

Command and Control (C&C)

~~(S)~~ The briefing on Soviet C&C by [(b)(3):10 USC 424] was outstanding. The SAC attaches a great importance to continuing that work.

(b)(1),1.4 (c) [redacted]

(U) The Committee approved the draft DIA/SAC report submitted by
(b)(1),1.4 (c) [redacted] The substance of a draft transmittal letter to the Director DIA, was also agreed upon.

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 26-27 March 1970 Time

Place The Pentagon, Room 3E267

NAME	REPRESENTING	SECURITY	26 DATE			27 DATE			DATE		711	REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424												
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 26-27 March 1970 Time _____

Place The Pentagon, Room 3E267

NAME	REPRESENTING	SECURITY	26 DATE			27 DATE			DATE 7/1			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 26-27 March 1970 Time

Place The Pentagon, Room 3E267

NE	REPRESENTING	SECURITY	26 DATE			27 DATE			DATE 7/1			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 26-27 Mar 1970 Time

Place The Pentagon, Room 3E267

NAME	REPRESENTING	SECURITY	26 DATE			27 DATE			DATE 7/1			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	26 DATE			27 DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
BENNETT, Donald LTG	DIAST	(b)(3):10 USC 424										
(b)(3):10 USC 424,(b)(6)			✓	✓								
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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

21-22 MAY 1970

I. (U) GENERAL: A meeting of the DIA/SAC was held on 21-22 May in Room 3E267 in the Pentagon. The meeting convened at 0900 hours on 21 May and adjourned at 1545 hours on 22 May.

II. (U) ATTENDEES: A list of attendees is attached (Encl 1). The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agendas are attached (Encls 2 and 3).

IV. ~~(S)~~ SUMMARY:

A. The meeting proceeded as indicated on the "Actual Agenda" (Encl 3). During the course of the SAO Update briefing, the Committee requested of DIA a future briefing by DIAXX on the coverage probabilities and assurance, for certain specific areas. This would up-date information of this sort presented to the DIA/SAC Arms Limitation Panel in September 1969.

B. The second agenda item was a comprehensive review of Chinese missile developments, testing, and manufacturing, leading to postulated characteristics and IOC for the initial CPR ICBM. The presentation stimulated the observation from Committee members that the SAC should devote some discussion to evaluating the impact of the Chinese missile progress on the SALT position that the US should take (and Soviets too perhaps) on the question of ABM. At the conclusion of the briefing, the SAC requested DIA to present at the next meeting a briefing covering:

1. A revised estimate of the probable impact areas for CPR ICBM test flights.

2. A discussion of launch azimuth indicators.

(b)(1),1.4 (c)

3. [redacted]

C. [redacted] briefing indicated that a team of [redacted] (b)(1),1.4 (c) personnel will be sent to the site in July to investigate upgrading the capability of the radar. The Committee expressed the belief that some U.S. technical personnel might be needed permanently on-site to improve the RADINT performance.

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~~DOD DIR 5200.10~~

(b)(1),1.4 (c)

D. On [redacted] much discussion centered around the questioned utility of the capability as being developed. It was agreed that some benefit would accrue to US ECM design from use of the intelligence data obtained via this capability.

(b)(3):10 USC 424

E. [redacted] reviewed the background for and the approach being taken in relation to the [redacted] requested study of collection against ICBM reentry. [redacted] stated that the study output being pursued is two-fold:

(b)(1),1.4 (c)

1. Comments on the utility and effectiveness of [redacted] collection systems.

2. Alternative cost-level package proposals with associated assessed capabilities and risks.

To make the study more manageable with limited resources and time, (b)(3):10 USC 424 suggested an inverse approach to the study, ie starting with [redacted] (b)(1),1.4 (c) collection systems and working backward toward the known intelligence requirements to see which approaches appear most effective. Much discussion ensued. It appeared that most felt that the study would have to be finally presented as a progression from identified intelligence requirements through to best proposed collection approaches and systems, and that the study should therefore be structured according to this pattern.

F. (b)(3):10 USC 424 discussed the issues associated with [redacted] (b)(1),1.4 (c) "Soviet Forces for Intercontinental Attack" and [redacted] on Soviet homeland defense forces.

G. The real-time/near-real-time collection presentation addressed the application of such a capability to the following: crisis intelligence, combat support, event analysis, intelligence production, and strategic warning. [redacted] emphasized the need in connection with such a system to consider thoroughly what is to be done with the data as it is obtained. [redacted] discussed the DIA approach to evaluation of such a capability and indicated the formation of an ad hoc committee to prepare a preliminary report to DIADR by 1 Sept 70 and a final report by 1 Nov 70.

(b)(3):10 USC 424

H. The results from (b)(3):10 USC 424 verbal report to the Committee on the "New Soviet ABM Efforts" are reflected in the conclusions and Recommendations from the Executive Session (Encl 4).

I. A letter reporting on the findings of the Committee was prepared by the Chairman and forwarded to the Director, DIA. It is attached as Enclosure 5.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

4 Enclosures a/s

Secretary, DIA/SAC

EXECUTIVE SESSION CONCLUSIONS AND RECOMMENDATIONS
DIA/SAC MEETING 21-22 MAY 1970

I. ~~(S)~~ MOSKVA

A. The Committee concluded that the Navy clearly has insufficient analysts working on reduction and evaluation of the [redacted] the MOSKVA.

(b)(1),1.4 (c)

B. The Navy should, at least temporarily, utilize the readily available and offered [redacted] capability for SONAR analysis until it has a sufficient in-house capability.

(b)(1),1.4 (c)

C. For the specific problem of SONAR collection against the MOSKVA operating in the Mediterranean, the Committee was led to understand that the Navy [redacted] the MOSKVA. The Committee therefore strongly recommends that the [redacted] which then be detailed (dedicated temporarily) to the specific task of [redacted] the MOSKVA.

(b)(1),1.4 (c)

D. (b)(3):10 USC 424 was asked by the Chairman to check with the appropriate offices and laboratories in the Navy to effect an analysis of the bi-static SONAR approach to submarine detection and report his findings back to the full Committee.

II. ~~(S)~~ New Soviet ABM Efforts

A. DIA should prepare a paper effecting a correlation of all data and information available on the new Soviet ABM efforts (similar to what [redacted] did at the blackboard in his ad hoc panel report to the Committee). [redacted] were asked to provide advice and guidance to the DIAST personnel in this effort.

(b)(3):10 USC 424

B. At the next SAC meeting, DIA/MID should make a presentation to the Committee on the methodology used by DoD in making an assessment of this subject - the new Soviet ABM efforts.

(b)(1),1.4 (c) [redacted]

III. ~~(S)~~ Evaluation of Collection Against Soviet and CPR Missile Reentry

At (b)(3):10 USC 424 request the Chairman appointed an ad hoc panel to

~~DOWNGRADED AT 12 YEAR INTERVALS;~~
~~NOT AUTOMATICALLY DECLASSIFIED~~
~~DoD DIR 5200.10~~

advise DIA on the current study of collection against Soviet and CPR missile reentry. The Panel is scheduled to meet on 16 June to review and advise on the material prepared by that date. The Panel was identified to consist of (b)(3):10 USC 424 (b)(3):10 USC 424

IV. (U) SS-11 Accuracy

A. The Committee approved the body of the report on SS-11 accuracy as previously prepared by (b)(3):10 USC 424 ad hoc panel.

B. The Committee revised the Conclusions of that report. The revised Conclusions are attached as Enclosure 1.

1 Enclosure
Revised Conclusions ~~(S)~~

CONCLUSIONS FOR REPORT ON

SS-11 ACCURACY

1. There is no intelligence data available from which good assessment can be made of the guidance accuracy of the SS-11.

(b)(1),1.4 (c) 2. The guidance mechanization including the [redacted] equation is only partially known for the SS-11.

(b)(1),1.4 (c) [redacted]

5. There is no plausible evidence to indicate a change in the guidance system of the SS-11 since 1965.

6. The increase in [redacted] (b)(1),1.4 (c) can be justified on the basis of [redacted]

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DIA SCIENTIFIC ADVISORY COMMITTEE
THE PENTAGON WASHINGTON, D. C.
21-22 MAY 1970

ACTUAL AGENDA

21 May Room 3E267

(b)(3):10 USC 424,(b)(6)

0900-1005	SAO Update
1005-1115	Chinese Missile Developments and Propellent Related Manufacturing Capability
1115-1120	Break
1120-1140	Discussion of CHICOM Missile Effort
1140-1210	SAC Endorsement of SS-11 Accuracy Report
1210-1300	Updated Acoustic Intelligence
1300-1325	Lunch
1325-1410	Navy's Assessment of MOSKVA's ASW Capability and Approach
1410-1440	(b)(1),1.4(c) Program
1440-1515	Program
1515-1700	Evaluation of Collection Against Soviet and CHICOM Missile Reentry

22 May Room 3E267

0905-0910	(b)(1),1.4(c)
0910-1000	
1000-1025	
1025-1035	Status Report on New Soviet ABM Efforts
1035-1040	Break

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~~NOT AUTOMATICALLY DECLASSIFIED~~
~~DoD DIR 5200.10~~

1040-1225	Real-Time Information Collection and Reporting	(b)(3):10 USC 424
1225-1310	Soviet ABM Efforts (continuation)	
1310-1325	Lunch	
1325-1335	(b)(1),1.4(c) [redacted]	
1335-1345	Additional Data on Reentry Evaluation	
1345-1545	Executive Session - Findings and Recommendations from Meeting	

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: DIA Scientific Advisory Committee Meeting

Date of Meeting 21-22 May 70 Time 0900

Place 3E267 Pentagon

NAME	REPRESENTING	SECURITY	21 May DATE AM	PM	EX	22 May DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
(b)(3)-10 USC 424 (b)(6)			✓	✓		✓	✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

ME	REPRESENTING	SECURITY	21 May DATE			22 May DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NE	REPRESENTING	SECURITY	21 May DATE			22 May DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	21 May DATE			22 May DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NE	REPRESENTING	SECURITY	21 May DATE			22 May DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	21 DATE			22 DATE			DATE			REMARKS
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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

[redacted]

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

23-24 JULY 1970

I. (U) GENERAL: A meeting of the DIA/SAC was held on 23-24 July at the [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i) and the [redacted] both in San Diego, California. The meeting convened at 0830 hours each day. The host was the [redacted]

II. (U) ATTENDEES: A list of attendees is attached (Encl 1). The DIA/SAC Secretariat representative was [redacted] (b)(3):10 USC 424

III. ~~(S)~~ AGENDA: A copy of the Tentative Agenda is attached (Encl 2). All topics were covered except:

A. Status Report on [redacted] (b)(1),1.4(c)

B. Interagency Committee on Methodology

C. Comments on [redacted] (b)(1),1.4(c) Discussion in SALT(S)

[redacted] (b)(3):10 USC 424

The above topics to appear on the next meeting agenda.

IV. ~~(S)~~ SUMMARY:

A. The meeting proceeded essentially as indicated on the agenda. [redacted] (b)(3):10 USC 424 was unable to attend the meeting, and his presentation was not given. Due to normal time slippage and the absence of [redacted] (b)(3):10 USC 424 the first day's session adjourned normally at 1615 hours.

B. A DIA hosted social was held at the Admiral Kidd Officers' Mess the evening of the 23rd. The Director, DIA Staff, DIA/SAC Members, meeting briefers, and selected [redacted] personnel attended. An open bar cocktail hour was held from 1900-2000 hours followed with a sitdown dinner for 36 people. (The social cost $180.00, $5.00 per head, paid by the DIA Representation Fund)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

C. Numerous early departures and time slippage caused the second day's session to terminate in an unorderly fashion around 1630 hours. An executive session was not held, although [redacted] (b)(3):10 USC 424 did give his On-Site Inspection presentation.

[redacted]

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Declassified Per E.O. 12958
Defense Intelligence Agency
By GP-4 Date 7-14-99
NOT Reviewed for Public Release

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DECLASSIFIED AFTER 12 YEARS
DoD DIR 5200.10

D. Letters of appreciation (Encls 3 thru 6) were sent to [redacted] (meeting host), and to the agencies providing briefers for this meeting. These letters were prepared by the DIA/SAC Secretariat for the Chairman's signature on his company letterhead. Courtesy copies were provided the Director.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

CERTIFIED:

[redacted]

Major, USA
Acting Secretary, DIA/SAC

6 Enclosures a/s

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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
23-24 July 1970

TENTATIVE AGENDA

23 July
1st Floor Conference Room, Bldg. 128, [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

0830-0845	Introduction to [redacted]
0845-0900	[redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
0900-1000	
1000-1030	S&T Intelligence Group
1030-1045	Break
1045-1105	[redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
1105-1135	THINK RED - Soviet Reaction to [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
1135-1235	Lunch (catered box)
1235-1300	Analysis of [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
1300-1330	Status Report on [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
1330-1345	Move to [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

Bldg. 33, NELC

1345-1515	Soviet Undersea Communications & Sonar Capabilities
1515-1615	Tour/Demonstration of [redacted] (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

[redacted] (b)(3):10 USC 424,(b)(6)

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NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

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TENTATIVE AGENDA

24 July, Bldg. 33, NELC

0830-0930	Real/NRT Readout
0930-1030	" " "
1030-1130	" " "
1130-1200	Discussion Period
1200-1300	Lunch
1300-1330	Interagency Committee on Methodology for Resources Allocation
1330-1400	Comments on (b)(3):10 USC 424,(b)(3):50 USC 403-1(i) Discussion in SALT(S)
1400-1500	Soviet & U.S. (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
1500-1530	Evaluation of Collection Against (b)(3):10 USC 424,(b)(3):50 USC 403-1(i)
1530-1630	Review of DIA Papers on Soviet ABM, SA-5 & SS-11
1630-1730	Executive Session a. SALT, On-Site Inspection (b)(3):10 USC 424,(b)(6) b. Plans for next meeting

(b)(3):10 USC 424,(b)(6)

~~SECRET~~

DTA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting 23-24 July 70 Time 0830

Place [redacted] San Diego, Calif.

NAME	REPRESENTING	SECURITY	23 July DATE			24 July DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
[redacted]			X	X		X	X					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

ME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
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THIS LIST DOES NOT INCLUDE (b)(3)-10 USC 424, (b)(3)-50 USC 403-1 PERSONNEL. ATTACHED LIST OF (b)(3)-10 USC 424,(b)(3)-50 USC 403-1(i) PERSONNEL WERE IN ATTENDANCE ON MORNING OF 23 JULY ONLY.

BADGE RECORD (TOUR/CONFERE'
11ND-NUC-5512/14 (1-70)

DATE: 23-24 July '70

TOUR/CONFERENCE

DIA COUNCIL Meeting

E (b)(3):10 USC 424,(b)(6) [redacted]

BADGE NO.	NAME	IN	OUT	SIGNATURE
	(b)(3):10 USC 424,(b)(6) [redacted]			(b)(3):10 USC 424,(b)(6) [redacted]
no show				
no show				
	LTG D. Bennett, USA, Director - DIA			
	(b)(3):10 USC 424 [redacted]			

Page 1 of 3

BADGE RECORD (TOUR/CONFERE
11ND-NUC-5512/14 (1-70)

DATE: 23-24 July '70

TOUR/CONFERENCE	ESCORT/SPONSOR
DIA COUNCIL Meeting	(b)(6)

BADGE NO.	NAME	IN	OUT	SIGNATURE
	(b)(3):10 USC 424,(b)(6)			

BADGE RECORD (TOUR/CONFERE
11ND-NUC-5512/14 (1-70)

DATE: 23-24 July 1970

TOUR/CONFERENCE

DIA COUNCIL Meeting

ESCORT/SPONSOR

(b)(6)

BADGE NO.	NAME	IN	OUT	SIGNATURE
	(b)(3):10 USC 424,(b)(6)			

Page 3 of 3

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

22-23 SEPTEMBER 1970

I. (U) GENERAL: A meeting of the DIA/SAC was held on 22-23 September in Room 3E267 in the Pentagon. The meeting convened at 0900 hours on 22 September and adjourned at 1600 hours on 23 September.

II. (U) ATTENDEES: A list of attendees is enclosed (enclosure 1). The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agendas are enclosed (enclosures 2 and 3).

IV. ~~(S)~~ SUMMARY:

A. (b)(3):10 USC 424 presented his customary SAO update briefing following a brief introduction of [redacted] (new DIA/SAC member) to the Committee by (b)(3):10 USC 424 As always, the Committee showed intense interest in the update. requested that a follow-on brief be given on the history of (b)(1),(b)(3):10 USC 424,1.4 (c)

B. (b)(3):10 USC 424 presented a follow-up to the NRT briefing given at the previous meeting in San Diego. Considerable discussion followed concerning the parameter requirements of the proposed system. The tasking letter from the Director (enclosure 4) on this subject was presented to the Committee for consideration. No conclusions were reached so [redacted] decided to delay further discussion until the executive session.

C. The following MID presentation failed to meet the requirements of the Committee. It was determined that another briefing would be required. (MFR: [redacted] decided to formulate a detailed Terms of Reference for MID with the concurrence of DIA and [redacted] in that MID did not understand the scope or purpose of the requested briefing.) (b)(3):10 USC.424

D. (b)(3):10 USC 424 briefing updated the Committee on their analysis of Soviet missile tests. He had previously briefed in October 1969, and subsequently [redacted] Emphasis was given to "event analysis" of the (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] (b)(3):10 USC 424

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DoD DIR 5200.10

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asked that the Committee again be updated after program 7601 data became available.

E. [redacted] presented his analysis of the SA-2 upgrading potential as well as recent data on SA-5 tests.

F. [redacted] began a discussion on the SA-2 capabilities as an ABM [redacted] contended that the SA-2 has considerable potential for upgrading without allowing external detection of change. This sparked the decision to ask IDA to present their study on the matter.

G. [redacted] was briefing several people in the Pentagon and was available at 1630 to brief the Committee. [redacted] gave a half-hour rundown on the Soviet SS-11 efforts including their most recent testing.

H. The second day's session began early with a current Near East briefing. The briefer [redacted] was unable to stay past 0845 -- Lt Gen Philpott, Acting Director, continued on the subject till 0900.

(b)(3):10 USC 424

I. General agreement with minor exceptions were offered to [redacted] report until [redacted] voiced objection to various "unsupported" assumptions made in the report. [redacted] would not permit his name to be used in approval of the report. (Decision pending on appropriate action).

J. [redacted] A very brief presentation was made to the Committee by [redacted] on the present status of nuclear storage at SA-2 sites.

K. [redacted] followed with his [redacted] history and update pitch [redacted] actively entered the discussion complete with chalkboard art work.

L. [redacted] presentation was well received. [redacted] was impressed with the status of the program.

M. [redacted] report was also well received. [redacted] revealed that recent new data had been collected and suggested the report be delayed until [redacted] could include any impact this data might have on the report.

N. Lunch ended early to allow for a brief impromptu executive session before the following briefing.

O. The meeting continued again with (b)(3):10 USC 424 comprehensive description of the Navy's ocean surveillance programs including some specific systems. This was not a report of a DSB Summer Study group as previously announced since (b)(3):10 USC 424,(b)(6) was unable to attend.

P. The IDA study on the SA-2 upgrade question was very interesting and added additional insight and thought to the problem.

Q. In executive session (b)(3):10 USC 424 established an ad hoc panel on the SA-2 Capabilities and Upgrading. The panel is to be chaired by [redacted] and have as members - (b)(3):10 USC 424 (b)(3):10 USC 424 The panel was given a broad charter and told to report to the full committee at its next meeting. Three areas were considered of prime importance: (1) degree of threat of present SA-2, (2) degree of concern to upgrading possibilities of the SA-2, and (3) kinds of things the intelligence community should look for or set in motion.

R. (b)(3):10 USC 424 solicited from the members items for future consideration and asked several members to individually look into these to determine what actions the committee should take. The areas to consider and the individual assigned to each are:

(1) Y class submarine - (b)(3):10 USC 424

(2) Tasking of peripheral devices - (b)(3):10 USC 424

(3) "Pickup" question (ocean) - (b)(3):10 USC 424

(4) Ocean Surveillance - (b)(3):10 USC 424

(5) "Intelligence systems" - (b)(3):10 USC 424

S. The membership endorsed the continuation of bi-monthly meetings for the full committee and confirmed the dates of the next meeting on 18-19 November 1970.

T. The question of NRT was raised again. The feeling was advanced by some that the Committee did not need anymore briefings on this subject but rather should devote considerable time at the next meeting in working of the question.

U. The meeting adjourned at 1600 hours, 23 September 1970.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

4 Enclosures a/s

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
22-23 SEPTEMBER 1970

TENTATIVE AGENDA

22 September 1970
Room 3E267, The Pentagon

0900-1000	SAO Update
1000-1100	Real/Near Real Time Reporting
1100-1200	Methodology in Assessment of New SU ABM Efforts
1200-1230	Lunch
1230-1330	ABM Collection
1330-1400	SA-2 and SA-5
1400-1530	Discussion on SA-2 as an ABM

23 September 1970
Room 3E267, The Pentagon

0900-0930	Review of Proposed Memo: Analysis of New Soviet ABM Developments
0930-1000	Comments on C&C (Nuclear)Discussion in SALT (S)
1000-1030	Interagency Committee on Methodology of Resource Allocations
1030-1100	Review of [redacted] Program
1100-1130	Review of Proposed Memo: [redacted]
1130-1200	Lunch
1200-1330	Ocean Surveillance
1330-1500	Executive Session

(b)(3):10 USC 424,(b)(6)

Edition 7
21 September 1970

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

S-215/AC

6 July 1970

(b)(3):10 USC 424

Chairman, Scientific Advisory Committee
Defense Intelligence Agency (DIAAC)
Washington, D.C. 20301

Dear Dr. Hall:

~~(S)~~ I have been giving further thought to your meeting with (b)(3):10 USC 424 and me on 10 June 1970. I would like the DIA Scientific Advisory Committee to take a further look into the subject of real/near real time reporting and advise me of its findings and conclusions.

~~(S)~~ Specifically, I am seeking broad and in-depth answers to the following questions:

a. To what kinds of situations and developments are real/near real time reporting systems applicable? To what are they not?

b. How would a real/near real time reporting system fit into or compliment existing reporting systems?

c. What present reporting system(s) could be replaced or reduced upon the implementation of a real/near real time reporting system?

(U) As always, my staff will assist in providing the necessary briefings you desire.

Sincerely,

(b)(6)

D. V. BENNETT
Lieutenant General, USA
Director

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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
22-23 SEPTEMBER 1970
ACTUAL AGENDA

22 September 1970
Room 3E267, The Pentagon

0900-1000	SAO Update
1000-1130	Real/Near Real Time Reporting
1130-1230	Methodology in Assessment of New SU ABM Efforts
1230-1300	Lunch
1300-1410	ABM Collection
1410-1510	SA-2 and SA-5
1510-1630	Discussion on SA-2 as an ABM
1630-1700	Recent testing of the SS-11

23 September 1970
Room 3E267, The Pentagon

0830-0845	Current Near East Situation
0845-0900	Near East Situation
0900-0940	Review of Proposed Memo: Analysis of New Soviet ABM Developments
0940-1030	History & Update - Sary Shagan
1030-1100	Review of (b)(1),1.4(c) Program
1100-1130	Review of Proposed Memo: (b)(1),1.4(c)
1130-1145	Lunch
1145-1215	Executive Session
1215-1330	Ocean Surveillance
1330-1430	Study on SA-2 Upgrade
1430-1600	Executive Session

(b)(3):10 USC 424,(b)(6)

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NOT AUTOMATICCALLY DECLASSIFIED
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 22-23 Sept 1970 Time 0900

Place Pentagon 3E267

NE	REPRESENTING	SECURITY	22 Sept DATE AM	PM	EX	23 Sept DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 22-23 September 1970 Time

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	22 Sep DATE			23 Sep DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 22-23 September 1970 Time

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	22 Sep DATE			23 Sep DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 22-23 Sept Time 0900

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	22 Sep DATE			23 Sep DATE			DATE			REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE 22 Sept AM	PM	EX	DATE 23 AM	PM	EX	DATE AM	PM	EX	REMARKS
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~~NO FOREIGN DISSEM~~

DEFENSE INTELLIGENCE AGENCY

SCIENTIFIC ADVISORY COMMITTEE

WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

18-19 NOVEMBER 1970

I. (U) GENERAL: A meeting of the SAC was held on 18-19 November in Room 3E267, The Pentagon. The meeting convened at 0900 hours on 18 November and adjourned at 1615 hours on 19 November.

II. (U) ATTENDEES: A list of attendees is enclosed (enclosure 1). The SAC Secretariat representative was [redacted]

III. (U) AGENDA: Copies of the tentative and actual agendas are enclosed (enclosures 2 and 3).

IV. ~~(S/NFD)~~ SUMMARY:

A. The meeting began with the customary SAO update by [redacted] Emphasis was on newer CPR activities.

B. The entire first day's session was devoted to an analysis of NRT as outlined in the Actual Agenda (enclosure 3). The day concluded with remarks by the Director.

C. The presentation on Silo Hardness led to considerable discussion on how slab thickness and other measurements are arrived at. The statistics involved were of particular interest, especially the upper and lower limits of measurement estimates. It was later considered appropriate for DIA to develop a probability curve.

D. [redacted] reported on the activities of his ad hoc [redacted] Panel and presented a written report (enclosure 4). He recommended the effort be continued -- with no specifics.

E. [redacted] reported the [redacted] preliminary study to be in its early stage. It is to [redacted] The Committee concluded that (1) the Navy should document their requirements on Naval targets in the area and (2) the study to test the validity of the method using existing equipment should continue if no significant amount of resources are involved.

Reason: 18 Nov 90

~~SECRET~~
~~NO FOREIGN DISSEM~~

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

F. Two versions of a SAC paper on the SA-2 were presented by (b)(3):10 USC 424 The resulting working sessions produced a Committee position paper based on these versions. The final paper (letter) was signed the following day (b)(3):10 USC 424 (enclosure 5).

G. During the short executive session following lunch, [redacted] (b)(3):10 USC 424 recommended an ad hoc panel be established to review the [redacted] (b)(3):50 USC 403-1(i) He suggested the Panel would need to meet for 4 or 5 full day meetings. He also recommended an hour briefing on this topic at the next meeting.

(b)(1),1.4 (c)

H. A special executive session on NRT was then held to outline further direction for the NRT study.

I. (b)(3):10 USC 424,(b)(6) presented a hurried presentation on (b)(1),1.4 (c) (b)(3):10 USC 424 followed with a description of work being done on ocean surveillance. It was generally felt that the SAC should get involved in ocean surveillance to some degree.

J. The meeting adjourned at 1615 hours, 19 November 1970.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

5 Enclosures
1. List of Attendees ~~(C)~~
2. Tentative Agenda ~~(S)~~
3. Actual Agenda ~~(S)~~
4. [redacted] Report ~~(S/NFD)~~
5. Ltr to LtGen Bennett from (b)(3):10 USC 424 20 Nov 70 ~~(S)~~

(b)(1),(b)(3):10 USC 424:1.4 (c)

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING
18-19 NOVEMBER 1970

TENTATIVE AGENDA

18 November 1970
Room 3E267, The Pentagon

0900-1000	SAO Update	(b)(3):10 USC 424
1000-1100	Description of NRT System	
1100-1115	DIA Analysis Program, NRT	
1115-1145	NRT in Selected Situations	
1145-1215	NRT Targeting	
1215-1245	Lunch	
1245-1330	[redacted]	
1330-1530	Detailed Analysis of Three Events	
1530-1700	Review and Discussion of Interim Report to the Director on NRT (Executive Session)	(b)(3):10 USC 424

19 November 1970
Room 3E267, The Pentagon

0830-0930	Silo Hardness	(b)(3):10 USC 424
0930-1015	SA-2 Panel Report	
1015-1100	(b)(1),(b)(3):10 USC 424,1.4 (c) Panel Report	

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NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

19 November 1970 (Cont'd)

1100-1130 [redacted] Missiles

1130-1200 Lunch

1200-1600 Executive Session

a. Unexplained endeavors [redacted]

b. Projected Threat Offered by [redacted]

c. Tactical Intelligence (Presentation of [redacted] Report")

d. Tactical Intelligence

e. Ocean Surveillance

(b)(3):10 USC 424

Edition 5
17 November 1970

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
18-19 NOVEMBER 1970
ACTUAL AGENDA

18 November 1970
Room 3E267, The Pentagon

(b)(3):10 USC 424

0900-0950	SAO Update
0950-1010	Study on NRT
1010-1200	Description of NRT System
1200-1210	Break
1210-1300	NRT in Selected Situations
1300-1330	Lunch (read ltr to DR on NRT)
1330-1450	NRT in Selected Situation (continued)
1450-1615	[redacted]
1615-1745	Detailed Analysis of Events

19 November 1970
Room 3E267, The Pentagon

0845-1000	Silo Hardness
1000-1015	Break
1015-1055	[redacted] Panel Report
1055-1125	[redacted] Missile
1125-1300	SA-2 Panel Report
1300-1320	Lunch

~~DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED DoD DIR 5200.10~~

19 November 1970 (con't)

1320-1400 Executive Session

a. General Session

b. [redacted] Threat

1400-1510 NRT Executive Session

1510-1615 Executive Session

a. [redacted]

b. Ocean Surveillance

[redacted]
(b)(3):10 USC 424

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD ~~CONFIDENTIAL~~

SUBJECT: Full Committee Meeting

Date of Meeting 18-19 November 1970 Time 0900

Place Pentagon, 3E267

NE	REPRESENTING	SECURITY	0900 18 Nov DATE AM	PM	EX	0830 19 Nov DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
(b)(3) 10 USC 424			✓	✓		✓	✓					
			✓	✓		✓	✓					
			✓	✓		✓	✓					
			✓	✓		✓	✓					
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			✓	✓								

Encl 1

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting ~~CONFIDENTIAL~~

Date of Meeting 18-19 November 1970 Time 0900

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	18 Nov DATE AM	PM	EX	19 Nov DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
BENNETT, DONALD V., LTG	DR	[redacted]		✓			✓					
[redacted]						✓						
			H ✓			✓						
				✓		✓						
			✓									
			G									
			H ✓	✓								
				✓								
						✓						
			✓	✓		✓	✓					
			H ✓	✓								
			✓	✓								
			✓	✓		✓						

(b)(3):10 USC 424

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD ~~CONFIDENTIAL~~

SUBJECT: Full Committee Meeting

Date of Meeting 18-19 November 1970 Time 0900

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	18 Nov DATE			19 Nov DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424(b)(6)												
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							✓					
			✓	✓		✓						
			✓	✓			✓					
			✓	✓		✓	✓					
			✓	✓								
			✓	✓								
			✓	✓								
			✓									
			✓	✓								
			✓	✓								

~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD ~~CONFIDENTIAL~~

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3) 10 USC 424(b)(6)				✓								
			✓	2								
				✓								
						✓						
						✓						
						✓						
						✓						
						✓						
						✓						

~~CONFIDENTIAL~~

~~NO FOREIGN DISSEM~~

Report to the DIA/SAC

from

Ad Hoc (b)(1),(b)(3):10 USC 424,1.4 (c) Panel

19 November 1970

1. ~~(S/NFD)~~ The Ad Hoc (b)(1),(b)(3):10 USC 424,1.4 (c) Panel met on 9 November 1970 to review the tentative e/o intelligence collection plan prepared by DIA for Assistant Secretary Froehlke. (b)(3):10 USC 424,(b)(6) reported on a study of ways to increase effectiveness of U.S. surface to air weapons using [redacted] devices. (b)(3):10 USC 424 presented some recent intelligence on (b) 1.4 with particular emphasis on (b)(1),(b)(3):10 USC 424,1.4 (c) on the BE-12/MAIL and IL-18/MAY aircraft.

2. ~~(S/NFD)~~ Based on this and previous meetings (agendas enclosed), the Panel reviewed the (b)(1),(b)(3):10 USC 424,1.4 (c) to the U.S. and established a priority listing of these threats. They are listed in enclosure 4 in descending order of importance. Also included in the listing are some possible collection techniques.

3. ~~(S/NFD)~~ Further technical developments need to be investigated to assist in (b) 1.4 intelligence collection. (b)(1),(b)(3):10 USC 424,1.4 (c) (b)(1),(b)(3):10 USC 424,1.4 (c) should prove useful collectors of (b) 1.4 intelligence. Increased use of higher resolution film and color film of various spectral bands should be considered.

4. ~~(S)~~ The Panel considers that a concerted team effort is required in the proper tasking for collection against (b) (1) 1.4 threats in general.

4 Enclosures
1. Revised Meeting Agenda, 19 Feb 70 (U)
2. Revised Meeting Agenda, 8 May 70 (U)
3. Actual Meeting Agenda, 9 Nov 70 (U)
4. [redacted] Threats ~~(S/NFD)~~

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DoD DIR 5200.10

~~SECRET~~
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Encl 4

DIA SCIENTIFIC ADVISORY COMMITTEE
[redacted]

REVISED MEETING AGENDA

19 Feb 1970, 1E 864

0900-0910	Introductory Remarks
0910-0920	SAO Update
0920-1105	Unique [redacted] echniques
1105-1115	Coffee Break
1115-1230	[redacted]
1230-1305	Lunch
1305-1410	[redacted]
1410-1510	[redacted] of Anti-Tank Missiles

(b)(3):10 USC 424,(b)(6)

ENCLOSURE #1

DIA SCIENTIFIC ADVISORY COMMITTEE

(b)(3):10 USC 424

REVISED MEETING AGENDA

8 May 1970, Room 1E864

0900-0925	SAO Update
0925-0950	(b)(3):10 USC 424
0950-1050	[redacted] Equipment & Problems
1050-1240	(b)(3):10 USC 424 Threat
1240-1300	Lunch
1300-1430	Airborne (b)(3):10 USC 424 Threat
1430-1515	(b)(3):10 USC 424 Against Anti-Tank Missiles
1515-1530	Executive Session

(b)(3):10 USC 424.(b)(6)

ENCLOSURE #2

DIA SCIENTIFIC ADVISORY COMMITTEE

[redacted]

ACTUAL MEETING AGENDA

9 November 1970, 1E864

0900-1015	Use of [redacted] on U.S. Surface to Air Weapons
1015-1200	[redacted] on USSR Aircraft
1200-1300	Lunch
1300-1430	Report to OSD on [redacted]
1430-1600	Executive Session

(b)(3):10 USC 424

ENCLOSURE #3

[redacted]

[redacted] THREATS

ENCLOSURE #4

Threats	Possible Collection Techniques
A. Of Critical Strategic Importance	
1. Soviet ASW using	Alert HUMINT generally
(a) [redacted]	Look for [redacted] plan tech collection, [redacted]
(b) [redacted]	[redacted]
2. [redacted] against reconnaissance satellites	Install [redacted]
3. [redacted]	[redacted]
4. [redacted]	
B. Of Serious Strategic/Tactical Importance	
1. Surface to Surface missile [redacted]	
(a) Strategic - [redacted]	Commend Navy's collection of [redacted]
(b) Tactical - AT weapons	[redacted]
2. Surface to air missile [redacted]	
(a) Strategic - carrier air and bombers	[redacted]
(b) Tactical - choppers and logistic air	
3. Air to surface missile [redacted]	
(a) Strategic - a/c carriers	
(b) Tactical - ground installation, troops, and vehicles	

[redacted]

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

Threats	Possible Collection Techniques
4. Air to air missile [redacted]	
5. [redacted]	HUMINT

C. Of General Importance

1. Active [redacted] for ranging, communication, and general reconnaissance

2. [redacted] early warning

3. Soviet [redacted] satellites

4. Real time tactical [redacted]

SECRET

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

S-345/SAC

20 NOV 1970

Lieutenant General D.V. Bennett, USA
Director
Defense Intelligence Agency
Washington, D.C. 20301

Dear Don:

(S) Considerable and detailed information is available in the intelligence community on the early versions of SA-2, (b)(1),1.4(c) [redacted] We have listened to technical-capability analyses from several organizations regarding possible "upgrading" of the SA-2 to perform an ABM role.

(S) "ABM" in our context means a feasible anti-ballistic missile system useful enough to be sensible to the Soviets when applied to a typical soft SIOP target. We grant that the SA-2, augmented with a 10 Kt warhead, would defend some area against single Minuteman RVs if the U.S. 3d stage tankage is unretarded.

(b)(1),1.4(c) [redacted]

a. For the Intelligence Apparatus:

(1) The SA-2 problem deserves high priority among intelligence activities.

(2) [redacted] (b)(1),1.4 (c)

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DoD DIR 5200.10 DOES NOT APPLY

SECRET

Review On 20 Nov 70

Encl 5

(3) (b)(1),1.4 (c) We urge a high priority on the search of these and any other pertinent records for such information. The DIA/SAC intends to pursue the examination also.

b. For Intelligence Consumers:

(1) Until more adequate intelligence assessments are complete, it seems necessary to concede that (b)(1),1.4 (c)

(2) Within the flexibility of our target planning (b)(1),1.4 (c)

(b)(3):10 USC 424

Chairman
DIA Scientific Advisory Committee

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

6-7 JANUARY 1971

I. (U) GENERAL: A meeting of the SAC was held on 6-7 January in Room 3E267, the Pentagon. The meeting convened at 0900 on 6 January and adjourned at 1700 on 7 January.

II. (U) ATTENDEES: A list of attendees is enclosed (Enclosure 1). The SAC Secretariat representative was [redacted]

III. (U) AGENDA: A copy of the tentative agenda is enclosed (Enclosure 2). The actual agenda followed was essentially as depicted in the tentative agenda.

IV. ~~(S/NFD)~~ SUMMARY:

a. The meeting began with the customary SAO update by [redacted]

b. The entire first days' session was devoted to a follow on analysis and discussion of the NRT study considered at the previous meeting (18-19 November 1970) and the special full Committee meeting on NRT (2-3 December 1970). [redacted] was presented the DIA Exceptional Service Medal by the Director (Actual award was made at the January 1969 meeting, however, the medal had not been manufactured yet. [redacted] is the recipient of the first award of the medal.)

c. [redacted] presented a synopsis of his [redacted] Report" to the Committee in executive session on the morning of 7 January. [redacted] followed with comments on tactical intelligence. He was unable to complete his discussion and was expected to followup at a later meeting.

d. The [redacted] Threat Assessment was presented by [redacted] with comments by [redacted] The [redacted] program examined the US naval force counters to the Soviet SLBM system threat against the U.S.

e. The meeting adjourned at 1700 hours, 7 January 1971.

CERTIFIED:

[redacted]

Executive Secretary, DIA/SAC

2 Enclosures
1. List of Attendees ~~(S)~~
2. Tentative Agenda (~~S~~) ~~(S)~~

[redacted]

~~SECRET~~
~~NO FOREIGN DISSEM~~

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NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

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DIA SCIENTIFIC ADVISORY COMMITTEE

MEETING

6-7 JANUARY 1971

TENTATIVE AGENDA

6 January 1971
3E267, The Pentagon

0900-1000	SAO Update
1000-1230	Report on NRT Study
1230-1300	Lunch
1300-1430	(b)(1),1.4(c) Study on Scenarios
1430-1600	- Indication & Warning List
1600-1700	(b)(1),1.4(c)

7 January 1971
3E267, The Pentagon

0900-1030	Executive Session
1030-1200	Tactical Intelligence (Executive Session)
	(b)(3):10 USC 424 Report
	Proposal of Questions
1200-1230	Lunch
1230-1400	(b)(1),1.4(c) Threat Assessment
1400-1600	Executive Session

(b)(3):10 USC 424,(b)(6)

~~SECRET~~

DOWNGRADED AT 12 YEAR INTERVALS;
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DoD DIR 5200.10

Encl 2

MEETING BRIEF

SAO Update

Normal SAC update.

Report on NRT Study

A further report to the Committee on the continuing combined DIA and Committee study on NRT.

[redacted] Study on Scenarios

Results of a COMIREX study on NRT Scenarios submitted by DIA.

[redacted] Indications and Warning List

A discussion on the (b)(1),1.4(c) Indications and Warning List and how an NRT system might be applicable.

(b)(1),1.4(c)

An (b)(1),1.4(c) presentation on how (b)(1),1.4(c) and picture quality as it applies to an NRT system.

[redacted] Threat Assessment

A presentation by Tetra Tech of the (b)(2),1.4(c) program examining naval force counters to the Soviet SLBM system. This was a suggested agenda item by (b)(3),10 USC 424,(b)(6)

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NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE (DIA/SAC)

6-7 JAN 1971

Members of the DIA/SAC

(b)(3):10 USC 424

(b)(3):10 USC 424

(b)(3):10 USC 424

Special Consultants to the DIA/SAC

(b)(3):10 USC 424

(b)(1),(b)(3):10 USC 424,1.4 (c)

DIA/SAC Secretariat

(b)(3):10 USC 424, Acting Secretary
istrative Officer

*Expected Attendees

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NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD ~~CONFIDENTIAL~~ CONFIDENTIAL

SUBJECT: Full Committee Meeting

Date of Meeting 6-7 January 1971 Time 0900

Place 3E267, The Pentagon

Encl 1

(b)(3):10USC 424

NAME	REPRESENTING	SECURITY	6 Jan DATE AM	6 Jan DATE PM	6 Jan DATE EX	7 Jan DATE AM	7 Jan DATE PM	7 Jan DATE EX	DATE AM	DATE PM	DATE EX	REMARKS
[redacted]												
			✓	✓		✓	✓					✓
			✓	✓		✓	✓					✓
			✓	✓		✓	✓					✓
			✓	✓		✓						✓
			✓	✓		✓	✓					✓
			✓	✓		✓	✓					✓
				✓		✓						✓
			✓	✓		✓	✓					✓
			✓	✓	✓	✓						✓
			✓	✓	✓	✓	✓					✓
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			✓	✓	✓							✓

~~CONFIDENTIAL~~ CONFIDENTIAL

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD ~~CONFIDENTIAL~~

SUBJECT: Full Committee Meeting

Date of Meeting 6-7 January 1971 Time 0900

Place 3E267, The Pentagon

NAME	REPRESENTING	SECURITY	6 Jan DATE			7 Jan DATE			DATE			REMARKS
			AM	PM	~~EX~~	AM	PM	EX	AM	PM	EX	
(b)(3) 10 USC 424,(b)(6)			✓	✓	~~✓~~	✓	✓					
				✓		✓						✓
			✓	✓		✓						✓
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~~CONFIDENTIAL~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE			REMARKS
(b)(3):10 USC 424			AM	PM	EX	AM	PM	EX	AM	PM	EX	
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	DATE 6 Jan			DATE 7 Jan			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424,(b)(6)												
			✓			✓						
						✓						✓
			✓			✓						✓
							✓					
							✓					
							✓					

Guest List

(b)(6)

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

25-26 MARCH 1971

I. (U) GENERAL: A meeting of the DIA/SAC was held on 25-26 March 1971 in Room 3E267, the Pentagon. Meeting convened at 0900 hours on 25 March and adjourned at 1600 hours, 26 March.

II. (U) ATTENDEES: A list of attendees is enclosed (Enclosure 1). DIA/SAC Secretariat representative was [redacted]

III. (U) AGENDA: Copies of the tentative and actual agenda are enclosed (Enclosures 2 and 3).

IV. ~~(S)~~ SUMMARY:

A. SAO update was given by [redacted] Considerable interest was shown on new ballistic missile silo construction.

B. General Bennett informed the Committee of the developments of the NRT studies submitted by the SAC and DIA. Emphasis was placed on the reaction of the EXCOM.

C. Following a short break [redacted] presented the substance of the ACP on Missile Reentry.

D. (b)(3):10 USC 424 gave a brief status report of the [redacted] modification schedule.

E. [redacted] described test of bistatic radint intercept [redacted] using the [redacted] He also presented test results of [redacted] developments against US reentries.

F. (b)(3):10 USC 424 gave a report on the [redacted] See [redacted] hand out. (Enclosure 4)

G. Preceding (b)(3):10 USC 424 scheduled presentation on CHICOM Missile testing, he presented some additional DIA comments on the ACP on missile reentry. His presentation on the CHICOM missile reentry collection program was an update version of this general subject presented by the Director at a Friday Breakfast meeting in December.

H. (b)(3):10 USC 424 gave a brief report on [redacted] scheduling and program planning.

I. (b)(3):10 USC 424 reported on a feasibility study using the Navy [redacted] technique for [redacted] Soviet missile reentry.

~~SECRET~~

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

J. The first day's session concluded in an executive session. The Committee discussed the day's presentations on the various intelligence programs on missile reentry.

K. [redacted] started the second day's session with a DIA analysis on recent collection techniques and results directed against Soviet SAM and ABM testing programs.

L. [redacted] elaborated on the previous discussion with emphasis on missile radar developments.

M. [redacted] discussed SA-3 electronic vunerabilities.

N. The final formal presentation was made by (b)(3):10 USC 424 . assisted by co-workers from [redacted] Their presentation on Methodology in assessing new missile developments was well received. Emphasis was placed on how (b)(1),1.4 (c) is used in day-to-day analyses.

O. The afternoon executive session was highlighted by a presentation by the Director on the current status of enemy forces in Southeast Asia. [redacted] Acting Chairman, discussed the following topics: ACP reentry, [redacted] Tactical Intelligence, S&T Intelligence, [redacted] NRT Follow Up. The Committee will report to the Director by letter on the above topics.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

4 Enclosures a/s

Secretary, DIA/SAC

SECRET

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
25-26 MARCH 1971

TENTATIVE AGENDA

(b)(3):10 USC 424,(b)(6)

25 MARCH

0900-1000	SAO Update
1000-1030	Summary of NRT Study
1030-1100	Review & Current Status of Area Coordination Paper on Missile Reentry
1100-1130	[redacted] Status & Modification Schedule
1130-1200	Recent Test & Results for Reentry Collection
1200-1230	Collection Against [redacted]
1230-1300	Lunch
1300-1400	[redacted] Test Results Against [redacted]
1400-1430	Status of [redacted]
1430-1500	[redacted]
1500-1600	Discussion of Reentry Programs & Plans

26 MARCH

0900-0930	SA-5 and ABM Developments
0930-1000	Missile Radar Developments
1000-1030	SA-3 Electronic Vulnerability
1030-1230	Methodology in Assessing New Missile Developments
1230-1300	Lunch
1300-1600	Executive Session

Edition 5 Incl 2

SECRET

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING
25-26 MARCH 1971

ACTUAL

25 MARCH		
0900-1025	SAO Update	(b)(3):10 USC 424
1025-1105	Summary of NRT Study	LTG Bennett
1105-1115	Break	
1115-1210	Review & Current Status of Area Coordination Paper on Missile Reentry	(b)(3):10 USC 424,(b)(6)
1210-1215	(b)(1),1.4(c) Status & Modification Schedule	
1215-1225	Recent Test & Results for Reentry Collection	
1225-1300	Lunch	
1300-1345	(b)(1),1.4(c) Test Results Against (b)(1),1.4(c)	
1345-1405	Comments on ACP on Missile Reentry	
1405-1425	Collection Against (b)(1),1.4(c)	
1425-1445	Status of (b)(1),1.4(c)	
1445-1510	(b)(1),1.4(c)	
1510-1605	Discussion of Reentry Programs & Plans	
26 MARCH		
0900-0930	SA-5 and ABM Developments	
0930-1000	Missile Radar Developments	
1000-1035	SA-3 Electronic Vulnerability	
1035-1055	Break	
1055-1235	Methodology in Assessing New Missile Developments	
1235-1300	Lunch	
1300-1600	Executive Session	LTG Bennett

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

DL. SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting 25-26 MARCH 1971 Time 0900

Place 3E267, THE PENTAGON

NAME	REPRESENTING	SECURITY	25 Mar DATE			26 Mar DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3):10 USC 424			✓	✓		✓	✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting 25-26 MARCH 1971 Time 0900

Place 3E267, THE PENTAGON

NAME	REPRESENTING	SECURITY	25 MAR DATE AM	PM	EX	26 MAR DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting 25-26 MARCH 1971 Time 0900

Place 3E267, THE PENTAGON

NAME	REPRESENTING	SECURITY	25 Mar DATE			26 Mar DATE			DATE			REMARKS
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THE SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE REPORT

SUBJECT: FULL COMMITTEE MEETING

Date of Meeting 25-26 MARCH 1971 Time 0900

Place 3E267, THE PENTAGON

NAME	TITLE/POSITION	SECURITY	25 Mar AM	25 Mar PM	26 Mar AM	26 Mar PM		
(b)(3):10 USC 424,(b)(6)			✓					
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(b)(3):10 USC 424

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

25-26 May 1971

I. (U) GENERAL: A meeting of the SAC was held on 25-26 May in Room 3E267, the Pentagon. The meeting convened at 0900 hours on 25 May and adjourned at 1630 hours on 26 May. A cocktails and buffet social was hosted by General Bennett at the Bolling Air Force Base Officers Open Mess on 24 May from 1830-2030 hours.

II. (U) ATTENDEES: A list of attendees at the social function and at the meeting is enclosed (encls 1 & 2). The SAC Secretariat representatives were [redacted] (b)(3) 10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agenda are attached (encls 3 & 4).

IV. ~~(S/NFD)~~ SUMMARY:

A. The meeting began with an SAO update from the previous meeting. Primary emphasis was placed on new Soviet ballistic missile activities.

B. During a lull in setting up for the group photograph, the Director took the opportunity to read the letter from [redacted] (Presidential Science Adviser) concerning the recent DIA study on crisis management (See BYE 11939-71) from the White House.

C. During the [redacted] briefing a question was raised on the capacity of the memory bank in the computer. A copy of the answer supplied at the end of the meeting is attached (encl 5).

D. The remainder of the first day's activities followed the general topic of "Support to Tactical Intelligence" as outlined in the Actual Agenda. No action items resulted from these briefings.

E. The Committee agreed that the proposal presented by [redacted] offered some promise and should be studied further. It was also suggested that DIA investigate the feasibility of using this same system against reentry on Soviet naval missiles. Details are spelled out in [redacted] report to the Director. [redacted] (b)(3) 10 USC 424 was tasked to follow-up on this.

F. No action items resulted from the remainder of the formal presentations.

[redacted] (b)(3) 10 USC 424

~~SECRET~~

~~NO FOREIGN DISSEM~~

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

G. Executive Session

(1) The executive session began with [redacted] saying a few kind words to and about [redacted] on the occasion of [redacted] last DIA/SAC Meeting (retires on 1 July 1971). A retirement card, signed by the membership, was presented to [redacted] responded with appropriate words.

(2) [redacted] reported on his previous meeting with the DIA staff to outline the future plans and direction of the [redacted] Panel. Three general areas were considered appropriate for their consideration--

(a) Soviet [redacted] capabilities for locating, tracking, and possible (laser) attack of satellites.

(b) Soviet [redacted] capabilities and equipment for submarine detection and track from satellites and aircraft.

(c) Soviet use of [redacted] devices and systems in conjunction with fire control.

[redacted] suggested the DIA/SAC attack the latter point first--as a starting point. A proposed tasking letter (encl 6) was considered. It was concluded that a broader terms of reference be considered and that a meeting be called for July to consider this point. Prospective Panel members include [redacted]

(3) [redacted] recommended that a portion of his Panel augmented with [redacted] and possibly others from outside the SAC be chartered to look into the problem of the merging of intelligence programs directed at RV's with those of nuclear warheads. He also wanted to tackle the [redacted] Approval of this program was endorsed by the Chairman.

(4) [redacted] letter to the Director on the F-14/F-15 (encl 7) was discussed. [redacted] recommended the threat be divided into three phases--threat to aircraft on the ground, threat enroute to mission, and threat in combat area. [redacted] agreed to chair this endeavor and invited [redacted] to participate. He also intends to solicit support from ODDR&E [redacted]

(5) [redacted] resurrected the issue of collection versus analysis balance. [redacted] anounced he has been working with [redacted] on a letter on Intelligence Processes that addresses this question. [redacted] suggested, as a pilot approach, looking at one months worth [redacted] data from periphial flights and follow the entire process from collection through to the "useful " product. (useful not in the sense of finding a particular set of parameters of say a radar, but rather what use it has in effecting R&D, tactical plans, etc.). [redacted] suggested a similar approach could be taken on the R system. It was decided to pursue [redacted]

suggestion by having him chair a panel, to include (b)(3):10 USC 424 and (b)(3):10 USC 424

(6) (b)(3):10 USC 424 suggested that the Committee continue its general approach on the tactical intelligence question.

(7) (b)(3):10 USC 424 agreed to chair an analysis of Soviet silo construction and hardness.

(8) General Bennett then joined the Committee. (b)(3):10 USC 424 outlined the discussions of the executive session. It was further suggested that the Director get NSA to brief on the use of one of its ELINT systems.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

7 Enclosures a/s

EXECUTIVE SECRETARY, SAC

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 25-26 MAY 1971 Time 0900

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	25 MAY DATE AM	PM	EX	26 MAY DATE AM	PM	EX	DATE AM	PM	EX	REMARKS
(b)(3)-10 USC 424 [redacted]			✓	✓		✓	✓					
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DSA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 25-26 May 1971 Time 0900

Place Pentagon, 3E267

NAME	REPRESENTING	SECURITY	25 May DATE			26 May DATE			DATE			REMARKS
			AM	PM	EX	AM	PM	EX	AM	PM	EX	
(b)(3) 10 USC 424(b)(6)			✓	✓		✓						
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: Full Committee Meeting

Date of Meeting 25-26 May 71 Time 0900

Place: Pentagon, 3E267

NAME	REPRESENTING	SECURITY	25 May DATE			26 May DATE			DATE			REMARKS
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PURPOSE: Full Committee Meeting

DATE: 25-26 May 71

PLACE: Pentagon, 3E267

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Date of Meeting _____ [illegible] _____

Place _____

NAME	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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ATTENDANCE AT DIA/SAC SOCIAL, 24 MAY

(b)(3):10 USC 424,(b)(6)

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DIA SCIENTIFIC ADVISORY COM TEE
MEETING

25-26 MAY 1971

Tentative Agenda

25 May
3E267, The Pentagon

0900-1000	SAO Update
1000-1015	Committee Photo
1015-1100	(b)(1),1.4(c)
1100-1130	Characteristics (b)(1),1.4(c)
1130-1200	Navy Applications
1200-1230	Theatre Applications (Comrades-in-Arms)
1230-1300	Lunch
1300-1330	First Fleet Exercise
1330-1400	Current Plans
1400-1430	Future Possibilities
1430-1600	Tactical Intelligence Support
1600-1630	Operation of JRC

(b)(3):10 USC 424

(b)(3):10 USC 424,(b)(6)

26 May
3E267, The Pentagon

0900-0930	Reentry Collection on ABM Target Missiles
0930-1000	Geodetic & Geophysical Support to DoD Weapon Systems
1000-1030	(b)(1),1.4(c) Briefing
1030-1130	Soviet & US C^3 Net Technical Assessment
1130-1200	Lunch
1200-1600	Executive Session

a. (b)(1),1.4(c)
b. Tactical Intelligence
c. Collection & Analysis Resources
d. Future Meetings (Jul, Sep, Nov)

(b)(3):10 USC 424

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DOD DIR 5200.10

~~SECRET~~

Edition 4

Meeting Brief

25 May

0900-1000 SAO Update

Normal SAO Update from previous meeting in March.

1000-1015 Committee Photo

Military members to be in Class A uniform.

1015-1115 Tactical Air Forces Intelligence Exploitation System (TAFIES)

A report on the design, capabilities and status of the automated intelligence collation system which is being planned for use by the tactical air forces (Tactical Air Command, Pacific Air Forces and U.S. Air Forces in Europe). The system is designed to collate all-source data on a timely basis and make the output immediately available to the tactical commander.

1115-1200 Characteristics/Limitations [redacted]

This briefing is to bring all members up to date on [redacted] commensurate with their general knowledge of [redacted] This is part of the overall effort to familiarize the Committee with all [redacted] to answer the basic question before them at this time - how [redacted] can assist in filling tactical intelligence requirements.

1200-1230 Plans for Navy ELINT System

This is to brief the Committee on the latest plans for the long standing Navy [redacted] its recent successes and future plans, particularly as to how these plans relate to the tactical commander.

1300-1500 Tactical Intelligence Support

This is a standard briefing [redacted] program for tactical support to the European Commanders.

1500-1530 Comrade-in-Arms Exercise

A report of the special collection exercise against Warsaw Pact Countries.

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NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

1530-1600 Navy [redacted]

Description of a U.S. [redacted] exercise directed against U.S. Navy forces in an attempt to produce timely tactical intelligence.

1600-1630 Operation of JRC

Following a very brief coverage of the overall operation of the JRC, the Committee will be briefed on the characteristics and capabilities of the [redacted] on the JRC - controlled vehicles. As with the 1115 briefing, the purpose is to identify all national resources which might support tactical intelligence.

26 May

0900-0930 Reentry Collection on Target Missiles for ABM

Description of a new concept for obtaining trajectories during reentry of target missiles and potential target missiles for ABM's at [redacted] including fly-bys of low altitude interceptors.

(b)(1),1.4(c)

0930-1000 Geodetic and Geophysical Support to DoD Weapon Systems

A discussion of the DIA's Support to DoD Weapon Systems, both strategic and tactical, and including Southeast Asia programs. The presentation will also include those technical areas in which problems have been encountered, but not resolved. The briefing will be similar in subject, but more technical in nature, to the one presented to [redacted] on 11 May, with General Philpott in attendance.

1000-1030 Subelement 14.00 (SAM) Briefing

The purpose of this briefing by the subelement monitor for surface-to-air missiles is to acquaint the members of the SAC with the DIA program for analysis and reporting in this subject area.

1030-1130 Soviet and U.S. Strategic Command and Control Net Technical Assessment

This is the study by IDA which was jointly sponsored by DIA and DDR&E.

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

25-26 MAY 1971

ACTUAL AGENDA

25 MAY
3E267, The Pentagon

0900-1020	SAO Update
1020-1040	Committee Photo
1040-1140	(b)(1),1.4(c) [redacted]
1140-1215	Navy Applications
1215-1245	Characteristics (b)(1),1.4(c) [redacted]
1245-1330	Lunch
1330-1400	Theatre Applications (Comrades-in-Arms)
1400-1425	First Fleet Exercise
1425-1440	Current Plans
1445-1615	Tactical Intelligence Support
1615-1645	Future Possibilities
1645-1740	Operation of JRC

26 MAY
3E267, The Pentagon

0900-0955	Reentry Collection on ABM Target Missiles
0955-1040	Geodetic & Geophysical Support to DoD Weapon Systems
1040-1145	Soviet & US C^3 Net Technical Assessment
1145-1245	(b)(1),1.4(c) [redacted] Briefing
1245-1300	Lunch
1300-1630	Executive Session

a. (b)(1),1.4(c) [redacted]
b. Tactical Intelligence
c. Collection & Analysis Resources

(b)(3):10 USC 424,(b)(6) [redacted]

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

Edition 5 Encl 4

31 May 71

SPC figures

DIGITAL DATA STORAGE CAPACITY, BY TYPE OF EQUIPMENT, TO SUPPORT A

[redacted]

DISC	300,000,000 bytes	To be used for data base
DRUM	7,000,000 bytes	To be used for programs
CPU CORE	520,000 bytes	To be used for working files
		Size expandable by factor of 2
NON DESTRUCTIVE READOUT CORE	2,048 bytes	Safety valve
MAG TAPES	691,200,000 bytes	240 reels @ 2,880,000 bytes ea
PAPER TAPES	2,340,000 bytes	195 rolls @ 12,000 bytes ea

[redacted]

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

S-1903/DT-1

[redacted]

Chairman, Scientific Advisory Committee
Defense Intelligence Agency (DIAAC)
Washington, D.C. 20301

Dear [redacted]

~~(S)~~ I would like the Scientific Advisory Committee to study the threat posed by Soviet anti-aircraft systems which use [redacted] to supplement their radar fire control. The committee should pay particular attention to the role played by the [redacted] and their effect on the performance of the overall systems.

~~(S)~~ I believe this can most meaningfully be accomplished in the following manner:

a. Have the SAC estimate the most likely characteristics of the optical devices based on the available intelligence, on the estimated functions performed by the [redacted] and on the constraints posed by the rest of the system.

b. Use these estimated characteristics as an input to war games designed to calculate the effectiveness of the anti-aircraft systems in a realistic environment. Then compare these results with results where radar is used alone. A sensitivity analysis should then be made to determine how the assumed characteristics effect the outcome.

c. Have the SAC evaluate the results.

(U) As always, my staff will assist in providing the necessary information you desire.

Sincerely,

D. V. BENNETT
Lieutenant General, USA
Director

GROUP 3
DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED

Review On 26 May 91

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THE DEPUTY SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

7 MAY 1971

MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE
DIRECTOR, DEFENSE INTELLIGENCE AGENCY

SUBJECT: Technical Intelligence Influence on Air Superiority System Requirements, Designs and Tactics Development

The Surveys and Investigations (S&I) Staff of the House Appropriations Committee has recently completed a comparative study of the F-14 and F-15 fighters. As part of this study, S&I Staff personnel examined the threat as it relates to determining our air superiority system requirements and made several trips to the USAF/Foreign Technology Division (FTD). I am concerned by some of their observations, summarized as follows:

(1) The F-14 and F-15 designs seemed, to the S&I Staff, to be proceeding with little concern for the accepted threat or possible improved threats. While some groups showed the Staff comparative performance analyses of the F-14 or F-15 vs "advanced" threats, the parameters for these threats had been arbitrarily defined by the particular analyzer. The Staff found no DIA-accepted threat definitions beyond FISHBED, FOXBAT, FLAGON and FLOGGER. The S&I Staff felt that DIA-accepted performance estimates for these current systems, and for Soviet air-to-air missile (AAM) capability, under-estimated Soviet technological capability -- and were not representative of what could be operational in the 1975-85 time period. There also seemed to be a failure to recognize the change in Soviet fighter design philosophy, as evidenced by the aircraft shown in 1967 at Domodedovo plus other more recent evidence, which indicates a trend towards increased range and advanced avionics and weapons, while maintaining maneuverability. Thus it appeared to the Staff that the F-14 and F-15 -- our 1975-85 first-line fighters -- are being designed to counter IOC 1965-1968 threats.

(2) The personnel assigned to evaluate air vehicle performance at FTD are few in numbers and appeared to lack strength in the areas of stability and control and aircraft handling qualities, and advanced propulsion and structural analysis capabilities and may lack the basic aircraft/missile design experience needed to assess performance estimates realistically. These areas require an advanced scientific computer capability, whereas the facilities at FTD were deemed inadequate for this type of work by the S&I Staff. Also, there appeared to be little knowledge, at the working level of FTD, of the design features of our own advanced fighter and air-to-air missile systems, from which future Soviet capability might be extrapolated.

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See Def Cont Nr. X-2237

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Regarding the Staff's observations, it does appear to be likely that Russia could develop better fighters by 1975. For example, is it not feasible for Russia to produce a FOXBAT or FISHBED derivative that would exhibit at least 25% higher installed thrust, improved flying qualities, (especially in roll control), maneuver devices, increased dynamic pressure limit (to permit supersonic flight at low altitude), load factors comparable to the F-15, increased radar range and increased transonic performance above presently-postulated levels, using advanced materials to minimize the weight penalty?

Similar questions could be raised about Soviet AAM capability. The ANAB (AA-3) and ASH (AA-5) missiles have better lift-to-drag ratio and acceleration characteristics vs angle of attack than any of our air-to-air missiles. This means the Soviet missiles have more end-game maneuverability and speed than US missiles, thereby having better potential maneuvering target kill capability. Could not even better Soviet missile performance be expected? How would the F-14 and F-15 fare against such threats, especially when combined with advanced fighters?

With respect to the concerns listed above, the DIA, working with the Navy and Air Force, is requested to perform an intensive re-evaluation of confirmed and possible Soviet fighter and AAM capability in the 1975-85 time and evaluate F-14 and F-15 performance relative to these threats.

The Air Force, working with the DIA and the Navy, is requested to review FTD's capability to assess and predict Soviet fighter and air-to-air missile performance and take such action to augment the staff and the computer capability as is appropriate. This should include an improved interface between FTD and Air Force and Navy project groups developing our new systems.

I would appreciate your keeping Dr. Foster posted on your progress; point of contact in ODDR&E is the Assistant Director (Air Warfare). As these concerns are of continuing interest to me and to Congress, I would appreciate a summary briefing on the outcome of your reviews, accompanied by a report, within six months.

(b)(6)

cc: Secretary of the Navy
Chairman, Joint Chiefs of Staff

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY

SCIENTIFIC ADVISORY COMMITTEE

WASHINGTON, D. C. 20301

(b)(3):10 USC 424

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

21-22 SEPTEMBER 1971

1. (U) GENERAL: A meeting of the DIA/SAC was held on 21-22 September 1971 in Room 3E267, the Pentagon. The meeting convened at 0900 hours on 21 September and was adjourned at 1630 hours on 22 September.

2. (U) ATTENDEES: A list of attendees is enclosed (encl 1). The DIA/SAC respresentative was (b)(3):10 USC 424

3. (U) AGENDA: Copies of the tentative and actual agenda are enclosed (encl 2 & 3).

4. ~~(S)~~ SUMMARY:

a. ~~(S)~~ SAO update was given by (b)(3):10 USC 424 None of the data relating to (b)(3):10 USC 424 Silo Panel was covered during this presentation, and therefore a wide range of subjects were updated that had not been covered for a considerable period of time. No action items resulted from this presentation.

b. ~~(S)~~ (b)(3):10 USC 424 presented a review of all data pertaining to the silo problem. This was essentially the same briefing given to the Silo Panel at SAMSO on 9-10 September, updated to include more recent information. Following this presentation, (b)(3):10 USC 424 discussed the progress of the panel to date. Their present position is that they will have to await further information before they can arrive at logical conclusions. The question was raised as to what the SAC's original proposal was on allowable upgrading of missiles (for SALT) and of its possible relation to the present situation. (b)(3):10 USC 424 suggested that there should be an open-source search of literature made from several years back, of the Soviet's thinking on vulnerability.

c. ~~(S)~~ (b)(3):10 USC 424 of MIA presented an analysis of possible ABM activity which has occurred since the last SAC briefing (25-26 March 1971) on this subject. Although the analysis is not completed the SAC felt that it was a good starter.

d. ~~(S)~~ The entire afternoon session was devoted to briefings and discussions by representatives from the Army, Navy and Air Force on the planned uses of automatic data processing (ADP) for providing better intelligence support to the tactical commanders, and the associated

Review On 21 Sep 1991

~~SECRET~~

GROUP 1
Excluded from automatic downgrading and declassification

problems. The interface (communications, command and control) problem among the Services and between the Services and national systems was acknowledged as one of the major areas needing more attention. The SAC noted that some central control is needed to ensure compatability, and perhaps the best way to get this is for DIA to insist that each Service system be compatible with the IDHS. It was also pointed out by several members, during the Executive Session, that the Service (Navy) having the most experience in applying ADP to intelligence support, made less use of it than any other Service, and that the Air Force, with the least amount of experience in this area, was counting on this equipment to the greatest extent. (b)(3):10 USC 424,(b)(6) observed that the Army has recognized the problem it faces in making all its systems effective and compatible, and that the entire Army has been brought into the picture through a recent reorganization. He indicated that if the present structure could not resolve these problems, then it probably would not be possible to resolve them.

e. ~~(S)~~ (b)(3):10 USC 424,(b)(6) presented the results of an analysis they had done on evidence of Soviet solid propellant developments. Their analysis was restricted to an association with the ICBM program. The SAC was very impressed with the analysis and felt that it was essential that a similar study be undertaken to show the association with naval missiles and with ABMs. General Bennett indicated that MIA and NAVSTIC would be tasked to pursue these areas.

f. ~~(S)~~ The entire second day was devoted to the antiship missile threat which faces the US Navy, the programs which the Navy has planned to counter the threat, and the steps which are being taken to obtain the kinds of intelligence needed to develop these programs. In the executive session, the SAC agreed that the threat was formidable but they expressed a considerable concern that DIA might overreact to the Navy's "stirring the pot" approach, at the expense of other more important objectives. It was also suggested that the Navy could better collect against their requirements than could many national sensors because of the nature of the threat. General Bennett assured the SAC that DIA would carefully evaluate all requirements before making major committments to the Navy problem. He also expressed concern during the presentations that the Navy had chosen to surface their problem through the Dep Sec Def to agencies outside of DoD rather than to use established procedures within the DoD, since it is strictly a military problem. (b)(3):10 USC 424 felt that the Navy was putting too much emphasis on ECM for a countermeasure and should put more effort into designing systems such as the 20 mm Vulcan gun system which is not critically dependent on intelligence information.

2. ~~(S)~~ During the Executive Session, the following points were made:

a. The Silo Panel will require further data before the study can be completed. In addition better targeting must be accomplished.

b. (b)(3):10 USC 424 expressed concern that the public was not getting concerned over the Soviet threat and that maybe what is required is to educate a "citizens group", with no axe to grind, on the extent of the threat. They might then have a greater impact on the public's awareness and acceptance of this knowledge. [redacted] said he would supply a list of names for possible membership in such a group.

c. (b)(3):10 USC 424 briefly described the results of the E-O Panel meeting on 9-10 September and indicated he would work on rewriting the tasking letter for the Panel, to put more emphasis on the requirements and collection aspects rather than on analysis.

d. An analysis should be done on ABM and naval associated missiles similar to that accomplished by FTD.

e. The Navy should put more emphasis in satisfying their own requirements against antiship missiles. It was suggested that a small group of the SAC might be able to help the Navy on this problem.

f. The next meeting of the SAC will be on 30 November and 1 December 1971.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

EXECUTIVE SECRETARY, SAC

3 Enclosures a/s

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

21-22 SEPTEMBER 1971

ROOM 3E267

Tentative Agenda

21 Sep 71

0900-1000	SAO Update	DIA
1000-1100	Silo Panel Update	(b)(3):10 USC 424
1100-1130	Silo Panel Observation	
1130-1215	Soviet Solid Propellant Development	
1215-1300	ABM Developments	
1300-1330	Lunch	
1330-1645	Tactical Intelligence Automatic Data Processing Requirements	
	a. 1330-1415 ADP Interface Plans & Problems (Army)	(b)(3):10 USC 424
	b. 1415-1500 Ocean Surveillance Information System (Navy)	
	c. 1500-1545 Tactical Intelligence Processing (Air Force)	
	d. 1545-1645 Seminar (A/N/AF/SAC)	Chairman

22 Sep 71

0900-1500	Anti-Ship Missile Threat	
	a. 0900-0915 Background for SAC	(b)(3):10 USC 424
	b. 0915-0945 (b)(1),1.4(c)	
	c. 0945-1040 Technical Review of Soviet Antiship Missile Threat	
	d. 1040-1140 Navy (OP-093) Program for Countering Antiship Missile Threat	
	e. 1140-1210 Antiship Missile Intelligence Requirements	
	f. 1210-1240 Lunch	
	g. 1240-1300 Navy Program for Satisfying Antiship Missile Intelligence Requirements	
	h. 1300-1340 (b)(1),1.4(c)	
	i. 1340-1500 Discussion	Chairman
1500-1600	Executive Session	Chairman

GROUP 1

Review On 21 Sep 1991

SECRET

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DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

21-22 SEPTEMBER 1971

ROOM 3E267

Actual Agenda

21 Sep 71

0900-1010 SAO Update

1010-1115 Silo Panel Update

1115-1140 Silo Panel Observation

1150-1300 ABM Developments

(b)(3):10 USC 424

1300-1345 Lunch

1345-1700 Tactical Intelligence Automatic Data Processing Requirements

a. 1345-1500 ADP Interface Plans & Problems (Army)
b. 1505-1550 Ocean Surveillance Information System (Navy)
c. 1605-1700 Tactical Intelligence Processing (Air Force)

(b)(3):10 USC 424

22 Sep 71

0900-0945 Soviet Solid Propellant Development

0945-1500 Anti-Ship Missile Threat

a. 0945-0955 Background for SAC
b. 0955-1045 (b)(1),1.4(e)
c. 1045-1130 Technical Review of Soviet Antiship Missile Threat
d. 1130-1300 Navy (OP-093) Program for Countering Antiship Missile Threat
e. 1300-1330 Antiship Missile Intelligence Requirements
f. 1330-1405 Lunch
g. 1405-1430 Navy Program for Satisfying Antiship Missile Intelligence Requirements
h. 1430-1500 (b)(1),1.4(e)

(b)(3):10 USC 424

1500-1630 Executive Session

Review On 21 Sep 1991

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GROUP 1
Excluded from automatic downgrading and declassification

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD
FULL COMMITTEE MEETING

SUBJECT: _____

DATE OF MEETING 21-22 September TIME 0900

PLACE Pentagon 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL-COMMITTEE MEETING

DATE OF MEETING 21-22 Sep 71 TIME 0900

PLACE 3E267, Pentagon

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 21-22 Sep 71 TIME 0900

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 21-22 Sep TIME 0900

PLACE 3E267

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SUBJECT: FUEL COMMITTEE MEETING

DATE OF MEETING 21-22 September 71 TIME 0900

PLACE Pentagon, 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 21-22 Sep TIME 0900

PLACE 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD
FULL COMMITTEE MEETING

SUBJECT: _____

DATE OF MEETING 21-22 Sep 71 TIME 0900

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

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DATE OF MEETING _____ TIME _____

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DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

13-14 JULY 1971

I. (U) GENERAL: A meeting of the SAC was held on 13-14 July in Room 3E267, The Pentagon. The meeting convened at 0900 hours on 13 July and was adjourned at 1600 hours on 14 July.

II. (U) ATTENDEES: A list of attendees at the meeting is attached (encl 1). The SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agenda are attached (encl 2 & 3).

IV. ~~(C)~~ SUMMARY:

A. (U) The meeting opened with an SAO update from the 25-26 May meeting. Several questions were raised on Chinese Communist activities which required research by the briefer. Answers were supplied prior to close of the meeting on 14 July.

B. (U) The briefings by the Army and Navy on Computer Support to Tactical Operations were received with differing interest. The Navy's NIPS looked very good in comparison to the Army's TOS and the Air Force's TIPI/TAFIES (briefed at the 25-26 May meeting). However, it was apparent from SAC comments that the NIPS still has a long ways to go and is really not very effective.

C. ~~(C)~~ (b)(3):10 USC 424 presentation on the Tactical Requirements Study Panel included recommended ways in which the DIA/SAC could help in tackling the tactical intelligence support question. His recommendations to the SAC were: (1) To identify the ways in which national sensors can respond to tactical requirements and (2) identify those changes which must be made to the national sensors to make them responsive to the tactical commanders.

D. (U) No action items resulted from the other briefings on 13 July although a considerable amount of interest was shown in each item.

E. ~~(C)~~ The topics dealing with the B-1 aircraft and the assessed threat to that system evoked considerable discussions. The major feeling of the SAC members seemed to be that the Air Force had generally gone beyond the technical threat which DIA presented. The propriety of this procedure was questioned, but not resolved.

(b)(3):10 USC 424

~~SECRET~~

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

V. ~~(S)~~ EXECUTIVE SESSION:

A. ~~(S)~~ The SAC felt that the real threat "swing-points" for the B-1, as identified by the Air Force were (not in order of ranking):

1. Capability of the SUAWACS

2. Airborne Interceptor (AI) Look-down, Shoot-down capability

3. Locations and distributons of defense systems

4. SAM low-altitude capability (with and without ECM)

5. SLBMs - trajectories, locations, etc.

It was recommended that the Air Force and DIA examine these "swing-points" together and arrive at a mutually acceptable threat projection to resolve the point made in Para IV. E. above. A discussion of the appropriateness of DIA estimating or establishing the future threats to be used in development of systems was resolved with the SAC statement that it was indeed DIA's business to establish future threats. The question then arose of our chance of detecting the FOXBAT AI radar if it is a CW type. Opinion seemed to be that the capability is extremely limited. However it was pointed out that there are no other indications of a FOXBAT AI system.

B. (U) The next question tackled was "What do we do with Tactical Intelligence?" After some discussion, it was suggested by General Bennett that we have General Fulton (Army) RADM Rectanus (NAVINTCOM) and someone from Air Force get together as a panel or forum at the next meeting and have them tell SAC what it is that they are striving for and how DIA can help in reaching that goal.

C. ~~(S)~~ (b)(3):10 USC 424 briefed the Committee on the request by (b)(3):10 USC 424 (DDR&E) to establish a panel (not exclusively DIA/SAC) to help define the accuracy of the SS-9 Mod 4 system. General Bennett had talked to (b)(3):10 USC 424 on panel members and they had agreed on the following:

(b)(3):10 USC 424

and someone else from DDR&E capable of "arguing the other side". All

the above SAC members agreed to serve.

D. (U) [redacted] briefed on the status of the F-14/F-15 panel. No action items.

E. (U) [redacted] covered what has happened on the Silo Panel. It was suggested that a complete rerun of data be presented at the next SAC meeting.

F. (U) [redacted] reported on the Sensor Data Flow Panel meeting at NSA on 8 July. He indicated that the panel would try to visit MIA, NAVSTIC, FTD and CIA before the next SAC meeting and that [redacted] would accompany them.

G. (U) It was agreed that [redacted] would write a report to General Bennett on the SAC's concern for the Army's TOS.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

3 Enclosures a/s

EXECUTIVE SECRETARY, SAC

[redacted]

A SCIENTIFIC ADVISORY COMMITTEE

MEETING

13-14 JULY

TENTATIVE AGENDA

15 JULY

0900-1000	SAO Update
1000-1030	Report on SA-5 Signal Intercepts
1030-1130	Computer Support to Tactical Operations (TOS)
1130-1230	Computer Support to Tactical Operations (HIPS)
1230-1315	Lunch
1315-1445	Report on a Sensor System
1445-1530	Tactical Requirements Study Panel
1530-1615	DIA Participation in JRC Scheduling
1615-1645	Status Report on F-14/F-15 Panel

14 JULY

0900-1100	Threat Assessment to the B-1 Aircraft
1100-1230	"Swing-points: for the B-1 Aircraft
1230-1300	Lunch
1300-1630	Executive Session
	a. Silo Panel Status Report
	b. Sensor Data Flow Panel Status Report
	c. Warhead Panel

(b)(3):10 USC 424,(b)(6)

EDITION 4

[redacted]

DIA SCIENTIFIC ADVISORY COMMITTEE

MEETING

13-14 JULY

ACTUAL AGENDA

13 JULY
3E267

(b)(3):10 USC 424,(b)(6)

0900-1005	SAO Update
1010-1100	Report on SA-5 Signal Intercepts
1100-1150	Computer Support to Tactical Operations (TOS)
1150-1300	Computer Support to Tactical Operations (NIPS)
1300-1325	Lunch
1325-1505	Report on a Sensor System
1515-1605	Tactical Requirements Study Panel
1610-1715	DIA Participation in JRC Scheduling

14 JULY

0900-1120	Threat Assessment to the B-1 Aircraft
1130-1315	"Swing-points: for the B-1 Aircraft
1315-1345	Lunch
1345-1600	Executive Session

a. Silo Panel Status Report

b. Sensor Data Flow Panel Status Report

c. F-14/F-15 Panel

EDITION 5

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DoD DIR 5200.10

Proposed Outline for DIA Assessment of the Threat to USAF B-1 Aircraft

I. Introduction — 10 min

a. Statement of material to be presented.

b. Discussion of B-1 aircraft performance with emphasis on Mission Profile. Estimated IOC 1978.

II. Aircraft Estimates

a. System presentation on Soviet aircraft threat. — 15 min

b. Electronic presentation to include: — 15 min

1. Range and capabilities of the radar in the SUAWACS.

2. C & I of the AI radars in Soviet interceptors.

III. Surface-to-Air Missile Estimates

a. System presentation on Soviet Ground SAMs having Low Altitude performance capability (SA-3, SA-6, SA-7, and SA-Z-1) — 10 min

b. System presentation on Soviet Naval SAMs (SA-N-1 and SA-N-3). — 5-8 min

c. Electronics presentation to complement system data presented in III a & b above; e.g. LOW BLOW, HEAD LIGHTS, PEEL GROUP, etc. — 15 min

IV. Anti-Aircraft Estimate

a. System presentation on Soviet AAA systems. — 5-8 min

b. Electronics presentation to complement system data presented in IV a. above; e.g., GUN DISH, FLAP WHEEL, etc. — 5-8 min

(b)(3):10 USC 424

6 Briefers @

(b)(3):10 USC 424

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 13-14 July 71 TIME 0900

PLACE [illegible]

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 13-14 July 71 TIME 0900

PLACE Pentagon, 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 13-14 July 1971 TIME 0900

PLACE Pentagon, Room 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 13-14 July 71 TIME 0900

PLACE Pentagon, 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 13-14 July 71 TIME 0900

PLACE 3E267

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DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

30 NOV - 1 DEC 1971

I. (U) GENERAL: A meeting of the full Committee was held in Room 3E267, the Pentagon on 30 November - 1 December 1971. In conjunction with the meeting, a social function was hosted by General Bennett at the Fort Myer Officers' Club from 1830-2030 hours, 30 November. A listing of the invitees and of those who attended the social is attached (Encl 1).

II. (U) ATTENDEES: A list of attendees at the meeting sessions is attached (Encl 2). The SAC Secretariat representative was [redacted] (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agendas are attached (Encls 3 & 4).

IV. ~~(S/NFD)~~ SUMMARY:

a. ~~(S)~~ The meeting opened with an intelligence update of activities since the September meeting. Considerable interest was shown in Soviet missile, aerodynamic systems, and submarine developments. Discussions concerning these items extended the session a half hour beyond the scheduled time.

b. ~~(S)~~ (b)(3):10 USC 424 presented his analysis of developments in Soviet high-powered lasers which may relate to weaponry. Although there is little direct evidence of Soviet capabilities in this area, there is considerable circumstantial evidence from open-source literature and other sources to suggest that the Soviets are ahead of the U.S. in the development of laser weapons.

c. ~~(S)~~ MIA's presentation on the KY-9 series of missile firings was well received but there were no SAC actions resulting from the briefing. An update of this program by FTD may be appropriate at a later date after the latest telemetry data has been analyzed.

(b)(3):10 USC 424

Review On 30 Nov 1991

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EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

d. ~~(S)~~ FTD's briefing on Space Unknowns generated a certain amount of interest - but no solutions. Most of the members have been aware of the Soviet programs for some time.

e. ~~(S/NFD)~~ [redacted] presented a synopsis of analysis being accomplished on anti-ship missiles, in response to General Bennett's concern over comments made at [redacted] Panel meeting at NAVSTIC on 30 September. Topics discussed were: types and amounts of data available; scope of analyses currently being accomplished; problem areas (collation and identification, resources, etc.); and future plans for increasing efforts in this area. [redacted] Also identified, were the actions which have been taken, relating to the anti-ship missile problem, since the September meeting. These actions are:

(1) Completion of the [redacted]

(2) Involvement of the Critical Collection Problems Committee of the USIB

(3) Involvement of the DoD Defense Electronic Warfare Board

(4) Involvement of the DoD ELINT Requirements Group

(5) Involvement of the SORS & COMIREX groups of the USIB.

f. ~~(C)~~ [redacted] presented essentially the same briefing as was given in September to the Electro-Optics Panel. He discussed threat E-O systems, past collection attempts and their results, plans for employing new E-O data collection systems and plans for exploitation of that data.

g. ~~(S)~~ The presentation by [redacted] on the FY 73 DIA R&D program elicited much discussion from the members. Basically they agreed that a program of this type is badly needed within DIA, but that it should have more direction to it than what was apparent from the presentation. Particularly, the question which needs to be answered is "What is the criteria for determining the priority and amount of money programmed for each element within the program?" A particular element singled out for discussion was the [redacted] program for producing long-range threats. The majority feeling of the members was that this is an impossible task when you are talking beyond about eight years. [redacted] commented that he felt it was possible and that he would be glad to have the plan for the [redacted] program presented at the next

SAC meeting. On a related topic, [redacted] answered a comment by [redacted] on the failure of the intelligence community to do any good analysis in the area of command and control by stating that DT [redacted] has recently completed an outstanding study in this area. [redacted] asked to receive this briefing as soon as possible.

h. ~~(S/NFD)~~ [redacted] presented a follow-up to [redacted] briefing of 22 September on the Soviet solid propellant program. The SAC felt it did not completely answer the question of where the entire production is going.

i. ~~(C)~~ The presentation on the Chinese Missile Program by [redacted] received very well and elicited an "excellent briefing" comment from Dr. Flax and the members. [redacted] asked for a synopsis of the Chinese collection program at the next SAC meeting.

j. ~~(C)~~ [redacted] scheduled briefing on Chinese Nuclear Developments was postponed to the next SAC meeting due to lack of time. However, he was given time to very briefly discuss the most recent Chinese nuclear detonation.

k. ~~(S)~~ While waiting for [redacted] to arrive, General Bennett gave the SAC a rundown on the ramifications of the national portion of the recent intelligence restructure. This session and the following discussion of the [redacted] Panel findings were conducted in closed session. [redacted] began his discussion by stating that what he would be saying probably reflected a lot of his own opinion but he hoped to keep it close to what the panel had said in their report. Some of the major points made by [redacted] were:

(1) There is a lack of [redacted] data

(2) There is a lack of interest [redacted] at the national level

(3) Compartmentation (security aspects) is a big problem

(4) There is a lack of basic R&D understanding by those involved in [redacted] activities

There was a considerable amount of discussion on the role the intelligence community should take in "selling" their product to the consumers. There was also discussion on the timeliness of EW data and on the reliance that should be placed on EW in the strategic mission.

l. ~~(S)~~ [redacted] presented a brief summary of the background leading to the "DIA" F-14/F-15 study, and pointed out that the resulting document was actually three separate studies (by DIA, Air Force and Navy) with a DIA cover. Four major questions resulting from this experience were:

(1) How does anyone come up with a good longrange (10-15 year) threat?

(2) When, in terms of systems development, should the longrange threat be made?

(3) How do you arrive at the proper format for presenting the threat data?

(4) How should DIA handle similar situations in the future?

It was also pointed out that there has not been a net threat assessment made in the case of the F-14 and F-15, and [redacted] stated that it was his personal opinion that DIA should not make such an NTA. General Bennett disagreed with this position, and asked for the SAC's opinions on this matter. After a discussion on the subject, [redacted] stated that DIA should be responsible for the NTA and that this would force analysts within intelligence to become familiar with our own weapon systems. [redacted] countered that DDR&E is better able to perform an NTA and that it would force DDR&E analysts to become more familiar with the intelligence community and product. General Bennett indicated he presently leaned toward the DDR&E approach in this case only because he presently did not have the resources to conduct the study. He stated however that DIA must participate in both Net Technical Assessments (as was done in the current study) and in Net Threat Assessments, which has not been done.

On the future role of the F-14/F-15 Panel, it was decided that it would have no future action, but that the outside members should be notified that the study is complete.

m. (S) In the Executive Session, the following action took place:

(1) General Bennett continued his rundown on recent intelligence restructuring within the DoD.

(2) [redacted] stated that his Accuracy Panel had met twice and is in the process of writing its report. He briefly discussed the uncertainty in arriving at a figure for the system CEP, after which [redacted] gave his pitch on statistical analysis.

(3) It was decided that in light of the actions which are already underway on the anti-ship missile problem, a decision on forming a panel of the SAC to address the questions would be deferred until the next meeting.

(4) A considerable discussion was held on the DIA FY 73 budget and it was established that the items in the budget should be reviewed in the light of standing up in budget hearings.

(5) The next meeting of the SAC will be held in the Pentagon on 11, 12 January 1972 as previously scheduled. The meeting on the West Coast will be deferred until at least March.

(6) (b)(3):10 USC 424 reported on the findings of the Sensor Data Flow Panel and stated that his report will be written soon. This completes initial action for the Panel but he would like to leave an option open for returning to the various agencies after a period of time. (b)(3):10 USC 424 asked for a report on other products from this system at the next SAC meeting - particularly as to what is available and what exploitation has been accomplished.

n. (U) The meeting adjourned at 1650 hours, 1 Dec 1971.

CERTIFIED:

(b)(3):10 USC 424 (b)(6)

Executive Secretary, DIA/SAC

4 Enclosures a/s

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

30 NOVEMBER - 1 DECEMBER 1971

ROOM 3E-267

Tentative Agenda

30 November

0900	Executive Session - SAO Update	(b)(3):10 USC 424,(b)(6)
1000	Soviet Hi-Power Laser Developments	
1045	KY-9 Missile Firings	
1130	Space Unknowns	
1215	Soviet Missile Solid Propellant Program	
1245	Lunch	
1330	Navy E-O Intelligence Program	
1430	Anti-Ship Missile Data Analysis	
1530	DIA R&D Program	
1600	Executive Session - Silo Panel	
1830-2030	Social at Fort Myer Officers' Club, by invitation	

1 December

0900	Chinese Missile Program	(b)(3):10 USC 424
1000	Chinese Nuclear Developments	
1045	DIA F-14/F-15 Study	

Review On 30 Nov 1991

~~SECRET~~

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

ROOM 3E-267

Tentative Agenda

01 December

0900	Soviet Missile Solid Propellant Program	(b)(3):10 USC 424 [redacted]
0930	Chinese Missile Program	
1015	Chinese Nuclear Developments	
1100	[redacted] Panel Findings (Executive Session)	
1200	DIA F-14/F-15 Study	
1245	Lunch	
1330 1545	Executive Session	
1330	DIA Automated Intelligence Program	
1430	Accuracy Panel	
1445	Sensor Data Flow Panel	
1500	F-14/F-15 Panel	
1515	Anti-ship Missile Problem	
1530	Warhead Panel	
	Future Meetings	

Review On 1 Dec 1991

1145-1545 Executive Session

1145 (b)(3):10 USC 424 ELINT Panel Findings

1245 Lunch

1330 DIA Automated Intelligence Program

1430 Accuracy Panel

1445 Sensor Data Flow Panel

1500 F-14/F-15 Panel

1515 Anti-ship Missile Problem

1530 Warhead Panel

Future Meetings

(b)(3):10 USC 424

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

30 NOVEMBER - 1 DECEMBER 1971

Actual Agenda

30 NOVEMBER

0900	SAO Update	(b)(3):10 USC 424,(b)(6)
1025	Soviet Hi-Power Laser Developments	
1120	Break	
1135	KY-9 Missile Firings	
1220	Space Unknowns	
1300	Lunch	
1335	Anti-ship Missile Data Analysis	
1445	Navy E-O Intelligence Program	
1540	DIA R&D Program	
1830-2030	Social at Fort Myer Officers' ~~Club~~	

1 DECEMBER

0905	Soviet Solid Propellant Program	
0940	Chinese Missile Program	
1050	Chinese Nuclear Program	
1055	Break	
1105	Changes in National Intelligence Structure	Gen. Bennett
1120	(b)(3):10 USC 424 ELINT Panel Findings	(b)(3):10 USC 424
1300	Lunch	
1330	DIA F-14/F-15 Study	
1400	Executive Session Long Range threat Assessment DoD Intelligence Structure Accuracy Panel Anti-ship Missile Problem DIA R&D Program Sensor Data Flow Panel Future Meetings	Gen. Bennett (b)(3):10 USC 424 Gen. Bennett (b)(3):10 USC 424

Review On 30 Nov 1991

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

~~SECRET~~

SOCIAL FUNCTION - 30 Nov 71

NAME	ACCEPT	REGRET	DATE
(b)(3):10 USC 424,(b)(6)	X		
	X		12 Nov
	X		12 Nov
	X		11 Nov
	X		15 Nov
	X		11 Nov
	X		15 Nov
	X		15 Nov
	X		
	X		11 Nov
	X		18 Nov
	X	18 Nov	11 Nov
		X	17 Nov
		X	15 Nov
		X	23 Nov
	X		12 Nov
	X		19 Nov
	X		
	X		23 Nov
		X	15 Nov
	X		12 Nov
	X		11 Nov
	X		22 Nov
	X		11 Nov
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		X	15 Nov
	X		15 Nov
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	X		16 Nov
	X		16 Nov
	X	X 29 Nov	17 Nov
	X		15 Nov
	X		26 Nov
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	X		24 Nov
		X	
	X		24 Nov
	X	X	22 Nov
	X		23 Nov
		X	22 Nov
	X		19 Nov

SAC MEMBERS

NAME	ACCEPT	REGRET
(b)(3);10 USC 424,(b)(6)	X 11/15	15 Nov
		X
		X
	!	15 Nov
	X	16 Nov
	X	17 Nov
	X	15 Nov
	X	
	X	29 Nov
	X	26 Nov
	X	19 Nov.
	X	18 Nov
	X	16 Nov
	X	11 Nov
	X	23 Nov!
	X	29 Nov
	X	29 Nov
	X	29 Nov

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 30 NOV - 1 DEC TIME 0900

PLACE 3E267 Pentagon

NAME	REPRESENTING	SECURITY	DATE Nov 30 AM	DATE Nov 30 PM	DATE Nov 30 EX	DATE Dec. 1 AM	DATE Dec. 1 PM	DATE Dec. 1 EX	DATE AM	DATE PM	DATE EX
[redacted]			✓	✓							
			—								
			✓	✓		✓	✓				
			✓	✓		✓	✓				
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			✓	✓		1100 ✓	✓				
			✓	✓		✓	[redacted]				
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	30 DATE			1 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)						✓					
			✓								
			[redacted]								
				✓							
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____ 30 1

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
[redacted]											
			✓	✓			✓				
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			✓		✓	✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	30 DATE			1 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3) 10 USC 424 (b)(6)											
						✓					
			✓			✓					
			✓	✓		✓					
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			✓			✓					
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			✓								
			✓								
				✓							

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	30 DATE			1 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424(b)(6)				✓							
			✓								
						✓					
						✓					
			✓	✓							
							✓				
			✓								
			✓	✓							

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____ 30 1

NAME	REPRESENTING	SECURITY	DATE			DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)						✓					
			✓	✓		✓	✓				
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	DATE Nov 30			DATE Dec 1			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3) 10 USC 424, (b)(6)				✓							
				✓							
				✓							
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						✓					
						✓	✓				
						✓					
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						✓	✓				
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~~SECRET~~

DEFENSE INTELLIGENCE AGENCY

SCIENTIFIC ADVISORY COMMITTEE

WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

11-12 JANUARY 1972

I. (U) GENERAL: A meeting of the DIA Scientific Advisory Committee was held on 11-12 January 1972 in Room 3E-267, the Pentagon. The meeting convened at 0900 hrs. on 11 January and adjourned at 1630 hrs., 12 January.

II. (U) ATTENDEES: A list of the attendees is attached (Encl 1). The DIA/SAC Secretariat representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agenda are attached (Encls 2 and 3).

IV. ~~(S)~~ SUMMARY:

A. ~~(S)~~ (b)(3):10 USC 424 provided a complete review of the Chinese Nuclear Energy Program beginning with Soviet aid until its abrupt cessation, (b)(1),1.4 (c) and extending through the latest [redacted] His review included facilities, nuclear and thermonuclear tests, application to naval systems and an estimate of fissionable materials and warheads. (b)(3):10 USC 424 stated that he would like to see similarly conducted estimates for the U.S. that would cover about the same development stage. He felt it might be worth spending 3-4 days on such an estimate.

B. ~~(S)~~ (b)(3):10 USC 424 presented a status report on collection resources against the Chinese. He also pointed out some problems,

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

[redacted]

Review On 11 Jan 1992

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

~~SECRET~~

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36.1.4 (c)

C. ~~(S)~~ [redacted]

D. ~~(S)~~ The reason for the intense Soviet interest in magnetospherics was the question posed to the SAC by [redacted] briefing. The subject created a considerable amount of discussion, and several theories were postulated, but no conclusions were reached.

E. ~~(C)~~ [redacted] presentation on Open-Source Literature Exploitation covered the total effort by the Services and DIA, for which DIA has the funding responsibility. A considerable amount of time was spent on the CIRC system and on the process of getting data into and out of the system.

F. ~~(S)~~ [redacted] Vought Missiles and Space Systems Division of LTV presented a briefing on the [redacted] threat forecast in response to the SAC's comments on long range threat projection at the last SAC meeting. They explained the mechanism by which they arrive at the most likely future threat systems through the use of three separate routines. They then gave an example of how the system could be used to predict the types of ICBM's that would be likely for about ten years in the future. After going through this exercise it was "shown" that future systems would probably carry 2-3 MIRV's with a payload of 2000-3000 lbs. After the briefers left the room, it was pointed out by [redacted] that there are already many other ways to arrive at the same conclusion much easier since we have a lot of experts in this field. However, the real test would come when it is used for such things as ASW, SSBM's, etc. [redacted] is OPR within DIA for this program.

G. ~~(S)~~ General Bennett presented a proposal by [redacted] to set up a permanent ELINT Panel to help DIA in solving their ELINT problems. The first task of this Panel would be to look at the two major ELINT collection problems as defined by each of the Services. However, [redacted] felt that the idea of a permanent sub-panel was not too good as it would tend to break up the Committee into groups. He also felt that such a broad charter was not desirable and that a panel should only comment on these subjects after DIA has taken a try at solving the problem. General Bennett agreed and indicated he would have [redacted] take another look at his proposal.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36.1.4 (c)

H. ~~(S)~~ [redacted]

from the collection system which has been addressed by (b)(3):10 USC 424 Sensor Data Flow Panel.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

I. ~~(S)~~

J. ~~(S)~~ Executive Session

(1) (b)(3):10 USC 424 gave a rundown on the data that had been presented to the Silo Panel at SAMSO on 7-8 December 1971 and (b)(3):10 USC 424 presented the Panel's conclusions to date. Another meeting of the Panel has been set for February 8 at SAMSO to listen to (b)(3):10 USC 424 recent silo vulnerability analysis. Several members pointed out the problems in assessing vulnerability and pointed out that the only good assessment which could be arrived at in such an exercise is the maximum value the system could withstand.

(2) (b)(3):10 USC 424 presented the results of the Warhead Panel which looked into the [redacted] He recommended that the SAC get out of this area - that there was a need for overall direction but that it was not appropriate for panel activity. [redacted] agreed to this, and General Bennett had also previously agreed to this approach. A copy of (b)(3):10 USC 424 report is attached (Encl 4). (b)(1),1.4 (c)

(3) (b)(3):10 USC 424 gave his status report on the Accuracy Panel and indicated that another meeting would be necessary to get the study into final shape. The meeting is scheduled for 9 February at SAMSO.

(4) The question of whether to set up an ad hoc panel to look at the anti-ship missile problem was addressed by the Committee. (b)(3):10 USC 424 pushed for such a panel to look into whether everything possible has been done to get guidance information on these systems. [redacted] added that we also need to look at the target designators - (radar, laser, etc.). It was pointed out that the Navy is divided over whether to use ECM or not with the argument against it being that intelligence has never been able to provide necessary data on a timely basis. [redacted] stated that he was not willing to base future chances of getting timely data on the basis of past history. There are new systems in being and in design that should change our capabilities and any panel should look at this aspect. (b)(3):10 USC 424 summed up the Committee's position as tentatively favoring setting up a panel to look at this question, but to combine it with the ELINT panel suggested by (b)(3):10 USC 424 (b)(3):10 USC 424

(5) After a considerable amount of checking, the next SAC meeting was set for Sunnyvale, California on 6,7 April. The May date was established as the 25th-26th.

CERTIFIED:
(b)(3):10 USC 424,(b)(6)
Executive Secretary, SAC

4 Enclosures a/s

DIA/SAC

TENTATIVE AGENDA

Room 3E267

11-12 JAN 1972

11 January

0900	Chinese Nuclear Developments	(b)(3):10 USC 424
1000	Break	
1015	Chinese Collection Program	
1115	(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36.1.4 (c)	(NSA)
1200	Magnetospherics	(b)(3):10 USC 424,(b)(6)
1230	Lunch	
1315	Open Source Literature Study	
1415	Break	
1430	(b)(1)1.4(g) (Threat Forecast) Program	

12 January

0900	Special Sensor Data Report
1000	Break
1015	USSR Command & Control
1215	Lunch
1300	Executive Session
	March, May Schedule Warhead Panel Report Silo Panel Report Accuracy Panel Report Anti-ship Missile Problem

Review On 11 Jan 1992

B

MEETING BRIEF

11 January - There will be no SAO Update briefing at this meeting as there have been no new developments since the last SAC meeting on 30 November - 1 December 1971.

0900 Chinese Nuclear Developments

A summary by DIA of Chinese nuclear developments, particularly as they relate to the missile program. This presentation was rescheduled from the last meeting.

1015 Chinese Collection Program

A status report by DIA on the U.S. collection effort against the Chinese missile and space programs. This report was requested during the last SAC meeting as a result of the presentation on Chinese missiles.

1115
(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

[redacted] This briefing has been presented to the Service Secretaries and [redacted] and is scheduled for presentation to [redacted] on 6 January.

1200 MAGNETOSPHERICS

A report on a special project by DIA(DT) to determine the extent of Soviet interest in magnetospherics, which has significance in ballistic missile and space programs.

1315 Open Source Literature Study

A presentation by DIA on the study requested by [redacted] to investigate what could be determined about the Soviet R&D program from a review of the open-source literature. This briefing should tie in with the following presentation on the [redacted] program.

1430 [redacted] Program

This presentation was requested as a result of discussions relating to long-range threat projections at the last SAC meeting. DE has asked for a 2-hour period in order to be able to give a complete presentation. The briefer will be [redacted] of the LTV Missiles and Space Division, who will be accompanied by one of the Company Vice-Presidents.

Review On 11 Jan 1992

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

12 January

0900 Special Sensor Data Report

This presentation was requested at the last SAC meeting after (b)(3):10 USC 424 report on his Sensor Data Flow Panel. The briefing will be on non-telemetry data from the same system which (b)(3):10 USC 424 Panel has been studying.

1015 USSR Command & Control

A report by DIA on recent work that has been accomplished in defining the Soviet C&C systems. This presentation was given to (b)(3):10 USC 424 on 15 December and his comment was that "it must be given to the SAC".

1300 Executive Session

Future Schedules. Feasibility of holding the March SAC meeting in Sunnyvale, California. Set the date for the March and May meetings.

Warhead Panel Report. (b)(3):10 USC 424 will present the findings of the July 1971 ad hoc panel which looked at the (b)(1):1.4(c) [redacted] effort.

Silo Panel Report. [redacted] will discuss the results of the Panel's last meeting at SAMSO on 7-8 December 1971. This will be essentially the same report as given to (b)(3):10 USC 424 on 15 December.

Accuracy Panel Report. (b)(3):10 USC 424 hopes to have a draft report ready for presentation to the Committee.

Anti-ship Missile Problem. A discussion of the advisability of setting up a panel of the SAC to address the anti-ship missile threat.

~~SECRET~~

DIA/SAC

ACTUAL AGENDA

Room 3E267

11-12 JAN 1972

11 January

0910	Chinese Nuclear Developments	(b)(3):10 USC 424
1000	Break	
1015	Chinese Collection Program	
1055	(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)	(NSA)
1140	Magnetospherics	(b)(3):10 USC 424,(b)(6)
1300	Lunch	
1340	Open Source Literature Study	
1430	Break	
1440	(b)(1),1.4 (c) (Threat Forecast) Program	
1545	Executive Session	

12 January

0910	Special Sensor Data Report
1030	Break
1045	USSR Command & Control
1230	Lunch
1330	Executive Session
	March, May Schedule Warhead Panel Report Silo Panel Report Accuracy Panel Report Anti-ship Missile Problem

Review On 11 Jan 1992

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 11-12 JANUARY 72 TIME 0900

PLACE 3E267 Pentagon

NAME	REPRESENTING	SECURITY	11 DATE AM	11 DATE PM	11 DATE EX	12 DATE AM	12 DATE PM	12 DATE EX	DATE AM	DATE PM	DATE EX
AF (b)(3):10 USC 424			✓	✓		✓	✓				
			✓	✓		✓					
			✓	✓		✓	✓				
			✓	✓		✓	✓				
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			✓	✓		✓					
BENNETT, DONALD, LTG			✓			✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	DATE 11			DATE 12			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424.(b)(6)			✓	✓		✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

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(b)(3):P.L. 86-36,(b)(6)											
(b)(3):10 USC 424,(b)(6)											
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(b)(3):P.L. 86-36,(b)(6)						✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

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DEFENSE INTELLIGENCE AGENCY

SCIENTIFIC ADVISORY COMMITTEE

WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

6 - 7 APRIL 1972

I. (U) GENERAL: A meeting of the DIA/SAC was held on 6-7 April 1972 in Sunnyvale, California. The morning session on 6 April was held at the Lockheed facilities while the remaining sessions were held in the SAO facilities at the Electromagnetic Systems Laboratory (ESL). The meeting convened at 0900 hours on 6 April and adjourned at 1500 on 7 April. Cocktails and dinner were hosted by [redacted] at his home on the evening of 6 April for all members of the SAC, as well as for all other persons attending the meeting from the Washington area.

II. (U) ATTENDEES: A list of the attendees is attached (Enclosure 1). The DIA/SAC representative was (b)(3):10 USC 424

III. (U) AGENDA: Copies of the tentative and actual agenda are attached (Enclosures 2 and 3).

IV. (S) SUMMARY:

A. The tour of Building 156A and 190 at Lockheed went essentially as planned, although the time was extended by one hour to allow all of the presentations to be given. These presentations were at a special access level and the agenda for this portion of the meeting is filed in DIA/SAC Pouch # 138.

B. The briefing by ESL on Project Queen dealt with work they are doing on their own to enhance photographic imagery by computer manipulation. Several different techniques are being used in this ~~technique,~~ process, including the use of intensity filtering.

C. A demonstration was given of the use of an (b)(1):1.4(c) [redacted]

D. (b)(3):10 USC 424.(b)(6) presented an analysis of the Chinese missile which was fired in November 1971, based on data collected by ROCKET BEACH, the VHF radar which was specifically installed in 1971, on a crash basis, to collect against Chinese missiles.

Review On 6 apr 1992

~~SECRET~~

EXCLUDED FROM AUTOMATIC REGRADING; DOD DIR. 5200.10 DOES NOT APPLY

E. GUARDRAIL is the name for some intercept equipment which has been used in tactical operations in Europe and which is presently at ESL for modification. It had been planned to take a look at the equipment but only a portion of it had arrived at meeting time; therefore a briefing was given on the system. [redacted] made the point that the biggest gripe of users of the system was the inaccuracy of location data. [redacted] replied that changes are being incorporated into the system which will greatly improve this capability. (b)(3):10 USC 424

F. [(b)(3):10 USC 424] gave the normal SAO update, which was followed by a recap of the Vietnam situation by LtGen Philpott. One action item resulted from the first briefing in regard to the possible use of a [(b)(1),(b)(3):10 USC 424,1.4 (c)]

[redacted]

G. The presentations by [(b)(3):10 USC 424] created considerable discussion by the SAC.

[redacted]

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

H. Executive Session:

1. [(b)(3):10 USC 424] discussed his role on a special panel he is chairing for the Navy [(b)(6)] on one of the special Navy programs. [redacted] wanted to ensure that it would not conflict with any studies undertaken by the SAC on the antiship missile problem, and it was the opinion of [redacted] and other members that there would be no conflict. [redacted] is also on the Panel with [(b)(3):10 USC 424] pushed for SAC to look at the anti-ship missile problem and it was agreed that the committee would recommend to General Bennett that a special panel be formed to accomplish this. (b)(3):10 USC 424

2. The [(b)(1),1.4 (c)] was presented to the SAC by [(b)(3):10 USC 424] for approval. A discussion was held on the question of whether the DSB should also be asked to approve the study and the decision was made not to attempt such coordination. [redacted] will discuss this with the DSB chairman. [(b)(3):10 USC 424,1] questioned the real value of [redacted] and General Philpott said DIA would review it. [(b)(3):10 USC 424] also suggested that, because of the small amount of money involved, it might be better [redacted] budget so that more could be done on a particular technique that might appear promising. After some (b)(1),1.4 (c) (b)(1),1.4 (c)

discussion, the SAC members agreed but felt that for budget purposes it would be safer to use two sets of books and submit a budget that included a breakdown among programs. General Philpott will discuss this with [redacted] formally submitted his resignation from Chairman of the Panel, which [redacted] accepted. [redacted] was approved by the full committee.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

3. (b)(3):10 USC 424 gave a status report on the Data Flow Panel and on the Data Management Group. He felt that a draft of the report would be ready for Committee approval at the May meeting. He also

4. (b)(3):10 USC 424 stated that the Accuracy Panel would meet again around the 26th of April to attempt to arrive at a report which is acceptable to all members. He requested that (b)(3):10 USC 424 give his presentation on numerology at that meeting.

5. (b)(3):10 USC 424 felt that the Silo Panel would meet during the early part of May to consider the latest available information. He commented that the Panel has essentially been integrated into the analytical efforts of the intelligence community.

(b)(1),(b)(3):18 USC 798,(b)(3):50 USC 403, (b)(3):P.L. 86-36,1.4 (c)

6. The May meeting of the SAC was confirmed for the 25th - 26th in the Pentagon and the July date was also tentatively set for the 25th - 26th.

V. (U) The meeting was adjourned at 1500 hours.

(b)(3):10 USC 424,(b)(6)

Executive Secretary, SAC

DIA/SAC
6-7 April
ESL, Sunnyvale, California

Tentative Agenda

6 April

0845	Depart from lobby Holiday Inn	
0900	Tour of Lockheed facilities. Meet in Main Lobby Bldg. 156A*	
1200	Lunch at Lockheed	
1300	Reconvene at ESL	
1315	Computer Manipulation of Imagery Processing	(b)(3):10 USC 424
1415	POCKET BEACH	
1515	Break	
1530	Inspection of GUARD RAIL Equipment	
Evening:	Cocktails/Dinner at (b)(3):10 USC 424 home	

7 April

0845	Depart Holiday Inn for ESL	
0900	SAO Update	
1015	Break	
1030	SWIFT BEAR Signal Collection Program	
1130	[redacted]	NSA (b)(3):P.L. 86-36
1230	Lunch	
1330	Executive Session	(b)(3):10 USC 424

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

[redacted]

(b)(1),1.4 (c)

*See inset on attached map. From ESL follow Java towards Moffett Field, cross Mathilda, to 2nd large building on right. Parking is in front of the building.

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DIA/SAC
6-7 April
ESL, Sunnyvale, California

Actual Agenda

6 April

0900 Tour of Bldg. 156A, Lockheed

1100 Convene in Building 190
Briefings by:
(b)(3):10 USC 424,(b)(6)

1200 Lunch

1330 Depart Bldg. 190

1345 Reconvene at ESL

1400 Introduction to ESL

1405 Project QUEEN

1455 (b)(1),1.4 (c)

1540 Analysis of POCKET BEACH Data

1635 GUARDRAIL

(b)(3):10 USC 424,(b)(6)

7 April

0800 SAO Update

0835 SEA Update

0950 SWIFT BEAR Collection Program

1035 Break

1055 [redacted] (NSA)

1200 Lunch

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

1300 Executive Session
Navy Panel Activity

(b)(1),1.4 (c) [redacted]

Panel Status Reports
Future Topics

(b)(1),(b)(3):10 USC 424,1.4 (c)

1500 Adjourn

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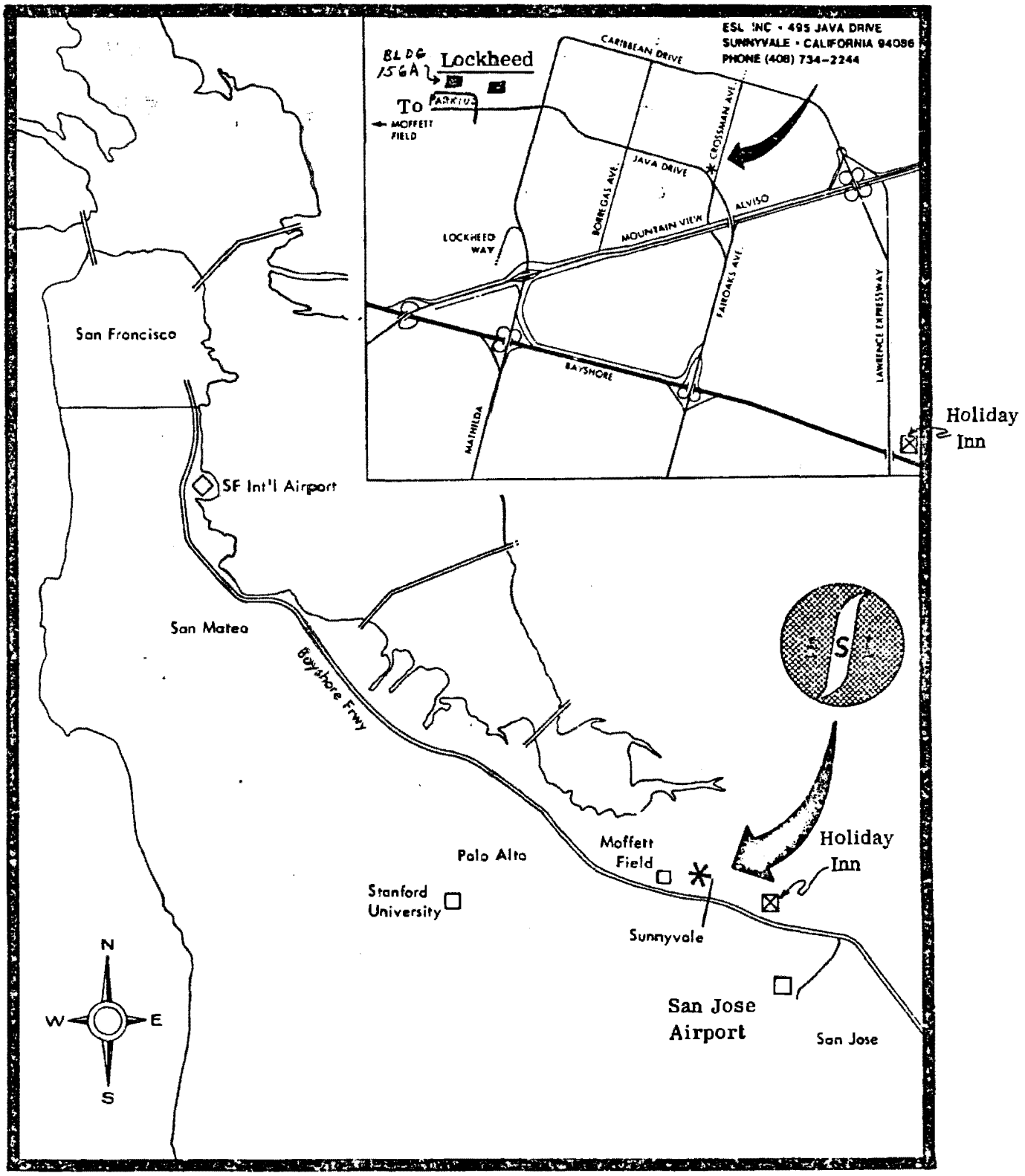
DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICALLY DECLASSIFIED
DOD DIR. 5200.10



ESL

Take Fairoaks (North) from 101.

Proceed 1 mile to overpass. ESL on other side of overpass.

10 minutes from San Jose Airport. 30 minutes from San Francisco Airport.

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 6-7 April 72 TIME 0900

PLACE GSL, Sunnyvale, Calif.

NAME	REPRESENTING	SECURITY	DATE 6 Apr AM	DATE 6 Apr PM	DATE 6 Apr EX	DATE 7 Apr AM	DATE 7 Apr PM	DATE 7 Apr EX	DATE AM	DATE PM	DATE EX
(b)(3):10 USC 424			✓	✓	✓	✓	✓	✓			
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~~BENNETT, DONALD, LTC~~		[redacted]									

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE: _____

NAME	REPRESENTING	SECURITY	DATE 6 Apr			DATE 7 Apr			DATE		
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	REPRESENTING	SECURITY	6 Apr DATE			DATE			DATE			REMARKS
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SUBJECT: _____

Date of Meeting _____ Time _____

Place _____

NAME	[illegible]	SECURITY	TIME			DATE						REMARKS
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DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

1-2 JUN 1972

I. (U) GENERAL: A meeting of the DIA/SAC was held in Room 3E267, the Pentagon on 1-2 June 1972. The meeting convened at 0900 hrs. on 1 June and adjourned at 1740 hrs. on 2 June.

II. (U) ATTENDEES: A list of the attendees is attached (Encl 1). The DIA/SAC Secretariat representative was [redacted]

III. (U) AGENDA: Copies of the tentative and actual agenda are attached (Encls 2 & 3).

IV. ~~(S)~~ SUMMARY:

A. The SAO update was presented by [redacted] and as usual the interest was high. Three questions were asked which required further research, and answers to the questions were provided to the SAC as the first item on 2 June. During the discussion it was requested that [redacted] (who was not present at the meeting) be asked to look at the feasibility of using [redacted] (b)(1),(b)(3):10 USC 424;1.4 (c) In response to questions on exploitation of the SA-7 missile, a summary was prepared by [redacted] and subsequently distributed to the members (Encl 4).

B. Following [redacted] brief presentation on large antenna arrays, a request was made by several members for an update on Soviet OTH radar, with emphasis on analysis of single/multiple hop propagation for various locations. This will be scheduled for the next meeting.

C. Following presentations on analysis of the KY-9 missile system by the various agencies as listed in the agenda, a discussion was held on possible future SAC actions in regard to the KY-9. It was proposed that the SAC members of the Accuracy Panel [redacted] form the nucleus of an ad hoc panel to tackle this problem. It was decided that [redacted] would recommend such an action to General Bennett and that in addition to the above individuals, the Panel would include [redacted] It was generally agreed that, based on the data which had been presented, the KY-9 system is designed to go against an instantly recognizable, slow-moving, surface(probably Naval) target. The possibility was discussed that the system would be

[redacted]

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utilized in a modified GOLF class submarine but this was largely discounted due to the problems associated with initial target position determination. [redacted] will recommend formation of an ad hoc panel to look at the KY-9 system in his report to General Bennett.

D. [redacted] "dry-run" of a briefing to Ambassador [redacted] U.S. representative at Geneva, on Soviet nuclear capabilities, weapons, stockpiles and Plowshare programs, was commented on extensively by the SAC and several recommendations were made on ways in which the briefing should be changed. A principal recommendation was made that comparative U.S. data should be presented with the data on the USSR. Following a short break, [redacted] gave a similar presentation on the Soviet CW program and on the problems of verification, should any ban on CW weapons be signed by the U.S. and USSR.

E. There was a short presentation and discussion on the text of the Arms Limitation Agreement which had been provided to the SAC at the beginning of the day by [redacted] General Bennett made some comments on the status of a baseline for verification purposes and [redacted] commented on the major concerns of verification for each item contained in the agreement. The members were generally reluctant to endorse the agreement, but felt that they should study it in more detail before making comments/recommendations concerning verification. General Bennett asked that the copies of the agreements be left with [redacted] until such time as permission was obtained for their release.

F. [redacted] presented a briefing on the effects of dimensional uncertainty as they affect hardness/vulnerability estimates. [redacted] subsequently made three points relating to this presentation:

1. Don't trust measurements of dimensions which approach system resolution.

2. A standard approach to mensuration is needed in the intelligence community.

3. Additionally, there are unmeasurable uncertainities which greatly affect vulnerability estimates - i.e., material compositions, etc.

[redacted] Panel feels that they cannot make a final report to General Bennett at this time.

G. Copies of the draft Sensor Data Flow report were distributed to each member, but due to time limitations, a complete review could not be accomplished during the meeting. [redacted] asked that the members drop by the SAC office as soon as possible to review the document and to make recommendations for any changes before the report is formally approved by the SAC.

[redacted] presented a brief summary of the activities and recommendations of the Executive Data Management Group. A list of recommendations made by this group is attached (Encl 5). A discussion was held of future actions of the [redacted] panel, and [redacted] stated that the Panel should proceed as outlined by [redacted] General Bennett made no comment on this item. The first meeting for the second phase of the Panel activity is tentatively scheduled for 30 June at NSA.

H. The draft of the Accuracy Panel Report on Accuracy of the SS-9 MOD II and IV Weapons Systems was distributed to the members for review. [redacted] briefly outlined the Panel's conclusions after which [redacted] presented a detailed report of his analysis [redacted] which had been referenced in the Panel's report and which greatly influenced the Panel's conclusions. Following the presentation [redacted] asked that the SAC Members critically review the report before it is approved by the Committee.

V. The next meeting of the SAC will be held in the Pentagon on 18-19 July. The following meeting is tentatively scheduled for 7-8 September.

CERTIFIED:

5 Encls a/s

[redacted]
Executive Secretary, SAC

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 1-2 Jun 72 TIME 0900

PLACE 3E267 Pentagon

NAME	REPRESENTING	SECURITY	1 DATE AM	1 DATE PM	1 DATE EX	2 DATE AM	2 DATE PM	2 DATE EX	DATE AM	DATE PM
[redacted]			✓	✓		✓	✓			
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 1-2 June 72 TIME 0900

PLACE 3E267

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 1-2 June 72 TIME 0900

PLACE 3E267 Pentagon

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 1-2 June 72 TIME 0900

PLACE 3E267

NAME	REPRESENTING	SECURITY	1 DATE			2 DATE			DATE		
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

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REVISED AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

2 June

0900	Nuclear Programs & Test Ban Verification
0940	CW Aspects of Disarmament
1015	Break
1030	Soviet SAM Command & Control
1130	Executive Session a. SALT b. Silo Panel Report
1230	Lunch
1300	Executive Session a. Schedule future dates b. Sensor Data Flow Panel Report Executive Data Management Group Report c. Accuracy Panel Report

(b)(3):10 USC 424,(b)(6)

Review On 2 June 1992

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GROUP 3
Downgraded at 12 year Intervals;
Not automatically Declassified

TENTATIVE AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

1-2 JUNE 1972

(b)(3):10 USC 424,(b)(6)

1 June

0900	SAO Update
1000	Update on Large Antenna Arrays
1015	Break
	Working Session (KY-9 Missile System)
1030	Introduction
1040	Review of Launch and Impact Areas
1110	First Stage Propulsion
1140	Second stage/Payload propulsion
1210	Guidance, Sensor Related Data
1310	Lunch
1400	Guidance, Trajectory
1500	Guidance, Data Format & Computer
1600	Reentry Vehicle
1630	Discussion

2 June

0900	Nuclear Programs & Test Ban Verification
0940	CW Aspects of Disarmament
1015	Break
1030	Soviet SAM Command & Control
1130	SA-5 SQUARE PAIR Signal/Model Analysis
1230	Lunch
1300	Executive Session a. Schedule future dates b. Sensor Data Flow Panel Report Executive Data Management Group Report c. Accuracy Panel Report

~~DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED DOD DIR. 5200.10~~

MEETING BRIEF

1 June

0900 SAO Update

1000 Update on a Large Antenna Array
This update was requested by [redacted] and it will be a brief status report on analysis of the large Soviet antenna array
(b)(1),1.4 (c) [redacted]

1030 KY-9 Working Session
The remainder of the day will be devoted to the KY-9 missile, as a result of discussions at the SAC meeting in California on 6-7 April. At the Committee's request, the major organizations performing analyses on this system will present the results of their individual efforts in a working session with the SAC. Representative samples of data are to be brought to the meeting.

2 June

0900 Nuclear and CW Aspects of Disarmament
These presentations have been inserted into the agenda in order to obtain comments or ideas from the members prior to briefing Ambassador [redacted] on 5 June.

1030 Soviet SAM Command & Control
This briefing, and the following one, were requested by the Committee as a result of discussions on possible changes in the SA-5 system and on the significance [redacted] (b)(1),1.4 (c) associated with a SAM. This presentation will stress the organizational and Command & Control relationships between the SA-2, SA-3 and SA-5 systems, as well as the technical characteristics of data systems serving these SAM units.

1130 SA-5 SQUARE PAIR Signal/Model Relationships
At the April meeting [redacted] felt that it would be useful for the Committee members to define the types of modulation [redacted] (b)(1),1.4 (c) [redacted] and to compare this with what we know about the SA-5. This briefing will attempt to provide the background for such a project by laying out the known/assessed characteristics of the SQUARE PAIR radar and associated signals.

1300 Executive Session
a. Future Meeting Schedule
The next meeting is scheduled for 18-19 July. A tentative date will be set for the September meeting.

b. Sensor Data Flow Panel Report
Dr. Lauderdale plans to present the Summary Report of his Panel

Review On 1 Jun 1992

EXCLUDED FROM AUTOMATIC REGRADING
DoD DIR 5200.10 DOES NOT APPLY

to the Committee for approval. In addition, there will be a report by [redacted] on the status of the Executive Data Management Group, formed following [redacted] verbal report to you and [redacted]

c. Accuracy Panel Report

[redacted] Panel met on 10 May to resolve their final differences on their report of the SS-9 MOD II and MOD IV accuracy. Their report will be submitted to the Committee for their approval.

TENTATIVE AGENDA

DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

1-2 JUNE 1972

1 June

0900	SAO Update	(b)(3):10 USC 424
1015	Break	
1030-1630	Working Session (KY-9 Missile System) Presentations by various agencies	

2 June

0900	Update on (b)(3):10 USC 424	DIA
0920	Recent Developments on SA-2 Missile Beacon	
0945	Soviet SAM Command & Control (SA-2/3/5)	
1045	Break	
1100	SA-5 SQUARE PAIR Signal/Model Relationships	DIA
1200	Lunch	
1245	Executive Session	

a. Data Flow Panel Report
Executive Data Management Group Report

b. Accuracy Panel Report

c. Future DIA/SAC Dates

(b)(3):10 USC 424,(b)(6)

~~DOWNGRADED AT 12 YEAR INTERVALS;~~
~~NOT AUTOMATICALLY DECLASSIFIED~~
DoD DIR 5200.10

~~SECRET~~

ACTUAL AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

1-2 JUNE 1972

1 June

0900	SAO Update	(b)(3):10 USC 424,(b)(6)
1040	Update on Large Antenna Arrays	
	Working Session (KY-9 Missile System)	
1100	Introduction	
1105	Review of Launch and Impact Areas	
1115	First Stage Propulsion	
1140	Second stage/Payload propulsion	
1215	Guidance, Sensor Related Data	
1345	Lunch	
1410	Guidance, Sensor Related Data	
1430	Guidance, Trajectory	
1450	Guidance, Data Format & Computer	
1550	Reentry Vehicle	
1610	Discussion	

2 June

0900	Nuclear Programs & Test Ban Verification	(b)(3):10 USC 424,(b)(6)
1125	Break	
1135	CW Aspects of Disarmament	
1245	Executive Session	
	SALT	
1335	Lunch	
1405	Executive Session a. Silo Panel b. Schedule future dates c. Sensor Data Flow Panel Report Executive Data Management Group Report d. Accuracy Panel Report	

Review On ~~1 June 1992~~

~~SECRET~~

~~SECRET~~
~~NO FOREIGN DISSEM~~

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

18-19 July 1972

I. (U) GENERAL: A meeting of the DIA/SAC was held in Room 3E267, the Pentagon on 18-19 July 1972. The meeting convened at 0900 hrs. on 18 July and adjourned at 1600 hrs. on 19 July.

II. (U) ATTENDEES: A list of the attendees is attached (Encl 1). The DIA/SAC Secretariat representative was (b)(3):10 USC 424 General Bennett was present from 1500-1730 on 18 Jul and 1000-1400 on 19 July.

III. (U) AGENDA: Copies of the tentative and actual agenda are enclosed (Encls 2 & 3).

IV. ~~(S/NFD)~~ SUMMARY:

A. (b)(3):10 USC 424 presented a brief recap of milestones for the Soviet SA-5 from early development to the present status. (b)(3):10 USC 424 then presented a summary of analyses he has accomplished (b)(1),1.4 (c) Considerable interest was displayed by the members in relation to this work and after (b)(3):10 USC 424 indicated that further analysis could be in peril because of budget considerations, (b)(3):10 USC 424 recommended that the SAC should prepare a statement strongly supporting further analysis on the SA-5 as a strong contender for available funds. A general conclusion of the SAC was that there probably has been significant changes made in the SA-5 system since its initial deployment.

B. (b)(3):10 USC 424 began his briefing on Soviet SAM Command and Control by reviewing the structure and facilities as they existed in the early 1960's and then continued with changes which have occurred since that time. Following the presentation, (b)(3):10 USC 424 discussed the impact of personnel reassignments and the loss of the MITRE effort on continued analysis in the Command and Control area. He indicated that the situation is pretty bleak for the next several months.

C. (b)(3):10 USC 424.(b)(6) reviewed Soviet efforts in OTH radar to the present time and postulated the current development by the Soviets of an advanced OTH system which might include a separate but collocated atmospheric sounder. The SAC questioned the feasibility of such a system on the basis that there could be considerable masking or shadow effect from such a system.

~~SECRET~~
~~NO FOREIGN DISSEM~~

Review On 19 Jul 92

Classified by DT
EXEMPT FROM GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTION CATEGORY 2
DECLASSIFY ON ~~Upon Notification~~

D. [redacted] presented a summary of a study conducted for ASD(I) on two IR sensor systems. The Committee felt that the study showed essentially what one would expect. [redacted] stated that a task was to be levied on the production agency involved to conduct a controlled test to determine the validity of analyses derived from the data from these systems and asked if any of the members might be interested in helping to ensure that the test is conducted properly. There were no takers.

E. Prior to [redacted] presentation on the management information system (modified Delphi technique) used in the CDIP Review Study, Admiral Longino summarized the concern which had been encountered by this technique and suggested that the Committee could provide a valuable service to DIA by commenting on its validity. The presentation proved to be disastrous for [redacted] as no one had a kind word for what he was doing. Some of the comments occurring during the briefing and later in the Executive Session follow:

(1) [redacted] Reference any correlation between succeeding iterations of the same matrix only proves the validity of the results for this particular matrix structure.

(2) [redacted] Unless the technique can be used to give answers to incremental changes in resource allocations, the technique is useless.

(3) [redacted] It is necessary to have any program of this sort, structured so that you can look at the same question from several different ways.

(4) [redacted] Not only is the basic methodology fundamentally wrong, but also it appeared from the results shown that the participants of the BETA group (analysts) were not the correct people to use.

(5) [redacted] (Summarizing): If the technique has any usefulness at all, it must stop short of trying to take the last step of assigning numerical values on each item. They hoped that no one had tried to use the present results to make any budget decisions.

(6) General Bennett: He had not been able to use this data to date.

F. [redacted] presented a status report on [redacted]

G. The NAVSTIC analysis of an apparently new anti-ship weapon was not accepted by the SAC as they felt there were too many questions not answered by available data. [redacted] stated that this was only an initial assessment and that they would take another look at their analysis.

H. General Bennett spent almost 2 hours at the beginning of the Executive Session on upcoming budget and personnel changes within DIA, including his pending reassignment prior to the next SAC meeting. He thanked the members for their advice and participation and solicited their continued support for VADM de Poix.

I. [redacted] gave a short summary of his trip to the Soviet Union with [redacted] and others who were working on exchange of S&T data between the US and the USSR. In addition to outlining areas in which exchanges would and would not take place, he commented that the Soviets were eager to accomplish agreements in all areas.

J. The following items were discussed in the Executive Session during the Director's absence:

(1) The Accuracy Panel report was reviewed and some specific changes were recommended. The report was approved for distribution upon completion of the changes.

(2) The Sensor Data Flow report was also approved for dissemination with the proviso that the recommendations would be made stronger. [redacted] provided the Secretariat with the rewritten paragraphs.

(3) [redacted] proposal and General Bennett's reply on establishing a KY-9 panel were discussed and it was indicated that the Chairman should proceed as soon as possible. [redacted] requested he be taken off this panel in order to work with the Naval missile problem, and [redacted] was asked to participate in his place. Membership now stands: [redacted]

(4) [redacted] stated that General Bennett had contacted officials in the Navy in regard to the SAC becoming involved in the acquisition and missile guidance aspects of cruise missiles and that the Navy would welcome such a study by a small panel. [redacted] was named (in absentia) as Chairman of the panel, others members to include [redacted] (b)(3):10 USC 424

(5) [redacted] announced that [redacted] would be the new Chairman [redacted]

(b)(1),1.4 (c)

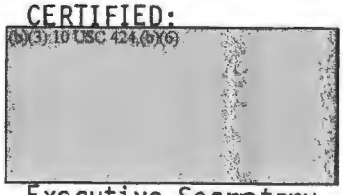
(6) [redacted] reported no activity for the Silo Panel.

(7) [redacted] commented on a discussion he had just held with [redacted] concerning suggestions for possible SAC activity. [redacted] suggestion was for the SAC to look at possible Soviet reactions to the

United States' use of new technology-type weapons in North Vietnam, and to the effectiveness of the "new" air war in NVN, i.e. use of B-52's, ASM's, etc. This suggestion was greeted with considerable enthusiasm and it was suggested that in order to determine if the SAC should pursue the matter in detail, they should first determine what information is available on North Vietnamese reactions to these systems. Specific items of interest would be reactions to use of laser and other E-O guided weapons, gunships, mines and anti-tank weapons. Briefings will be arranged on these topics at the next SAC meeting.

(8) A discussion was held on the possibility of setting up a small working group of the SAC to study the SA-5 problem. [redacted] felt that there is more data available at the agencies working this problem than shows up in studies, briefings, etc. He proposed that a small working group visit each of these agencies and talk to the analysts involved. Hopefully, this group might be able to shake out more information in regard to the past and present role of the SA-5. [redacted] appointed [redacted] to be Chairman of this group, assuming that the Director agrees to the proposal which [redacted] will prepare.

CERTIFIED:



Executive Secretary, SAC

3 Enclosures a/s

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

18-19 July

TENTATIVE AGENDA

Item #	18 July	
1	0900	SA-5 SQUARE PAIR Radar Analysis
	1000	Break
2	1015	Soviet SAM Command & Control
3	1115	Soviet OTH Radar
	1215	Lunch
4	1300	Evaluation of Two Infra-red Sensors
	1415	Break
5	1430	CDIP Review Study
	1530	Executive Session
	19 July	
6	0900	Analysis of an Anti-ship Weapon
	1000	Break
7	1015	Soviet SLBM Command & Control
	1115	Lunch
	1200	SAO Update
	1230	Executive Session

(b)(3):10 USC 424,(b)(6)

Classified by DT
EXEMPT FROM GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTION CATEGORY 2
DECLASSIFY ON Unknown

~~SECRET~~

Review On 19 Feb 72

~~SECRET~~

DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

18-19 July

ACTUAL AGENDA

Item #	18 July		
1	0910	SA-5 SQUARE PAIR Radar Analysis	(b)(3):10 USC 424,(b)(6)
	1020	Break	
2	1030	Soviet SAM Command & Control	
3	1130	Soviet OTH Radar	
	1230	Lunch	
4	1325	Evaluation of Two Infra-red Sensors	
	1450	Break	
5	1505	CDIP Review Study	
	19 July		
6	0830	Soviet SLBM Command & Control	
	0925	Analysis of an Anti-ship Weapon	
	1035	Executive Session	
	1340	Lunch	
	1415	Executive Session	

Classified by D.T.
EXEMPT FROM GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTION CATEGORY 2
DECLASSIFY ON Unknown

Review 19 Jul 92

~~SECRET~~

UNITED STATES GOVERNMENT

Memorandum

U-71,174/DC-7A

TO: DS-6C2
SAC

DATE: 13 JUL 1972

FROM: DC-7

SUBJECT: DIA Scientific Advisory Committee Tentative Agenda

1. Reference memorandum, subject as above, S-198/SAC, 6 July 1972.

2. Following are the names and SSNs of the [redacted] personnel desiring to attend the agenda item indicated as requested in the reference. Clearances will be passed separately.

13 July 1972

Item Number	Name	SSN
	(b)(3):10 USC 424.(b)(6)	
	(b)(3):10 USC 424.(b)(6)	

Cancelled

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 18-19 Jul 72 TIME 0900

PLACE 3E267 Pentagon

NAME	REPRESENTING	SECURITY	18 DATE			19 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓	✓		✓	✓				
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			✓	✓		✓	✓				
			✓	✓		[redacted]					
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			✓	✓		✓	✓				
BENNETT, DONALD LTG	DR			✓		✓	✓				
(b)(3):10 USC 424			✓	✓		✓	✓				

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	18 DATE			19 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)			✓	✓							
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	DATE 18			DATE 19			DATE		
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(b)(3):10 USC 424,(b)(6)				✓	✓						
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	18 DATE			19 DATE			DATE		
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(b)(3):10 USC 424,(b)(6)						✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	18 DATE			19 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424						✓					
						✓					

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

7-8 September 1972

I. (U) GENERAL: A meeting of the DIA/SAC was held in the Pentagon, Room 3E267 on 7-8 September 1972. The DIA/SAC Secretariat representative was [redacted]

II. (U) ATTENDEES: A list of attendees is attached (Encl 1). VADM de Poix was present at various times during the two-day meeting.

III. (U) AGENDA: Copies of the tentative and actual agendas are attached (Encls 2 & 3).

IV. ~~(S)~~ SUMMARY:

A. The SAO update was begun at 0900 hours due to VADM de Poix' attendance at the Chairman's morning briefing. Upon the Admiral's arrival, the update was interrupted to permit [redacted] to welcome him to his first meeting of the SAC. ADM de Poix returned the courtesy by stating that General Bennett had stated that the SAC has been of considerable help to him during his tour as Director, DIA, and that he looked forward to a similar close relationship. The update was continued with the normal high level of interest displayed by the members.

B. Prior to the break, [redacted] reported to the SAC on a report (Encl 4) he had received from MACV on artillery losses in SVN. In answer to a question from [redacted] it was determined that the 130 mm CHICOM and the 130 mm Soviet guns have been requested for exploitation. Status of the 122 mm gun is presently unknown, but is being determined.

~~SECRET~~

Classified by D.T.
EXEMPT FROM GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTION CATEGORY 2
DECLASSIFY ON ~~Upon notification~~

Review On 8 Sep 82

C. A series of presentations on reactions to the use of new technology weapons and new tactics in SEA was arranged by [redacted] and included representatives from Air Force Special Communications Center and NSA. A copy of the briefing text is included in the backup portion of the folder for this meeting. The SAC expressed sincere appreciation for the details provided by the briefers. There was no discussion of future SAC actions relating to this topic, but two questions were asked which could not be answered by persons present and will require action. These questions are:

(1) What is known about detonation of the SA-2 upon impact with the ground?

(2) What is the status of the ARM version of TALOS, and if operational, what results have been obtained?

D. The Committee was very complementary to [redacted] on Project SUMMER NIGHT/TEAL BEAK. They expressed the opinion that the theoretical studies which had been accomplished were sufficiently promising to support the proposed tests in the Pacific, assuming that the costs were in the range of stated estimates.

(b)(3):10 USC 424

E. During the report on exploitation of the SA-7, it was noted that the use of an [redacted] requested data on the battery associated with the system be forwarded to him as soon as possible to use in work on countermeasures which he is performing for the Army.

(b)(1),1.4 (c)

(b)(3):10 USC 424

F. Concern was expressed by the SAC on our capability [redacted]

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

G. Reaction to the presentation on changes in the DIA projections of Soviet forces due to the SAL Agreement was that the projections were based only on the hypothesis that the treaties presently in being will remain in effect for all time. It was stated that there needs to be other options explored such as a continued high level of R&D activity in these areas, with a decision made at the end of the present treaty that it would not be extended. Another option investigated might be similar to this, but with the decision made two years prior to expiration of the present treaty that it would not be extended beyond the five years. [redacted] assured the Panel that these options were being investigated.

H. VADM de Poix suggested, prior to his departure, that the SAC might be able to provide some help on the problem of our lack of knowledge of the Warsaw Pact forces. He felt that this is one of our most significant intelligence gaps at the present time.

I. During discussions on the SEA briefings, [redacted] (b)(3):10 USC 424 [redacted] asked what the ASD(ISA) study did in regard to his discussions with [redacted] as to future Vietnamese intelligence capabilities.

(b)(3):P.L. 86-36

J. [redacted]

[redacted] K. The Advanced Missile Guidance Panel, chaired by will have its first meeting in the Pentagon on 19 September.

L. [redacted] stated that he would take up the subject of the Anti-ship Missile Panel and the proposal by [redacted] for an SA-5 Panel with VADM de Poix.

M. The dates established for the next two meetings of the SAC are:

9-10 November 1972

18-19 January 1973

N. The meeting was adjourned at 1500 hours.

CERTIFIED:

(b)(3):10 USC 424,(b)(6)

Executive Secretary, SAC

4 Enclosures a/s

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 7-8 Sept 72 TIME 0900

PLACE 3E267 Pentagon

NAME	REPRESENTING	SECURITY	7 DATE AM	7 DATE PM	7 DATE EX	8 DATE AM	8 DATE PM	8 DATE EX	DATE AM	DATE PM	DATE EX
(b)(3):10 USC 424			✓	✓		✓	✓				
			✓	✓		✓	✓				
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			✓	✓		✓	✓				
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deFOTA, VINCENT, VADM	DR		✓	✓			✓				
(b)(3):10 USC 424			✓	✓		✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	7 DATE AM	7 DATE PM	7 DATE EX	8 DATE AM	8 DATE PM	8 DATE EX	DATE	DATE	DATE EX
(b)(3):10 USC 424,(b)(6)		(b)(3):10 USC 424		✓							
						✓					
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				✓							
			✓	✓			✓				
(b)(3):P.L. 86-36,(b)(6)			✓								
(b)(3):10 USC 424,(b)(6)				✓							
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(b)(3):P.L. 86-36,(b)(6)			✓								

IA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	7 DATE AM	PM	EX	8 DATE AM	PM	EX	DATE AM	PM	EX
(b)(3):10 USC 424,(b)(6)		(b)(3):10 USC 424	✓	✓							
(b)(3):P.L. 86-36			✓								
			✓								
			✓								
(b)(3):10 USC 424,(b)(6)			✓								
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				✓							
			✓			✓					
(b)(3):P.L. 86-36			✓								
(b)(3):10 USC 424						✓					
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	7 DATE			8 DATE			DATE		
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(b)(3) 10 USC 424 (b)(6)			✓								
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	DATE 7			DATE 8			DATE		
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(b)(3):10 USC 424											
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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

7-8 September 1972

TENTATIVE AGENDA

7 September 1972
Room 3E267, The Pentagon

0900	Opening Remarks	VADM dePoix
0915	SAO Update	(b)(3):10 USC 424
1015	Break	
1030	NVN/VC Reactions to U.S. Air Operations	DIA/NSA/USAF Security Service
1315	Lunch	
1400	Project SUMMER NIGHT	(b)(3):10 USC 424,(b)(6)
1515	Break	
1530	SA-7 Exploitation Results	(b)(3):10 USC 424

8 September 1972

0900	Changes to Projections of Soviet Forces & Systems Resulting from SAL Agreements	(b)(3):10 USC 424,(b)(6)
0930	Soviet Missile Developments	
1030	Break	
1045	Missile Silo Developments	
1145	Executive Session	

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~~CONFIDENTIAL~~

C

Classified by DT
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
DECLASSIFIED ON 31 DECEMBER 1978

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DIA SCIENTIFIC ADVISORY COMMITTEE MEETING

7-8 September 1972

ACTUAL AGENDA

7 September 1972
Room 3E267, The Pentagon

0900	SAO Update	(b)(3):10 USC 424,(b)(6)
1030	Break	
1045	NVN/VC Reactions to US Air Operations	
1315	Lunch	
1400	Project SUMMER NIGHT	
1515	Break	
1530	SA-7 Exploitation Results	

8 September 1972

0900	Missile Silo Developments
0945	Break
1015	Soviet Missile Developments
1115	Changes to Projections of Soviet Forces & Systems Resulting from SAL Agreements
1200	Lunch
1230	Executive Session

Classified by D.T.
SUBJECT TO GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652 AUTOMATICALLY DOWNGRADED AT TWO YEAR INTERVALS
DECLASSIFIED ON 31 DECEMBER 1978

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~~CONFIDENTIAL~~

SAC

DEPARTMENT OF DEFENSE

NATIONAL MILITARY COMMAND CENTER

MESSAGE CENTER

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ACTION

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FM COMUSMACV

TO RUHHHQA/CINCPAC

INFO RUEKJCS/DIA, WASHINGTON, D.C. FOR SAC

BT

~~S E C R E T~~ ----------MACTC

SUBJ: REQUEST FOR INFORMATION

REFERENCE: MSG DTG 260054Z AUG 72 (C)

THE FOLLOWING INFORMATION IS PROVIDED TO YOU AS REQUESTED IN REFERENCES MESSAGE CONCERNING ENEMY ARTILLERY PIECES CAPTURED/DESTROYED , ARVN ARTILLERY LOSSS, ENEMY ESTIMATE OF OPERATIONAL ARTILLERY PIECES, AND GROUND SENSORS DATA.

1. SINCE THE BEGINNING OF THE OFFENSIVE, 30 MAR 72 UNTIL 27 AUGUST 72, THERE HAVE BEEN 262 WNEMY ARTILLERT PIECES DESTROYED/CAPTURED. THIS WAS ACCOMPLISHED BY ARVN/MARINE GROUND FORCES, USAF/VNAF AIRCRAFT, ARVN ARTILLERY, US NAVAL GUNFIRE, AND USA HELICOPTER (TOW&SS-11).

2. UP TO 27 AUGUST 72, ARVN/MARINE GROUND FORCES CAPTURED FOUR 130MM AND FIVE 122MM GUNS. ONE OF THE 122MM GUNS IS SERVICEABLE AND WE BELIEVE ONE OF THE 130MM GUNS IS ALSO SERVICEABLE. WE ARE VERIFYING THIS NOW. THESE NINE GUNS ARE INCLUDED IN THET TOTAL ABOVE. SPECIFICS ON WHAT WEAPON SYSTEM DESTROYED THE ARTILLERY IS NOT AVAILABLE.

3. DATA ON HOW MANY ARVN ARTILLERY PIECES HAVE BEEN CAPTURED/OVERRUN IS NOT PRECISE. ARVN REPORTS DEAL WITH LOSSES ONLY AND ARE NOT BROKEN OUT BY CAPTURED OR DESTROYED. LISTED BELOW ARE THE TOTAL LOSSES TO 30 AUGUST 1972 SINCE THE PRESENT OFFENSIVE:

WEAPON	FLD RPTD LOSSES	JGS RPTD LOSS
105MM M102 HOWITZERS	48	27
105MMM101A1 HOWITZERS	311	240
155MM HOWITZERS	94	90
175MM GUNS	12	5

FIELD REPORTED LOSSES ARE THOSE REPORTED BY USA ADVISORS IN THE FIELD WHO RECEIVE INPUTS FROM THEIR ARVN AREA

Review On 4 Aug 98

Incl 4

LOGISTICS COMMAND (ALC) COUNTERPARTS. THESE REPORTS USUALLY PRECEDE THE OFFICIAL JGS REPORTED LOSSED BY 30 TO 45 DAYS. THE JGS REPORTED LOSSES, WHICH REQUIRE CONFIRMATION BY AN ARVN GENERAL OFFICER, ARE THE REPORTS USED TO RE-ISSUE EQUIPMENT.
4. THERE ARE CONFIRMED SHELL REPORTS VERIFYING THAT THE ENEMY IS USING CAPTURED WEAPONS.
5. BASED ON ANALYSIS OF ALL AVAILABLE INTELLIGENCE, THE FOLLOWING LIST REPRESENTS THE ESTIMATE OF OPERATIONAL TUBE ARTILLERY PIECES TO 27 AUGUST IN NVA/VC FIELD ARTILLERY UNITS IN THE RVN.

AREA	[number] OF TUBES	CALIBER	ENEMY CONTROL UNITS
QUANG TRI	10	100MM	45TH, 68TH, 845#
PROVINCE	16	105MM	& 164TH ARTILLERY
	26	122MM	REGIMENTS
	14	130MM	
	4	155MM	
SW OF HUE	4	122MMM	675B ARTILLERY REGIMENT
QUANG NAM/QUANG TIN BORDER AREA	4	130MM	711TH NVA DIVISION
KONTUM/PLEIKU	10	105MM	40TH ARTILLEY
PROVINCE	8	122MM	REGIMENT
	4	155MM	
BINH DINH PROVINCE	6	105MM	3RD NVA DIBVISION
BINH LONG PROVINCE	2	105MM	69TH ARTILLERY
	3	155MM	COMMAND
PARROT'S BEAK	4	105MM	69TH ARTILLERY COMMAND

REFERRING BACK TO PARAGRAPH 3, THE ABOVE DATA DOES PROVIDE SOME INFORMATION ON HOW MANY USEABEL ARVNARTILLERY PIECES HVAVE BEEN CAPTURED.
6 REQUIRED INFORMATION VON SENSORS WILL BE PROVIDED AS SOON AS IT CAN BE COLLATED. GDS 2 SEP 984
BT
#1067
ANNOTES
REF IS DIA OUT 5679
RDT

NNNN
0416487

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~~SECRET~~

Two pages are denied in full and are not included.

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

9-10 NOVEMBER 1972

I. (U) GENERAL: A meeting of the DIA Scientific Advisory Committee was held in the Pentagon on 9-10 November 1972. The DIA/SAC Secretariat representative was [redacted] (b)(3):10 USC 424. VADM de Poix hosted a social in honor of the DIA/SAC at the Washington Navy Yard Commissioned Officers' Mess (Open) from 1800-2000 hrs. on 9 November.

II. (U) ATTENDEES: A list of attendees is attached (Encl 1). VADM de Poix was present during various portions of the meeting. Social function invitees and attendees are listed in Encl 2 and 3.

III. (U) AGENDA: Copies of the tentative and actual agenda are attached (Encl 4 and 5).

IV. ~~(S)~~ SUMMARY:

(b)(1),(b)(6),1.4 (c)

A. [redacted]

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

B. The normal SAO update by [redacted] elicited typical discussions from the members. One question, asked [redacted] has been forwarded to [redacted] for an answer. (b)(3):10 USC 424

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

[redacted]

Classified by DJ
~~EXEMPT FROM GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652 EXEMPTION CATEGORY~~
DECLASSIFY ON ~~[illegible]~~

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Review On 10 Nov 72

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

D. (b)(3):10 USC 424,(b)(6) FTD, was briefing various agencies in the area on two recent (15 Sep, 3 Nov) missile events and was asked to present the briefing to the SAC. The briefing was well-received and it appears that when all data from these events becomes available, it may provide some significant answers to questions which are being pursued by (b)(3):10 USC 424 Panel.

E. (b)(3):10 USC 424,(b)(6) (FTD) briefing on indications of Soviet development of land-mobile strategic missile systems was primarily an update of a briefing by (b)(3):10 USC 424, (b)(6) (FTD) to the SAC several months ago.

F. During the visit to NPIC, a presentation was given on the methodology and limitations in the current photo mensuration process. Following this, a quick inspection tour was made of some of the more unique equipment at NPIC, including a 0.5 micron stereo comparator and a digital imaging device. A major topic of discussion for this session was the error statement, which the Committee strongly recommended should accompany all dimensions appearing on photos, but which should not be a "standard" figure. The SAC felt that the present method of determining error was not realistic, and was in most cases, smaller than stated. During the Executive Session, the SAC decided that (b)(3):10 USC 424 would write a letter for (b)(3):10 USC 424 signature, to go to Adm de Poix, on this matter.

G. Arrangements for taking a picture of the SAC at 0900 hrs. on 10 November turned out poorly when only 9 members were present. Another try will be made at a future meeting.

H. (b)(3):10 USC 424 discussed a study they are accomplishing for DI which attempts to apply experimental probabilistic procedures to intelligence estimates. The SAC has in the past felt that this type of activity offered little promise and they did not react much differently this time. Copies of documentation for two examples will be forwarded to each member.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

J. VADM de Poix, in Executive Session, discussed two major topics with the SAC - the GDIP modernization program proposed by [redacted] (b)(3):10 USC 424 [redacted] (b)(3):10 USC 424 and the problem of obtaining a qualified individual for the PL 313 position as Deputy Director S&T Intelligence (DT). The Admiral asked that suggestions for either area be forwarded to him by the individual members.

K. Three topics submitted by DC for consideration as possible future study areas by the SAC were selected for presentation during this meeting, as listed on the agenda. The Soviet's use of [redacted] (b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36 [redacted] is presently an unknown and it was suggested by [redacted] (b)(3):10 USC 424 that a search be made of Soviet open-source literature on this subject as a first step towards assessing their interest in this area. The problem posed by DC on both this item and on the Soviet Ocean Surveillance system was essentially collection oriented - How do they identify the parameters for targeting and then how do they go about collecting the data? The SAL verification topic proposed that the SAC review the DC study which is being prepared on this subject and then decide what the SAC can do to help DIA on this problem. During the Executive Session following these presentations, the Committee felt that there was little they could do to help in the first two topics but they were extremely interested in becoming involved with the SAL topic.

(b)(3):10 USC 424

L. Progress reports on Panel activities were presented by [redacted] Anti-Ship Missile Panel; [redacted] Advanced Missile Guidance Panel; [redacted] Silo Panel; and [redacted] Sensor Data Flow Panel. [redacted] read General Deane's letter on establishment of an SA-5 Panel and discussion was held on setting up their activity. [redacted] was named Chairman of the Panel; [redacted] were named as members; and [redacted] indicated that he would talk to [redacted] about joining the group [redacted] had left prior to this time). The first meeting of the SA-5 Panel was set for 21-22 December 1972. [redacted] and [redacted] were added to the Silo Panel to cover areas of mensuration and new guidance techniques, respectively.

M. [redacted] discussed the possibility of holding a [redacted] (b)(1),1.4 (c) [redacted] (b)(1),1.4(c) meeting and of the topics which should be addressed. [redacted] indicated he would contact [redacted] reference such a meeting and the DSB's participation in this meeting.

(b)(3):10 USC 424

N. [redacted] indicated he would discuss with Adm de Poix just exactly how much he would like the SAC involved in a SAL study. He would also raise the question of how many Panels the SAC could support without supplementation from outside consultants.

O. The meeting was adjourned at 1530 hrs.

CERTIFIED:
(b)(3):10 USC 424,(b)(6)
[redacted]
Executive Secretary, SAC

6 Encls a/s

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 9-10 Nov 72 TIME 0900

PLACE 3E267 Pentagon

NAME	REPRESENTING	SECURITY	9 DATE AM	9 DATE PM	9 DATE EX	10 DATE AM	10 DATE PM	10 DATE EX	DATE AM	DATE PM	DATE EX
(b)(3):10 USC 424			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓	✓		✓					
			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓ 1045-1330	✓							
			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓	✓		✓	✓				
			✓			✓	✓				
			✓	✓		✓	✓				
[illegible] VINCENT, VADM	DR		✓	✓							
(b)(3):10 USC 424			✓	✓		✓					

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	9 DATE			10 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(3):P.L. 86-36,(b)(6)			✓	✓		✓					
			✓								
						✓					
							✓				
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						✓					
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			✓								
			✓								

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	9 DATE			10 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(3):P.L. 86-36,(b)(6)				✓							
				✓							
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	9 DATE			10 DATE			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)							✓				
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	REPRESENTING	SECURITY	DATE 9			DATE 10			DATE		
			AM	PM	EX	AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)						✓					
						✓					
							/				
							✓				

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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

9-10 NOVEMBER 1972

TENTATIVE AGENDA

9 November
Room 3E-267, The Pentagon

0900	COSMOS 469/519 "Heavy Maneuverable" Satellites	(b)(3):10 USC 424,(b)(6) [redacted]
1000	SAO Update	(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)
1115	Break	
1130	[redacted]	NSA
1230	Lunch	
1315	Indications of Soviet Land-mobile Strategic Missile Development	(b)(3):10 USC 424,(b)(6) [redacted]
1415	Break	
1430	Depart River Entrance for Building 213, Washington Navy Yard	
1500	Imagery Mensuration methodology, equipments, limitations and state-of-the art	

10 November
Room 3E-267, The Pentagon

0900	Executive Session (Panel Reports) (b)(3):10 USC 424 [redacted]
1000	SA-5 Guidance Analysis
1045	Break
1100	Discussion of Problem Areas Soviet Spread Spectrum Communications Soviet Ocean Surveillance Aspects of SAL verification
1230	Lunch
1315	Executive Session

~~Classified by ... CT ...~~
~~SUBJECT TO GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652 AUTOMATICALLY DOWNGRADED AT TWO YEAR INTERVALS~~

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~~Review On 20 Nov 92~~

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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

9-10 NOVEMBER 1972

ACTUAL AGENDA

9 November
Room 3E-267, The Pentagon

(b)(3):10 USC 424,(b)(6)

0900 COSMOS 469/519 "Heavy Maneuverable" Satellites

1000 SAO Update

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

1120 Break

1145 [redacted], NSA

1230 Lunch

(b)(3):10 USC 424,(b)(6)

1300 TT-06 Tests

1345 Indications of Soviet Land-mobile Strategic Missile Development

1415 Break

1430 Depart River Entrance for Building 213, Washington Navy Yard

1500 Imagery Mensuration methodology, equipments, limitations and state-of-the art

10 November
Room 3E-267, The Pentagon

0900 Photographic Session

0940 Application of Probabilistic Procedures to Estimates

1015 SA-5 Guidance Analysis

1130 Panel Report

1145 Executive Session

1245 Lunch

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

1325 Discussion of Problem Areas
[redacted]
Soviet Ocean Surveillance
Aspects of SAL verification

1430 Executive Session

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Review On ~~10 Nov 72~~

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DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE
WASHINGTON, D. C. 20301

MINUTES OF
DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

4-5 APR 73 FTD WPAFB, OHIO

I. (U) GENERAL: A meeting of the DIA/SAC was held at the Foreign Technology Division, Wright-Patterson AFB, Ohio on 4-5 April 1973. VADM de Poix was present during the entire meeting and (b)(3):10 USC 424 was present as the DIA/SAC Secretariat representative.

II. (U) AGENDA: The tentative and actual agendas are attached as Enclosure 1.

III. (U) ATTENDEES: A list of attendees is attached at Enclosure 2.

IV. ~~(S)~~ SUMMARY:

A. ~~(S)~~ (b)(3) 10 USC 424, provided an update briefing on new Soviet ballistic missile developments, with emphasis on the SS-X-16, SS-X-17, SS-X-18 and recent SS-9 flights including the last two MOD 4 events. During discussions of zero launch techniques, ADM de Poix stated that

(b)(1),(b)(3):10 USC 424,1.4 (e)

B. ~~(S)~~ As the second portion of the updating, (b)(3):10 USC 424, briefed on developments in Soviet aircraft, particularly V/STOL, advanced fighters and bombers.

C. ~~(S)~~ (b)(3):10 USC 424 (b)(6) briefed on the status of Chinese (PRC) ballistic missiles, covering the CSS-1, CSS-2, CSS-X-3, and CSS-X-4 (SCT-1) as well as estimated future systems.

(b)(1),1.4 (c)

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Review On ..5 Apr 93.....

D. (U) The presentation by (b)(3):10 USC 424 on the sensitivity studies caused considerable discussion and consternation for the SAC. The FTD effort is aimed at applying scientific principles to the evaluation of intelligence information and intelligence collectors from the standpoint of benefit to the FTD analyst. The total concept involves four phases: the identification of Essential Elements of Information (EEIs) and the identification of collectors that can contribute to the data collection, determination of primary and alternate data flow paths, determination of sensitivity of estimated system parameters relative to data requirements (EEIs), and finally an evaluation of the worth of a particular collector in relation to FTD tasks. To date work has been accomplished on the first two phases in the ICBM area and the first phase is also being addressed in several other subject areas.

The SAC was sharply critical of this effort and their major criticisms were:

a. That there should be an effort to identify a few critical requirements rather than a minute listing of EEI's (approx. 250 were identified for ICBMs). Their point was that with this many elements to rate the central limit theorem applies

b. The final step of applying a numerical value to signify a particular collector's value should not be made. It is just as useful to list the collectors in rank order and such a ranking does not imply an accepted and scientifically valid experiment or result.

Although the SAC was critical of the particular method being used to arrive at an evaluation, they readily agreed that some method of evaluation is necessary.

(b)(1),(b)(3):10 USC 424,1.4 (a)

G. ~~(S~~ (b)(3):10 USC 424,(b)(6) Director Engineering Services, gave a brief sketch of the equipments which were going to be seen during the visit to the labs. FTD has been working for several years towards obtaining a better method of data analysis and at the present time are considerably ahead of the other Service S&T intelligence agencies in this area. They currently have (b)(1),1.4 (c) [redacted] Demonstrations on each of these systems were included in the tour and were quite impressive. In general, the members were quite favorably impressed with FTD's present capability and with their plans for additional systems.

(b)(1),(b)(3) 10 USC 424,1.4 (c) [redacted]

I. (U) (b)(3):10 USC 424 presented a summary of the Integrated Event Analysis Subsystem (formerly Aerospace Data Integration Capability) which FTD has been fostering as a concept for timely all-source analysis of events. Basically the concept is a 3-phase system with decision points at the end of each phase of analysis for determining whether or not the event was of sufficient significance to proceed to the next phase or whether it should be discontinued. A report (wire or hard-copy) would be produced at the end of each phase. The physical system would receive inputs from all appropriate sensors through various communications links and the grand plan is to input all data (coordinated in time and space) into one final computer model in order to arrive at a final estimate. This particular aspect caused (b)(3):10 USC 424 to comment that the concept was great and he wished them luck, but added that similar attempts had never been made to work and he doubted that any of the companies represented around the table would be willing to write a contract for producing such a system. It was also suggested that FTD advertise their goal as automating through analysis of individual data streams because this could definitely be achieved. Later they could adjust their goal upward to try for the ultimate.

J. ~~(S)~~ [redacted] presented his assessment of the new Soviet ICBMs (missiles and facilities). He has taken his estimate somewhat beyond that of FTD and DIA, but has a very convincing story. His analysis parallels very closely that of the Silo Panel and it was for that reason that [redacted] asked that he present his analysis at this meeting.

K. ~~(S)~~ The following topics were discussed during Executive Session:

1) [redacted] presented the conclusions and recommendations of the Silo Panel for Committee approval. There are to be a few changes made in the report to reflect new data and SAC comments and it will then be reviewed by [redacted] and forwarded to the Director. It was felt that there was no need for everyone to look at it again. [redacted] The question of continuing the Panel was discussed and VADM de Poix agreed that it should continue to function and to look at the entire system as a whole (missiles and facilities).

(b)(1),(b)(3):10 USC 424,1.4 (c)

2) (b)(3):10 USC 424 presented a review of studies which have been accomplished on imagery resolution and of the recommendations and improvements which have resulted. It was finally decided that the SAC would set up an ad hoc Imagery Panel (b)(3):10 USC 424 (b)(3):10 USC 424 to review past requirements and bring them up to date. They will also look at the ways of increasing effective resolution as opposed to absolute. (b)(3):10 USC 424 will not be able to begin until October and ADM de Poix indicated this would be acceptable pending approval by ASD(I).

3) The [redacted] Panel report was presented to the Committee and approved with some minor changes. It will be published as soon as possible. VADM de Poix requested that the USIB answer to the Sec Def on satellite nuclear detection be made available to [redacted] [Note: The answer has not yet been signed [redacted]

4) A tentative date of 12-13 June was set for the next SAC meeting in the Pentagon, provided VADM de Poix could make the schedule.

5) VADM de Poix announced that (b)(3):10 USC 424 would be retiring from the Air Force on 30 April and (b)(3):10 USC 424,(b)(6) would be assuming the position of Deputy Director for S&T Intelligence, effective 16 April.

6) (b)(3):10 USC 424 stated that the SA-5 Panel would meet in the Pentagon on 30 April and 1 May. He is not optimistic for success but hopes to have some idea of chances after this meeting.

7) (b)(3):10 USC 424 gave a status report on the Antiship Missile Panel. Their report is being finished and will be ready for Committee approval by the next meeting.

The meeting was abruptly adjourned at 1600 hrs.

CERTIFIED:
(b)(3):10 USC 424,(b)(6)

2 Encls a/s

Executive Secretary, SAC

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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

4-5 April (FTD)

Actual Agenda

4 April

0910	Welcome
0915	S&T Intelligence Update
1030	PRC Missile Developments
1115	Data Selectivity Study, Part 1
1150	Lunch at Officers' Club
1320	Data Selectivity Study, Part 2
1400	Soviet Photo Satellite Capability
1450	Break
1500	Status report on IR data analysis
1525	Tour preview
1530-1650	Tour TELINT/IROP processing facilities
1800-2000	Social - Sunset Lounge, Officers' Club

(b)(3):10 USC 424, (b)(6)

5 April

0830	Analyses Relating to Soviet ELINT Satellites
1015	Break
1030	Aerospace Data Integration Capability
1115	Executive Session
	Silo Assessment
1140	Lunch at Officers' Club

(b)(3):10 USC 424,(b)(6)

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EXEMPT FROM GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTION CATEGORY
DECLASSIFY ON Indefinite~~

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Review On ~~April 90~~

	Executive Session
1315	Silo Panel report for approval
1400	ASD(I) Proposed Study
1510	(b)(3):10 USC 424 Panel report for approval
1525	SA-5 Panel plans
1530	Antiship Missile Panel progress
1545	Future activities

(b)(3):10 USC 424

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DIA SCIENTIFIC ADVISORY COMMITTEE
MEETING

4-5 April (FTD)

Revised Agenda

4 April

0900	Welcome	(b)(6) Commander FTD
0910	S&T Intelligence Update	FTD
0950	PRC Missile Developments	FTD
1025	Break	
1035	Data Selectivity Study	FTD
1135	Lunch at Officers' Club	
1250	Aerospace Data Integration Capability	FTD
1340	Soviet Photo Satellite Capability	FTD
1440	Break	
1450	Status report on IR data analysis	FTD
1520	Tour preview	FTD
1530-1630	Tour TELINT/IROP processing facilities	FTD
1800-2000	Social - Sunset Lounge, Officers' Club	

5 April

0830	Analyses Relating to Soviet ELINT Satellites	FTD
0930	ASD(I) Proposed Study - Improved Imagery	(b)(3):10 USC 424
1015	Break	
1030	Executive Session	
	a. Silo Panel report for approval (:20)	

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~~EXEMPTION CATEGORY 2~~
~~DECLASSIFY ON Indefinite~~

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Review On 5 Apr 83

(b)(3):10 USC 424,(b)(6)

b. Silo Assessment (:40)

1130 Lunch at Officers' Club

1250 Executive Session

a. Panel Reports
   [redacted] Panel report for approval (:15)
   Anti-Ship Missile Panel status report (:05)
   Sensor Data Flow Panel status report (:05)
   SA-5 Panel status report (:05)

b. Set date for June SAC meeting (:05)

c. Proposed imagery study (:10)

d. ELINT satellite (:10)

e. Application of probabilistic procedures to intelligence analysis (:10)

f. Discussion of future activities (:20)

1415 Ocean Surveillance System (Heavy Maneuverable) Update FTD

1500 Adjourn

DISTINGUISHED VISITOR AGENDA

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE

4-5 April 1973

ACTIVITY: Visit of Defense Intelligence Agency Scientific Advisory Committee, Vice Admiral Vincent P. dePoix, Director, Defense Intelligence Agency, and Major General George J. Keegan, Assistant Chief of Staff, Intelligence, Headquarters USAF

PURPOSE: Regularly Scheduled Meeting

SECURITY: SI/SAO Level

HOST:

FTD OPR:

PROTOCOL:

(b)(3):10 USC 424,(b)(6)

DISTINGUISHED VISITOR AGENDA

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE

4-5 April 1973

4 April 1973

TIME	SUBJECT	BRIEFER	BLDG/ROOM
		(b)(3):10 USC 424,(b)(6)	
0900	Welcome		828/276
0910	Update Briefing		828/276
0955	PRC Missile Developments		828/276
1025	Break		
1035	Data Selectivity Study		828/276
1135	Lunch		
1250	Integrated Event Analysis Subsystems		828/276
1340	Soviet Photo Satellite Capabilities		828/276
1440	Break		
1450	Status Report on IR Data Analysis		828/276
1520	Tour Preview		828/276
1530	Tour TELINT/IROP Processing Facilities		280/
1630	Depart to Quarters		
1800-2000	Cocktail/Buffet Officers' Club		

DISTINGUISHED VISITOR AGENDA

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE

4-5 April 1973

5 April 1973

TIME	SUBJECT	BRIEFER	BLDG/ROOM
0830	ELINT Techniques	(b)(3) 10 USC 424 [redacted]	828/276
0930	ASD/I Proposed Study		828/276
1015	Break		
1030	Executive Session		828/276
1130	Lunch		
1250	Executive Session		828/276
1415	Update on Ocean Surveillance Satellite System		828/276
1500	Adjourn		

DISTINGUISHED VISITOR AGENDA

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE

4-5 April 1973

ITINERARY

DATE	TIME	ACTIVITY
4 April	0745	Depart VIP Quarters by Staff Car to AFLC, Building 262 for breakfast in Executive Dining-Room, Escorted by (b)(6) [redacted]
	0845	Travel by Staff Car to FTD Bldg 828.
	0900	Meeting convenes, Conference Room 276.
	1135	Depart FTD Bldg 828 to Officers' Club for lunch.
	1145	Luncheon in Fireside Room.
	1240	Depart Officers' Club to FTD Bldg 828.
	1525	Depart FTD Bldg 828 to FTD Bldg 280. (Walk, weather permitting)
	1630	Depart FTD Bldg 280 to Quarters.
	1755	Depart VIP Quarters to Officers' Club for Cocktail/Buffet.
	(approx) 2000	Depart Officers' Club to Quarters.
5 April	0715	Depart VIP Quarters by Staff Car to AFLC, Building 262 for breakfast in Executive Dining-Room, Escorted by Major Began.
	0815	Travel by Staff Car to FTD Bldg 828.
	0830	Meeting convenes, Conference Room 276.
	1130	Depart FTD Bldg 828 to Officers' Club for lunch.

DISTINGUISHED VISITOR AGENDA

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE

4-5 April 1973

ITINERARY

DATE	TIME	ACTIVITY
5 April	1140	Luncheon in Protocol Room.
	1240	Depart Officers' Club to FTD Bldg 828.
	1500	Meeting adjourned.

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: FULL COMMITTEE MEETING

DATE OF MEETING 4-5 April 73 TIME

PLACE FTD

NAME	SSN:	REPRESENTING	SECURITY	4 DATE			5 DATE		
				AM	PM	EX	AM	PM	EX
(b)(3);10 USC 424 [redacted]				✓	✓		✓	✓	
				✓	✓		✓	✓	
				✓	✓		✓	✓	
				✓	✓		✓	✓	
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				✓	✓		✓	✓	

DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	SSN:	REPRESENTING	SECURITY	DATE 4			DATE 5		
				AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)									
				✓	✓		✓	✓	
				✓	✓		✓	✓	
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DIA SCIENTIFIC ADVISORY COMMITTEE - ATTENDANCE RECORD

SUBJECT: _____

DATE OF MEETING _____ TIME _____

PLACE _____

NAME	SSN:	REPRESENTING	SECURITY	DATE			DATE		
				AM	PM	EX	AM	PM	EX
(b)(3):10 USC 424,(b)(6)									
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				✓	✓		✓	✓	

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
ADVISORY COMMITTEE
WASHINGTON, D.C. 20301

24 AUG 1979

S-195/AC

Lieutenant General Eugene F. Tighe, Jr., USAF
Director
Defense Intelligence Agency
Washington, D.C. 20301

Dear Gene:

~~(S)~~ In attempting to provide you with additional feed-back on the Full Committee meeting at CINCPAC, I solicited comments from each Committee member. Although the membership has an impression that the sheer size of the area under CINCPAC may be too large and varied for a single Unified Command to comprehend and place each region in proper perspective, the Committee was highly impressed by the leadership and professionalism displayed during our formal and informal meeting sessions. Areas the membership emphasized as deserving high praise and recognition included: the Intelligence Center Pacific (IPAC) for its integrated approach to supplying the Commander with intelligence data and analysis; the 548RTG as a competent and highly motivated organization; and the J-2 leadership and cohesiveness displayed during the briefings and tours and in the members' personal conversations with their escort officers. With respect to the latter area, we were highly impressed by [redacted] and by his personal awareness of the Pacific situation; his focus on deficiencies in the intelligence collection resource arena; and his recognition and understanding of the potential problems and capabilities associated with the PACOM Data Systems Center (PDSC). In essence, the membership felt that PACOM's J-2 was in extremely capable hands.

(U) Other areas the Committee members highlighted or commented on were:

- PDSC: ~~(S/NF)~~ Although the PDSC has the potential to be a very powerful system, the Committee generally believes (as noted by General Marks) that its growth and integration into the intelligence structure could present continuing problems if the schedule continues to be completely driven by the requirements and unless some form of corporate memory is established. Although the Committee believes that [redacted] will skillfully minimize the impact on the program, we note that the next J-2 may not be as capable. Accordingly, we recommend that DIA assist [redacted] to whatever extent possible to place this major and important program on a firmer foundation.

Classified by DIA/DT
Declassify on 24 August 1985

Declassified Per E.O. 12958
Defense Intelligence Agency
By GDS Date 8-24-85
NOT Reviewed for Public Release

~~NOT RELEASABLE TO FOREIGN NATIONALS~~

~~SECRET~~

- UTILIZATION OF NATIONAL ASSETS: ~~(S/NF)~~ We observed and were told that because the NCA tasking of national assets during various levels of crisis or war may not be consistent with PACOM needs, contingency plans do not take into account the benefits that might be derived from such collection assets. While we recognize the possibility that the NCA can limit and preclude their use in many situations, we do believe they would be useful in some cases and that they would enhance the credibility of PACOM plans, programs and requirements. Although the problem is not peculiar to PACOM, one of the difficulties is the lack of a planned, nationally approved and periodically exercised system for the tasking and utilization of National systems with various degrees of CINC control. Specifically, the CINC control should be geared to the degree of reliance required under conditions varying from peacetime I&W through direct combat support under direct DoD (JCS) operational control in the event of a high level of military conflict. Since this is a problem involving all of the CINCs and several national-level agencies, DIA might well take the leading role in seeking a resolution.

- COLLECTION RESOURCES: ~~(S/NF)~~ The discussions and briefings we received at PACOM on the collection resources available for normal I&W and crisis surges indicate that current resources are not adequate. For example, during the Chinese and Vietnam War, the I&W targets in North Korea were not adequately covered. This suggests a study be made to determine what would be the minimum requirements under various crisis scenarios. The Committee could assist in this area if you desire.

- NORTH KOREAN HARDENING: ~~(S/NF)~~ For purposes of forward planning of intelligence collection requirements, it is unfortunate that the targeting and target acquisition functions of PACOM are based on navigation and fire control systems for strike aircraft platforms which at present are marginal to inadequate to permit high-effectiveness attacks on hard targets which are camouflaged and otherwise concealed to inhibit easy acquisition from high-speed attack aircraft at low altitude. There are substitutes or adjuncts to the navigation and fire control systems which would be far more suitable and effective for this task. Some of these are available or in late stages of development for strategic cruise missiles and advanced tactical ballistic missiles (such as Pershing II) but they do not seem yet to have been considered for aircraft, manned or unmanned. To utilize these systems in PACOM would require collection of high-accuracy, high definition data for PACOM's hard target list, especially during certain phases of construction. While a study in this area perhaps more appropriately belongs within the DSB arena, we believe some forward-looking work to explore this area by the DIA and PACOM would be worthwhile.

(U) From a broader viewpoint, I believe the CINCPAC meeting sessions has afforded the membership with perspectives that are not available through the normal Committee meetings in Washington. We believe that these types of trips will immeasurably add to our perspectives in developing more useful comments, observations, conclusions and recommendations on areas where Committee views are solicited.

(U) Finally, the Committee would like to express their wholehearted thanks and appreciation to (b)(6) the escort officers, and all the other PACOM people who contributed their energies to making the Committee meeting so worthwhile.

Very respectfully,

(b)(3):10 USC 424,(b)(6)

Chairman, Advisory Committee

DEFENSE INTELLIGENCE AGENCY

Advisory Committee

30 August 1983

MEMO FOR THE RECORD

Minutes for 15-16 February 1983, dated 23 AUGUST 83, are provided to expand, clarify, and correct minutes previously written 3 March 1983.

(b)(3):10 USC 424,(b)(6)

Executive Assistant

~~SECRET~~

DEFENSE INTELLIGENCE AGENCY
ADVISORY COMMITTEE
WASHINGTON, D.C. 20301

23 August 1983

S-198/AC

Minutes of the Meeting of the Advisory Committee

1. (U) Place: LANTCOM, Norfolk, Virginia

2. (U) Time and Date: 0800, 15-16 February 1983

3. (U) Members present: (b)(3):10 USC 424

(departing)

4. (U) Members absent:

5. (U) Other persons present: (b)(3):10 USC 424
(b)(3):10 USC 424

6. (U) The meeting was held in conjunction with a meeting of the Intelligence Support to Tactical Commanders Panel at LANTCOM on 14 February 1983. Minutes from the panel meeting are prepared separately. The host for both meetings was LANTCOM/J2, (b)(6) His staff provided briefing support throughout the meeting and arranged the final schedule of events (see enclosed CINCLANT NOTICE 5050).

7. (U) The purpose of holding the full committee meeting at LANTCOM was to allow the Director and members to hear directly from the CINC and J2, their perspective of problems LANTCOM faces in the collection and dissemination of intelligence

(b)(3):10 USC 424

Classified by DIA (DT-AC)
Declassify on [redacted]

~~SECRET~~

information. Additionally, this meeting at LANTCOM was consistent with visits to other U&S Commands by the Committee and its Panel on Intelligence Support to Tactical Commanders.

8. (S) The LANTCOM briefing officer, [redacted] gave a command briefing which was followed by discussions with the Deputy CINC, [redacted] The J2 provided a full series of briefings on LANTCOM projects and interests which included: C^3M; FIST; OSIS; ASARS; SIGINT support to the Fleet; and meaningful SSBN I&W. The committee had a working lunch while briefings and discussions continued.

9. (S) The committee followed the J2 briefings with an executive session. The executive session was structured to allow reports from the following panels: Soviet Naval Trends, SEIS, Imagery, CW/BW, DoDIIS, and Intelligence Support to Tactical Commanders.

a. (S) [redacted] gave a briefing on the findings addressed in the Final Report of the Soviet Naval Trends Panel.

(b)(3):10 USC 424.

b. (S) Discussions on the activities of the SEIS Panel were led by [redacted] It was concluded that NSA participation in the future should provide the panel with technical guidance to DIA/COG.

c. (U) The proposed Imagery Panel was discussed and a decision on how to proceed was tabled until a later date.

d. (S) There was more definition given to a proposed problem statement for the CW/BW Panel. The basic problem to be addressed is in the area of both human and technical collection efforts. [redacted] suggested that the panel consult with [redacted] and consider [redacted] for possible membership on the panel.

e. (S) [redacted] briefed the draft final report of the DoDIIS Panel. The Director showed considerable interest in the subject. [redacted] talked about the primary DoDIIS issues which impact DIA. The committee generally agreed that the DIA DoDIIS office needs to be strengthened by doubling its size and increasing its authority. Also, two technical problems in the DoDIIS were identified: a lack of ability to handle the collection systems products adequately (timely) and an apparent lack of an overall system engineering/management scheme. The final DoDIIS report is due by mid-March.

f. (U) [redacted] gave a tentative report from the Intelligence Support to Tactical Commanders Panel. The Director was encouraged by the work up to this point and is looking forward to receiving the final report.

g. (S) Interspersed throughout these briefings were commentary and discussion on the following topics: artifical intelligence, technology trends, tasking and upgrading space assets, STEALTH technology, submarine threat management, and information dissemination. No firm decision was made to pursue any of these topics.

10. (U) On completion of the first day's agenda, the meeting adjourned at 1630.

11. (U) The second day of briefings convened at 0800, 16 February, onboard the USS Eisenhower (CVN-69). [redacted] hosted the committee on a tour of the carrier's intelligence spaces. Particular attention was devoted to explaining the relationship of the Combat Information Center (CIC), the Signals Exploitation Center (SESS) and the Carrier Airwing's Intelligence Center (CVIC).

12. (U) The committee traveled to the Commissioned Officers' Mess Open, Naval Air Station, Norfolk for lunch. The Director took this opportunity to present [redacted] with a DIA plaque and a few words commemorating the Major's contributions to the Advisory Committee upon his retirement from the Air Force.

13. (U) After lunch, the committee returned to LANTCOM Headquarters for planned briefings on the operation and maintenance of the Ocean Surveillance Information System (OSIS). General Williams made a courtesy call on ADM Wesley L. McDonald, USN, CINCLANT/CINCLANTFLT.

14. (U) Before the meeting adjourned at approximately 1545 on the second day, the Director and the Chairman, AC, announced that the next meeting of the full Advisory Committee would be held in Denver, Colorado on 14-15 July 1983.

Recorded by:

(b)(3):10 USC 424,(b)(6)

Executive Secretary

Approved by:

(b)(3):10 USC 424,(b)(6)

Chairman

DEPARTMENT OF DEFENSE
THE ATLANTIC COMMAND
HEADQUARTERS OF THE COMMANDER IN CHIEF
NORFOLK, VIRGINIA 23511

CANC: FEB 1983

CINCLANTNOTE 5050
(J2AX)

CINCLANT NOTICE 5050

Subj: Visit of Defense Intelligence Agency Advisory Committee (DIA/AC) to CINCLANT and area commands 13 - 16 February 1983

Ref: (a) CINCLANT/CINCLANTFLT/CINCWESTLANT/COMOCEANLANT STAFFINST 5050.12B

Encl: (1) Members of the Visiting Party
(2) Schedule of Events

1. Purpose. To announce and effect arrangements for subject visit in accordance with reference (a).

2. Scope. The Defense Intelligence Agency Advisory Committee will visit two ships inport, FICEURLANT, COMOCEANSYSLANT, and CINCLANT/CINCLANTFLT Headquarters for tours, briefings and discussions.

3. Party. The Defense Intelligence Agency Advisory Committee will be accompanied by Lieutenant General James A. WILLIAMS, USA, Director, Defense Intelligence Agency, and members of the Advisory Committee Secretariat. Advisory Committee members are listed in enclosure (1).

4. Schedule. The schedule of events for this visit is contained in enclosure (2).

5. Action

a. Action Officer. [redacted] is assigned as Action Officer for this visit.

b. Escort Officer. [redacted] is assigned as Escort Officer for this visit.

c. Briefing Coordination Officer. [redacted] is assigned as Briefing Coordination Officer for this visit.

d. Transportation. LANTFLT HEDSUPPACT Transportation will provide two maxivans and two drivers as required by the schedule of events. Additionally, two sedans will be provided as requested by separate correspondence.

e. Accommodations. Reservations have been confirmed for accommodations at Naval Station BOQ.

6. Uniform. Service Dress Blue is the prescribed uniform for staff personnel participating in this visit.

7. Implementation. Personnel concerned with this visit will comply with the schedule of events and instructions contained herein.

8. This notice is for planning purposes only and is subject to change.

(b)(6)

By direction

Distribution:
CINCLANTFLT
COMNAVAIRLANT NORFOLK VA
COMNAVSURFLANT NORFOLK VA
COMCARGRU EIGHT
COMCRUDESGRU EIGHT
COMOCEANSYSLANT
CO, USS DWIGHT D. EISENHOWER (CVN 69)
CO, USS BIDDLE (CG 34)
CO FICEURLANT
NAS NORFOLK VA
CO, LANTFLT HEDSUPPACT (Transportation) (4)

MEMBERS OF THE VISITING PARTY

Lieutenant General James A. WILLIAMS, USA, Director, Defense Intelligence Agency

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424,(b)(6)

Enclosure (1)

SCHEDULE OF EVENTS

Sunday, 13 February 1983

TBA - Members [redacted] Sub-committee, DIA Advisory Committee arrive Norfolk International Airport. Transport to Naval Station, Norfolk BOQ.

Monday, 14 February 1983

0700 - Breakfast, COMO Annex, as desired.

0745 - Escort Officer, [redacted] meet Sub-committee members. Depart Naval Station, Norfolk BOQ via two sedans for CINCLANT/CINCLANTFLT Headquarters.

0800 - Arrive Bldg. NH-95 Quarterdeck, proceed to Room 202

- Discussions with [redacted] U. S. Navy, CINCLANT Assistant Chief of Staff for Intelligence.

0900 - Depart for pier 24, Naval Station, Norfolk.

0915 - Party arrives USS BIDDLE (CG 34)

- Tour/Discussion Period

1000 - Party departs for CINCLANT/CINCLANTFLT Headquarters.

1015 - Party arrives Bldg. NH-95 Quarterdeck, proceed to Room 202.

- Administrative Time.

1030 - Proceed to COMOCEANSYSLANT.

- Tour/Discussion period

1145 - Depart for Commissioned Officers' Mess Open, Naval Air Station, Norfolk.

- Lunch

1245 - Depart for CINCLANT/CINCLANTFLT Headquarters compound.

1300 - Arrive Bldg. NH-134, FICEURLANT, Quarterdeck, proceed to Room 216.

- TMPS Demonstration

1345 - Depart for Bldg. NH-95.

1350 - Arrive Bldg. NH-95 Quarterdeck, proceed to Room 202

- Executive Session

SCHEDULE OF EVENTS

Monday, 14 February 1983 (continued)

1600 - Discussions with [redacted]

1700 - Depart for Naval Station, Norfolk BOQ

Tuesday, 15 February 1983

0700 - Breakfast, COMO Annex, as desired.

0800 - Escort Officer departs CINCLANT Quarterdeck via maxivan for Naval Station, Norfolk BOQ.

0815 - Escort Officer meets Advisory Committee members at Naval Station, Norfolk BOQ.

- Party departs via maxivan and two sedans for CINCLANT/CINCLANTFLT Headquarters.

0830 - Party arrives Bldg. NH-95 Quarterdeck, proceed to Room 202.

- Administrative Time

0845 - Escort Officer departs Bldg. NH-95 Quarterdeck via two maxivans and one sedan for CINCLANT Helicopter pad.

0900 - Lieutenant General James A. WILLIAMS, U. S. Army and members, DIA Advisory Committee, arrive CINCLANT Helicopter pad via Pentagon helicopter.

- Party departs via one sedan and two maxivans to Bldg. NH-95 Quarterdeck.

0915 - Arrive Bldg. NH-95 Quarterdeck, proceed to Room 202.

- Administrative Time

0945 - CINCLANT/CINCLANTFLT Command Brief; Hosted by Vice Admiral James R. SANDERSON, U. S. Navy, Deputy and Chief of Staff, Atlantic Command and U. S. Atlantic Fleet.

1030 - Intelligence Subjects discussions - [redacted] U. S. Navy, CINCLANT Assistant Chief of Staff for Intelligence/[redacted] U. S. Navy, CINCLANT Deputy Assistant Chief of Staff for Intelligence.

Enclosure (2)

SCHEDULE OF EVENTS

Tuesday, 15 February 1983 (continued)

1200 - Lunch/Executive Session.

1300 - Intelligence Subjects discussions - [redacted]

1500 - Executive Session.

1700 - No Host Cocktail Party, SACLANT Staff Mess.

1830 - Depart via two maxivans and sedan for Naval Station, Norfolk BOQ.

1915 - Depart for dinner party.

1930 - Arrive restaurant for dinner.

2130 - Depart for Naval Station, Norfolk BOQ.

2145 - Arrive Naval Station, Norfolk BOQ.

Wednesday, 16 February 1983

0700 - Breakfast, COMO Annex, as desired.

0730 - Escort Officer depart Bldg. NH-95 Quarterdeck via two maxivans to Naval Station, Norfolk BOQ.

0745 - Escort Officer meet Lieutenant General WILLIAMS and Advisory Committee members. Depart Naval Station, Norfolk BOQ via two maxivans and sedan for CINCLANT/CINCLANTFLT Headquarters.

0800 - Arrive Bldg. NH-95 Quarterdeck, proceed to Room 202.

- Executive Session.

0945 - Depart Bldg. NH-95 Quarterdeck via two maxivans and sedan for pier 12, Naval Station, Norfolk.

1000 - Arrive USS DWIGHT D. EISENHOWER (CVN 69).

- Tour/Discussions.

1130 - Depart for Commissioned Officers' Mess Open, Naval Air Station, Norfolk.

- Lunch

Enclosure (2)

SCHEDULE OF EVENTS

Wednesday, 16 February 1983 (continued)

1230 - Depart via two maxivans and sedan for CINCLANT/CINCLANTFLT Headquarters.

1245 - Arrive Bldg. NH-95 Quarterdeck, proceed to Room 202

- Intelligence Operations Briefings

1345 - Proceed to CIOC for FOSIC tour

- Tour/Discussions.

1400 - Lieutenant General James A. WILLIAMS, U. S. Army call on Admiral Wesley L. MCDONALD, U. S. Navy, Supreme Allied Commander Atlantic, Commander in Chief, Atlantic Command and U. S. Atlantic Fleet.

1400 - Proceed to Room 202.

1430 - Briefing - PME 106.

- Selected committee members depart via maxivan with DIA escort for Norfolk International Airport.

Maxivan and escort return CINCLANT/CINCLANTFLT Headquarters

1530 - Concluding discussions - (b)(6)

1555 - Depart via two maxivans and one sedan for CINCLANT Helo Pad.

1600 - Party departs via Pentagon helo; farewell by Escort Officer.

1700 - Selected committee members depart via maxivan with DIA escort for Norfolk International Airport. Maxivan and escort return CINCLANT/CINCLANTFLT Headquarters.

Enclosure (2)

FILE DESIGNATION

U-9/SAC

CONCURRENCES

RCC-1 (ATTN: (b)(3):10 USC 424)

23 January 1978

CS
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DT/SAC

Closed Meeting Report for DIA/SAC

Reference: RCC Memorandum, U-257/RCC-1, 1 Dec 77, subject: Reporting Requirements - Federal Advisory Committees

Enclosed is the closed meeting report for the Scientific Advisory Committee you requested in referenced memorandum.

(b)(3):10 USC 424,(b)(6)

1 Enclosure
Closed Meeting Report for
DT/SAC, 2 Cys

Executive Secretary, SAC

RETURN FOR FILING TO:

DEPARTMENT OF DEFENSE
DEFENSE INTELLIGENCE AGENCY
1977 Report of Closed Meeting(s) of the
SCIENTIFIC ADVISORY COMMITTEE
Under Section 10(d)
of the Federal Advisory Committee Act

All of the eighteen Committee and Panel meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1) of Title 5 U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. Intelligence information and activities are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The first meeting of the Imagery Utilization Panel was held on 10 January 1977 at Pomponio Plaza, Rosslyn, Virginia. The Panel reviewed the Terms of Reference and established a firm time schedule to meet the interim report requirement. Briefings covered the present and projected capabilities of collection systems; the tasking and distribution procedures; and some typical crisis management scenarios. Discussions centered around the degree to which the established tasking, analysis, and distribution procedures would meet the needs of the Unified and Specified Commands and the Services in various situations. Accordingly, the next Panel meeting would concentrate in this general area.

The first full Scientific Advisory Committee meeting was held on 1-2 February 1977 at the Pentagon, Washington, D.C. The Committee received update briefings on recent Soviet activities in the areas of strategic and tactical SAMs, ballistic missile defense programs, submarine launched ballistic missiles, mobile strategic missiles, and other high technology areas. Special briefings covered Soviet strategic interceptor aircraft and a surface to air missile. Committee discussions centered on the Soviet strategic objectives, low altitude air defense capabilities and strategic ballistic missile accuracy. The executive session concentrated on present and projected Soviet capabilities. Other areas covered included the establishment and utilization procedures for existing collection systems, and the planning and requirements aspects for future collection systems. In addition, the Committee discussed the present status of the HUMINT and the Imagery Utilization Panel.

The second meeting of the Imagery Utilization Panel was held on 8 February 1977 at Pomponio Plaza, Rosslyn, Virginia. Briefings were presented by representatives from the CINCs (LATCOM, EUCOM, PACOM, SAC) and the Services. Briefings concentrated on the problems encountered by the various representatives and their concerns about projected capabilities. Based upon the briefings and subsequent discussions, various Panel members were tasked to research specific topic areas and submit written reports at the next meeting.

The second meeting of the HUMINT Panel was held at Pomponio Plaza, Rosslyn, Virginia on 15 February 1977. Panel activities concentrated on the [redacted] (b)(3)-10 USC 424 and the S&T Intelligence Information Support Program. Trends in the resources allocated to HUMINT, interface with other collection systems, and productivity were also discussed. Members of the Panel were tasked to take a closer look at the HUMINT Information Management Systems (HIMS) and behavorial science contributions and report their findings in subsequent Panel meetings.

The third meeting of the Imagery Utilization Panel was held on 8 March 1977 at Pomponio Plaza, Rosslyn, Virginia. Topics covered during the briefings included tasking procedures; image quality and quanity requirements for scientific, technical and battlefield intelligence; and projected improvements in imagery reporting to the user. Discussions centered on potential means of improving the utility of imagery products via better management practices and the use of more advanced technology. Some unique and novel scenarios were also discussed which had the potential to substantially increase the value of imagery. The executive session concentrated on the procedures for completing the interim report to the DIA Director. Basic issues, consensus areas and future Panel activities were the broad areas that would be covered in the interim report.

The second Scientific Advisory Committee meeting was held on 4-5 April 1977 at the Pentagon, Washington, D.C. The Committee received update briefings on Soviet strategic missile (offensive and defensive) systems and the People's Republic of China strategic ballistic missile systems. In addition, a review of the Soviet military trends and capabilities was conducted. Areas included the continued upgrading/development efforts on a variety of strategic weapon systems (Soviet TRIAD elements); significant developments in the general purpose forces (armor, aircraft and naval combatants); and Soviet Civil Defense activities. The executive session activities included review, discussion, modification and approval of the Navy Panel report; discussions on the Air Defense Panel activities; discussions on the status of the HUMINT Panel work; review and modification of the interim Imagery Utilization Panel report; and discussions on the formation and scope of a Bistatic Radar Panel.

The fourth meeting of the Imagery Utilization Panel was held on 6 April 1977 at Pomponio Plaza, Rosslyn, Virginia. Panel activities concentrated on specific problem areas that had been identified in previous sessions. Generic areas covered included capabilities (present and projected), tasking, exploitation and dissemination. In executive session, Panel members were assigned additional research activities to clarify areas of uncertainty. In addition,

the interim report was reviewed, modified and approved for forwarding to the DIA Scientific Advisory Committee. The report covered the findings and recommendations in the areas of educational requirements; management deficiencies; tasking and dissemination procedures; and other potential areas of improvement in imagery utilization.

The third meeting of the HIMINT Panel was held on 6 April 1977 at Pomponio Plaza, Rosslyn, Virginia. Panel members reported on the HUMINT Intelligence Management System (HIMS) and the status of behavioral research in the Community. The basic automated files in the HIMS file were described. Discussion of this report focused on the need to educate consumers on the uses of the system; the need to study and experiment with the system to determine its full capabilities; and techniques that could identify new applications. The behavorial research report and discussion focused on the identification of skills, attributes, and reliability aspects of the human operator. Members to the Panel were tasked to concentrate their research activities on system management, collector management, technology, and HUMINT utility. Panel findings would be reported at future meetings.

A two day Sensor Panel meeting was held on 20-21 April 1977 at the Naval Ocean Systems Center (NOSC) in San Diego, California. The Panel examined the status and progress of the R&D program on a generic class of sensors. Briefings covered the various parmeters which influence the interpretation of sensor data. The Panel also made an on-site inspection of an experimental sensor and recording package system and monitored its operation in a typical scenario. The second day of the meeting centered around discussions devoted to the preparation of the Panel's report to the DIA Director. Both general and specific recommendations on the utilization of the generic class of sensors were included in the Panel's report.

A two day Bistatic Radar Panel meeting was held on 18-19 May 1977 at Pomponio Plaza, Rosslyn, Virginia. Briefings reviewed various bistatic radar projects, contributions to scientific and technical (S&T) intelligence, and the requirements/interfaces with the Unified and Specified Commands and Services. Panel activity focused on the basic feasibility and trade-off options associated with various systems including system sizing, costs and risks. Based upon the discussions and amplifications of the first day briefings, a draft report was prepared for the DIA Director on the second day of the meeting. The draft report contained the Panel's conclusions and recommendations on the useful applications of bistatic radar, and an assessment of the prospects, plans and programs.

The fifth meeting of the Imagery Utilization Panel was held on 31 May 1977 at Pomponio Plaza, Rosslyn, Virginia. The bulk of the meeting was devoted to Panel member briefings on the results of their research into specific areas of uncertainty. Areas included image processing techniques, dissemination chokepoints, utility of various imagery products, and problems in various areas of the world (e.g., Middle East, Africa, Korea, etc.). In executive session, the

final report structure was developed and Panel members were assigned specific writing tasks. Additional research topics were also assigned to several members of the Panel.

The third meeting of the Scientific Advisory Committee was held on 1-2 June 1977 at the Pentagon, Washington, D.C. Update briefings covered the Soviet mobile missile programs; present and potential anti-ballistic missile (ABM) capabilities; strategic air defense capabilities; and submarine launched ballistic missile systems. Other areas covered included Soviet research and development activities and their capabilities in various nuclear, biological, chemical and electronic environments. In executive sessions the Committee reviewed and restructured the Bistatic Radar Panel report; discussed the results and plans of the Imagery Utilization Panel; and reviewed and discussed an analytic methodology report prepared for the Director, Defense Intelligence Agency.

The fourth meeting of the HUMINT Panel was held on 3 June 1977 at Pomponio Plaza, Rosslyn, Virginia. Panel activities concentrated on (b)(3):10 USC 424 [redacted] Panel members reported such topics as: matching requirements with sources; use of automatic data processing (ADP) for structuring interviews and generating requirements; and stress analysis techniques. Members of the Panel were tasked to provide written inputs on their special areas of investigation.

The sixth and final meeting of the Imagery Utilization Panel was held on 15 June 1977 at Pomponio Plaza, Rosslyn, Virginia. Briefings were presented which reviewed the overall problems associated with imagery utilization in a potential crisis situation. In addition, technological approaches were described which could substantially close the image analysis gap caused by the lengthy and sometimes cumbersome analysis procedures. The Panel also reviewed various inputs by the members and discussed a variety of issues to establish the tone of the final report. The major topic areas selected included imagery utilization by the Unified and Specified Commands; present, projected and potential future developments; management procedures; and a summary of the Panel's recommendations on future DIA activities.

The fifth meeting of the HUMINT Panel was held on 12 July 1977 at Pomponio Plaza, Rosslyn, Virginia. The Panel was briefed on special and standard devices used by humans in their collection activities. Generic areas covered included electronics, photo-optics and security systems. Problems associated with the acquisition and the development of the devices were discussed. In addition to the device briefings, the Panel also received a detailed briefing on (b)(3):10 USC 424 [redacted] Other activities included

the review/modification of the proposed outline for the final report; review and discussion of the written Panel inputs; and additional assignments to the Panel members. The additional assignments were largely concerned with the application of technology to various aspects of the HUMINT collection system.

The sixth and final meeting of the HUMINT Panel was held on 9 September 1977 at Pomponio Plaza, Rosslyn, Virginia. The entire meeting was devoted to the preparation of the Panel's final report. Consequently, the preliminary draft was reviewed and the appropriate changes were made. In addition, the Panel prepared an Executive Summary of their findings, observations and recommendations.

The fourth Scientific Advisory Committee meeting was held on 19-20 September 1977 at the Pentagon, Washington, D.C. Update briefings to the Committee included Soviet space activities, strategic missile developments, and various submarine programs. The People's Republic of China offensive missile programs and capabilities were also briefed to the Committee. Detailed briefings dealt with Soviet ground force developments and various aspects of technology transfer to the Soviet Union and other Communist countries. Discussions on ground force developments centered on self-propelled artillery, multiple rocket launches and heavy armor. Technology transfer discussions concentrated on Soviet presence within the U.S., bilateral agreements and exchanges, and various problem areas. The executive sessions primarily dealt with the results and status of the HUMINT Panel effort. In addition, the Committee reviewed recently completed studies on various radar systems and developed recommendations relating to future Committee actions.

The fifth Scientific Advisory Committee meeting was held on 1-2 December 1977. Portions of the meeting were held at the Pentagon, Washington, D.C. and at Fort Meade, Maryland. The Committee concentrated on the development of the requirements for various collection systems and the performance of those systems under a variety of scenarios. As a result of their review, the Committee drafted a memo to the Director of the Defense Intelligence Agency. The memorandum expressed the Committee's concerns with various collection systems, and made recommendations for future system mixes. In addition, the Committee reviewed the final draft reports of the Air Defense, Bistatic and HUMINT Panel reports. As a result of the discussions on the reports, some changes to the text were made. The full Committee recommended the revised reports be forwarded to the Director for review and disposition. The Committee also discussed the formation of new ad hoc Panels on radar system vulnerability, ICBM refire, phased array radars and underground nuclear testing.

(b)(3):10 USC 424,(b)(6)

Chairman, SAC

16 January 1979

DT/AC

Closed Meeting Report of the DIA Advisory Committee

RCC-1 (ATTN: (b)(3):10 USC 424

Reference: OASD(A) Memorandum, 15 November 1978, Subject: Reporting Requirements - Federal Advisory Committees.

Enclosed is the closed meeting report as required by PL 92-463.

1 Enclosure a/s

(b)(3):10 USC 424

Executive Secretary, AC

FILE DESIGNATION

U-21/AC

CONCURRENCES

RETURN FOR FILING TO:

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1978 Report of Closed Meetings of the
ADVISORY COMMITTEE*
under Section 10(d)
of the Federal Advisory Committee Act

All of the fourteen Committee and Panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The first full Scientific Advisory Committee meeting was held on 16-17 February 1978 at the Pentagon, Washington, D.C. The Committee received updated briefings on recent Soviet activities in the areas of strategic and tactical air defense, nuclear and diesel powered submarines, surface vessels, and air-to-air missiles. Special briefings were given on unique HUMINT contributions to scientific and technical intelligence; Soviet research and development activities in special fields; and unique aspects of the Soviet space program. The executive session centered on the terms of reference for the three new ad hoc Panels of the Committee; the anticipated approach the Panels would take in studying their problem areas; and the schedule for future Panel meetings.

The first meeting of the Phased Array Radar Panel was held on 22 February 1978 at Pomponio Plaza, Rosslyn, Virginia. Briefings were presented by representatives from the Army's Missile Intelligence Agency and the Air Force's Foreign Technology Division. Technical discussions focused on radar parameters including frequencies, beamwidths, scan angles, monostatic versus bistatic operations, phased array feed techniques, etc. Operational factors considered search parameters, modes of operation, propagation constraints. In executive session, the Panel identified future specific areas of investigation and developed a preliminary assessment of the potential functional use of the phased array radars under investigation.

The second meeting of the Phased Array Radar Panel was held on 22 March 1978 at Pomponio Plaza, Rosslyn, Virginia. Panel activities concentrated on the history of phased array radar development including the design,

*Name changed from Scientific Advisory Committee to Advisory Committee on 2 October 1978.

fabrication, construction and checkout techniques. Specific areas considered by the Panel were the types of component, subsystem and scaling testing that was accomplished and the reasons for such testing; the chronology for construction, and the rationale for the approach; the types of problems that developed during the design, fabrication, construction and checkout; and unique characteristics that would identify the capabilities of the radar system. In executive session, the Panel drafted a memorandum for the Director, DIA which contained the Panel's specific assessments.

The first meeting of the ICBM Refire Panel was held on 6 April 1978 at Pomponio Plaza, Rosslyn, Virginia. Topics covered during the briefings and subsequent discussions included soft and hard basing modes which could be used to support an ICBM refire potential; procedures and equipment required to support the various basing modes; and ballistic missile production, logistics and storage capabilities. In executive session, the Panel developed an interim report on their observations, conclusions and recommendations.

The second full Scientific Advisory Committee meeting was held on 17-19 April 1978 in Denver, Colorado to meet with representatives of ADCOM and to visit various facilities in the area. In addition, the Committee: reviewed the activities of Phased Array Radar and the ICBM Refire Panels; discussed and prepared an interim report on the ECM vulnerability of a specific system; and discussed tentative objectives of a potential new ad hoc Panel on Soviet technology. Based upon review of the Phased Array Radar Panel activities, the full Committee directed the Panel to review the computer requirements for various potential functional uses of phased array radars. The interim report of the ICBM Refire Panel was approved by the Committee and the final written report was scheduled for review in July 1978. Discussions on ECM vulnerability identified some potential errors in analysis and indicated some additional research would be necessary. Consequently, several Committee members were tasked to conduct appropriate in-depth reviews and to report their findings at the next full Committee meeting. With respect to the new ad hoc Panel on Technology, several members were tasked to study the growth and implications of Soviet technology and to prepare written recommendations on those areas that should be considered in the study.

The first meeting of the [redacted] was held on 1-2 May 1978 at [redacted] the Defense Intelligence Agency. In executive session, the Panel members identified additional areas that would be considered at the next Panel meeting.

The third and final meeting of the Phased Array Radar Panel was held on 22 May 1978 at Pomponio Plaza, Rosslyn, Virginia. Briefings and discussions centered on waveforms and computer requirements. In addition, the current and projected computer technology was reviewed for compatibility with specific requirements. In executive session, the Panel drafted a memo to the full Committee chairman which summarized their findings, observations and recommendations.

The second and final meeting of the [redacted] In executive session, the Panel developed an outline for the written report and summarized their major findings, conclusions and recommendations.

The second and final meeting of the ICBM Refire Panel was held on 20 June 1978 at Norton AFB, San Bernardino, California. Briefings and discussions centered on the resources, configuration, location tasks, and timing associated with providing an ICBM refire capability under various deployment schemes. In all, over ten potential deployment scenarios were discussed including post nuclear attack operational problems (e.g., personnel/equipment survival under various yield regimes and time constraints). In executive session, the Panel reviewed and modified the draft final report to reflect new data presented at the meeting.

The third full Scientific Advisory Committee meeting was held on 6-7 July 1978 at the Pentagon, Washington, D.C. Updated briefings covered certain Soviet missile programs; present and potential anti-ballistic missile capabilities; surface vessel and submarine developments; fighter aircraft activities; and anti-satellite capabilities. Special briefings were presented on Soviet research and development trends and capabilities. Generic areas covered in the R&D briefings including the magnitude and growth of the physical resources; patterns of application of resources to R&D output; and potential priorities in Soviet R&D. In executive session the Committee: reviewed, discussed and approved the final reports of the Radar System ECM Vulnerability Panel and the ICBM Refire Panel; directed the Phased Array Radar Panel to prepare a detailed report on their findings, conclusions and recommendations; directed that the [redacted] consider some additional aspects in their final report; reviewed the recommendations of several members on the formation and scope of a Technology Panel and tasked a single Committee member to consolidate the recommendations; and discussed the possible formation of two new ad hoc Panels on HUMINT and the intelligence data base. In

addition, several Committee members reviewed a radar problem associated with a foreign weapon system and developed recommendations on approaches to solve the problem area.

The fourth full Scientific Advisory Committee meeting was held on 6-7 September 1978. The 6 September session was held at the Pentagon, Washington, D.C. where the Committee received updated briefings on Soviet missile developments, submarines, and strategic air defense research and development activities. Special briefings were given on current and projected Soviet SSBN/SLBM systems and capabilities, surface ship developments, reentry vehicle technology, and new tanks. In executive session, the [redacted] Chairman presented the findings, conclusions and recommendations to the Committee. In addition, the Committee discussed the status of the Phased Array Radar Panel report and reviewed and modified the terms of reference for the Technology, DoD HUMINT Collection and Master Intelligence Data Base Panels. The 7 September session was held at the Airlie House, Airlie, VA. The entire day session was devoted to discussions on the elements of substantive intelligence that require added emphasis and techniques that have the potential to improve operations.

The first meeting of the Technology Panel was held on 5 December 1978 at Pomponio Plaza, Rosslyn, VA. The Panel reviewed and discussed the terms of reference; outlined a generalized approach for studying and evaluating the data base; and established a sequential time phased review of generic areas. Briefings covered the Soviet military product research and development process; political and institutional factors which influence the decision process in the Soviet Union; and some selected enigmas. Discussions centered on the similarities and the differences between the U.S. and the USSR RDT&E processes, and recently completed studies on the growth and implications of maturing Soviet technology. As a result of the discussions, the Panel members were tasked to review the recently completed studies before the next scheduled Panel meeting.

The fifth and final meeting of the full Advisory Committee was held on 6-7 December 1978 at the Pentagon, Washington, D.C. The Committee received updated briefings on Soviet ICBM/IRBM and space related activities; the People's Republic of China ballistic missile activities; a Soviet military related industry; and Soviet submarine related activities over the past year. Special briefings covered potential new U.S. collection systems; potential future strategic SAM and early warning capabilities of Soviet systems; the Soviet high energy laser program; and the Soviet anti-ballistic missile programs. The executive sessions concentrated on the special briefings and the Committee developed a memorandum to the Director

(DIA) on their views in each subject area. In addition, the Committee reviewed, discussed, modified and approved the final reports of the (b)(3):10 USC 424 [redacted] and the Phased Array Radar Panels; discussed the present status of the DoD HUMINT Collection and Technology Panels; and delayed discussion of the Master Intelligence Data Base Panel until additional guidance was received from the Director.

The first meeting of the DoD HUMINT Collection Panel was held on 8 December 1978 at Pomponio Plaza, Rosslyn, VA. The Panel reviewed and discussed the terms of reference and established a time schedule to meet the reporting requirements. As a result of the briefing and discussions on the HUMINT effort, the Panel identified several areas that would be investigated at the next meeting session.

(b)(3):10 USC 424.(b)(6)

Chairman, DIA Advisory Committee

3 January 1980

DT/AC

FILE DESIGNATION

U-3/AC

CONCURRENCES

Closed Meeting Report of the DIA Advisory Committee

RCC-1 (ATTN: (b)(3):10 USC 424

eference: OASD (Administration) Memorandum, 19 November 1979, subject: Reporting Requirements - Federal Advisory Committees

Enclosed is the closed meeting report as required by PL 92-463.

SIGNED

1 Enclosure a/s

(b)(3):10 USC 424

Lt Col, USAF
Executive Secretary, AC

RETURN FOR FILING

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1979 Report of Closed Meetings of the
ADVISORY COMMITTEE
of the Federal Advisory Committee Act

All seventeen Committee and Panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The first meeting of the Master Intelligence Data Base (MIDB) Panel was held on 11 January 1979 at Pomponio Plaza, Rosslyn, Virginia. Briefings were presented which included the generic nature of data bases available to the analysts; the techniques and methods used to extract the data under various conditions; and, the depth and quality of the data bases available for various countries. In executive session, discussions centered on potential additional data sources currently untapped by the Agency; the degree of professionalism within the Agency; and significant data gaps within the resident holdings.

The second meeting of the DoD HUMINT Collection (DHC) Panel was held on 30-31 January 1979 at Pomponio Plaza, Rosslyn, Virginia. The Panel received briefings from eight different organizations which had varying degrees of responsibility in the planning, procurement and training of individuals for intelligence collection efforts. Specific missions, capabilities and limitations of the organizations were discussed and several recent or potential future collection efforts were described. In executive session, the Panel concentrated on the mechanisms or techniques that could be used to overcome some of the deficiencies noted during the two day meeting session. In addition, the Panel chairman assigned specific research projects to each member. The results of their research would be considered at the next Panel meeting.

The second meeting of the Technology Panel was held on 5-6 February 1979 at the Naval Intelligence Support Center, Suitland, Maryland. The two day meeting session was devoted to the growth and implications of Soviet technology as applied to current or potential Naval systems (e.g., submarines, surface vessels, aircraft and uniquely configured platforms). In addition, in-depth briefings and discussions were held on specific technologies which could significantly improve the capabilities of various Naval subsystems or systems. In executive session, specific technological areas and generic Naval systems were selected by several Panel members as subjects which they would explore in greater depth. Their findings, conclusions and recommendations would be reported to the entire Panel after the meeting sessions at the three remaining scientific and technical intelligence centers.

The third meeting of the Technology Panel was held on 21-22 February 1979 at the Army's Missile Intelligence Agency, Huntsville, Alabama. Briefings and discussions centered on the trends and/or technologies associated with tactical missiles (ATGMs, SRBMs and air defense systems) and ~~strategic~~ areas which included air defense systems, ballistic missile defense and ground based ASAT systems. Specific technological areas included such areas as advanced radars; [redacted] and warheads for ATGMs; precision guided munitions; various data processing capabilities and limitations; and high energy lasers. In executive session, individual analysts were interviewed by the membership to obtain additional information and insight on specific technological areas of concern. Areas which remained unresolved at the conclusion of each interview were assigned to individual Panel members for research and future reporting to the membership.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

The second meeting of the MIDB Panel was held on 28 February 1979 at Pomponio Plaza, Rosslyn, Virginia. Presentations concentrated on the specific types and the quality of the information available on the Middle East and the African regions (both within the DIA and other organizations); the background and experience of the DIA analysts; and the various mechanisms the DIA could use to obtain the services of experts in the private sector. The executive session was devoted to discussions on the potential data gaps; mechanisms to fill the gaps perceived; and areas which should be addressed at future Panel meetings.

The first full Advisory Committee meeting was held on 6-7 March 1979 at the Pentagon, Washington, D.C. In addition to the normal update briefings on various scientific and technical areas, the Committee received six detailed briefings on areas of high interest to the Director (DIA). Based upon these six briefings and subsequent discussions, the Committe chairman prepared an extensive paper on the findings, conclusions and recommendations related to each area. The paper was coordinated in the executive session before forwarding to the Director. In addition, in executive session, the Committee reviewed and modified a special report to the Director on a uniquely configured aircraft; discussed the current status, findings and anticipated goals of the three ad hoc Panels, and reviewed some of the key areas the Committee would address at the next full Committee meeting.

The third meeting of the DHC Panel was held on 8-9 March 1979 at Pomponio Plaza, Rosslyn, Virginia. The Panel continued their interviews of individuals involved in the collection of intelligence data. Specific areas discussed included the need for specialized equipment to collect specific types of data; types of equipment normally used and the availability of such equipment; the mechanisms/techniques that could be used to supply the individual with his equipment needs; and the management,

fiscal responsibilities and hardware development aspects of various organizations. In executive session, the membership: reviewed and discussed the general nature of written member inputs requested at the previous meeting; identified areas of agreement, and specific issues which would require additional thought by the Panel; and designated specific Panel members to draft certain sections of the report for the next meeting.

The fourth and final meeting of the DHC Panel was held on 19-20 April 1979 at the Northrop Research and Technology Center, Palos Verdes Peninsula, California. The meeting was basically devoted to review, discussion, modification and rewrite of the draft member papers. The Panel chairman agreed to integrate the final papers into the report to the Director before the next full Committee meeting.

The third meeting of the MIDB Panel was held on 27 April 1979 at Pomponio Plaza, Rosslyn, Virginia. The sessions were devoted to: reviewing the current status of a special study with special emphasis on the data gaps that were identified; obtaining management and analyst perspectives on the utility of a unique series of documents; and reviewing and discussing a draft paper on the perspectives the Panel had obtained during the previous meeting session. The executive session concentrated on the key points the Panel would like to highlight to the Director (DIA) and the structure of the final report. The Chairman agreed to draft the report for discussion at the next Panel meeting.

The fourth meeting of the Technology Panel was held on 21-22 May 1979 at the Army's Foreign Science and Technology Center, Charlottesville, Virginia. Detailed briefings were given by the various production divisions which included basic sciences, military technologies, electronic systems and arms and battlefield systems. Generic areas included armor-antiarmor trends and projections; modernization and the R&D process for ground forces; acoustic and [redacted] and control; computer pattern recognition; and a wide spectrum of basic science and military technologies (e.g., materials, [redacted]. The executive session was devoted to interviews of individual analysts on areas of high interest to the members of the Panel. As a result of the briefings and interviews, several Panel members agreed to research certain specific areas and to prepare written drafts on their findings and conclusions.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

The second meeting of the full Committee was held on 30-31 May 1979 at CINCPAC, Hawaii. Briefings and tours were focused on the problems that face the theatre commander with particular emphasis on the historical, current and potential impact of specific types of intelligence data and analysis. Areas reviewed included the Intelligence Center Pacific (IPAC), Pacific Fleet (PACFLT) and the Fleet Intelligence Center Pacific (FICPAC), Fleet Ocean Surveillance Intelligence Center (FOSIC), the 548RTG, etc. In executive session the Committee: discussed its findings and recommendations with the Director (DIA); solicited and obtained additional views on specific

subjects from the Director for Intelligence, PACOM; and briefly reviewed the current status of the three ad hoc Panels. The chairman of the Committee agreed to summarize the findings, conclusions and recommendations of the membership (on the CINCPAC trip) after some independent research had been conducted by several members. The report was forwarded to the Director (DIA) in August 1979.

The fifth meeting of the Technology Panel was held on 26-28 June 1979 at the Air Force's Foreign Technology Division, Dayton, Ohio. The three day meeting sessions covered a wide spectrum of subjects which dealt with the growth and implications of Soviet technology. Generic areas briefed and discussed included: the growth, structure and competence of the resource bases; specific technological areas which have application in the military sector (e.g., composite materials, microelectronics, turbine engines, lasers, particle beams, hi pulse power generators, etc.); trends in both the aircraft and ICBM arena; and major advances in the development of potential new weapon systems. In executive session, the Panel interviewed individual analysts on specific areas of concern and discussed the tentative writing assignments for each Panel member. Over 30 generic areas were covered in the writing assignments.

The fourth meeting of the MIDB Panel was held on 24 July 1979 at Pomponio Plaza, Rosslyn, Virginia. Although the Panel reviewed the current status and findings of the special study, the majority of time was spent on reviewing and commenting on the draft Panel report to the Director. The chairman agreed to enlargen and rewrite the report to include some new perspectives discussed during the meeting sessions. The rewrite was circulated to the Panel members before the full Committee meeting in September 1979.

The sixth meeting of the Technology Panel was held on 26-27 July 1979 at the Institute for Defense Analyses, Arlington, Virginia. The entire meeting was devoted to the review of each member's paper on the various generic areas identified at the previous Panel meetings. Based upon the discussions, approximately ten generic areas were selected for inclusion into the final report to the Director (DIA). The chairman agreed to prepare the draft report for circulation to Panel members before submission to the full Committee.

The third full Committee meeting was held on 5-6 September 1979 at the Pentagon, Washington, D.C. Briefings included Soviet missile programs; surface vessel and selected submarine developments; aircraft in various stages of the RDT&E process; advanced air defense systems; and unique intelligence collection systems. In executive session the Committee: reviewed, discussed and approved the DoD HUMINT Collection Panel report; directed that the Master Intelligence Data Base Panel consider some additional aspects for their final report and accepted the prepared report as an interim paper; discussed and critiqued the general findings and conclusions of the Technology Panel; and discussed some potential

areas of investigation in FY 80. In addition, specific Committee members briefed the Director and Deputy Director on the technological significance of some new Soviet weapon systems.

The fifth and final meeting of the MIDB Panel was held on 15 November 1979 at Pomponio Plaza, Rosslyn, Virginia. Efforts were focused on the specific areas the Committee had identified as requiring more study and review and discussion of the special study rough draft. Based upon these efforts, the Panel discussed the modifications of the Panel's interim report to reflect their findings, conclusions and recommendations. The chairman agreed to rewrite the report for Panel member comment before submission to the Committee.

The fourth full Committee meeting was held on 19-20 November 1979 at the Pentagon, Washington, D. C. The Committee received update and detail briefings on surface vessel and submarine developments; IRBM, ICBM and ABM technical and operational uncertainties; advanced tactical air defense systems; and developments in the chemical, biological and nuclear arena. In addition, individual Committee members briefed on the results of special studies of interest to the Command Element in the DIA and on the results of current ad hoc Panels of the Committee (e.g., Technology and the Master Intelligence Data Base). Special briefings and sessions were also held on other areas of high interest to the Command Element where the scientific and technical assistance of the Committee was solicited. Individual members agreed to assist the Agency in various aspects of the problems discussed. For problems which appeared broad in scope, the Committee agreed to conduct preliminary investigations on potential approaches to investigate each area. The Committee chairman agreed to report, to the Director (DIA), on the findings of these investigations.

(b)(3):10 USC 424.(b)(6)

Chairman, DIA Advisory
Committee

131

17 December 1980

DT/AC

U-228/AC

FILE DESIGNATION

CONCURRENCES

Closed Meeting Report of the DIA Advisory Committee

RCC-1 (ATTN: (b)(3):10 USC 424

Reference: OASD (Administration) Memorandum, 21 November 1980, subject: Reporting Requirements - Federal Advisory Committees.

Enclosed is the closed meeting report as required by PL 92-463.

1 Enclosure a/s

(b)(3):10 USC 424

Executive Secretary,
AC

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(Previous Editions Obsolete)

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1980 Report of Closed Meetings of the
ADVISORY COMMITTEE
Of The Federal Advisory Committee Act

All seventeen Committee and Panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552b (c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The first full Advisory Committee meeting was held on 7-8 February 1980 at the Pentagon, Washington, D.C. In addition to the normal update briefings on various scientific and technical areas, the Committee received eight detailed briefings on areas of high interest to the Director, DIA. Based upon these briefings and subsequent discussions, the Committee chairman prepared an extensive paper on the findings, conclusions and recommendations related to each area. The paper was coordinated in the executive session before forwarding to the Director. In addition, in executive session, the Committee reviewed current plans in several technical intelligence areas; reviewed and discussed the final report of the Master Intelligence Data Base Panel (MIDB); discussed the current status, findings and anticipated goals of the three ad hoc Panels, and reviewed some of the key areas the Committee would address at the next full Committee meeting.

The first meeting of the Tactical Weapons R&D (TWR&D) Panel was held on 25 February 1980 at Pomponio Plaza, Rosslyn, Virginia. Briefings were presented which included audit trails of currently deployed and future Soviet tactical SAM systems and the techniques and methods used to extract this data under various conditions; and, the depth and quality of the data bases available. In executive session, discussions centered on potential additional data sources and objectives and goals of the Panel.

The first meeting of the [redacted] was held on 17 March 1980 at Pomponio Plaza, Rosslyn, Virginia. In executive session, the Panel reviewed terms of reference, goals and objectives for the study. Briefings were presented that assessed the results of previous studies of [redacted] that discussed [redacted] and the projected impact on tactical reconnaissance and surveillance systems.

(b)(3):10 USC 424

The second meeting of the TWR&D Panel was held on 1 April 1980 at the [redacted]. Briefings and discussions centered on the trends and/or technical intelligence on tactical

air defense and targeting systems. The emphasis was placed on the chronological development of these systems and associated technical intelligence.

(b)(3):10 USC 424

The second meeting of the full Committee was held on 10-11 April 1980 at [redacted] Briefings and tours were focused on specific science and technology areas in nuclear physics and related weapons development programs. Additionally, the Committee reviewed special presentations on [redacted] In executive session, the committee prepared a paper on the findings, conclusions, and recommendations on these specific technical intelligence areas. The Committee also reviewed the rewrite of the Final Report of MIDB Panel; the summary findings and conclusions of the Technology Panel and the progress of two ad hoc panels, the standpoint of [redacted] likely application and operational implications.

The second meeting of the [redacted] was held on 1-2 May 1980 at Pomponio Plaza, Rosslyn, Virginia. The briefings and discussions centered on capabilities and predicted trends in the special signals area. Specifically, the panel discussed [redacted]

The third meeting of the [redacted] was held 22-23 May 1980 at Pomponio Plaza, Rosslyn, Virginia. The briefings highlighted open literature searches in [redacted] and related technology development; research and engineering into [redacted] communications management; [redacted] microelectronics development and [redacted] In executive session, the Panel reviewed individual Panel member submissions on potential threats and the likely [redacted]

(b)(3):10 USC 424

The fourth meeting of the [redacted] was held 10 June 1980. The entire meeting consisted of executive session in which the Panel developed a discussion of the [redacted] in generic terms. The Panel developed a threat projection from that discussion which addressed the radar and communications areas from the standpoint of [redacted] likely application and operational implications. The Panel also developed an interim report for submission to the Director, DIA.

The third meeting of the TWR&D Panel was held 23 June 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel reviewed presentations on radar test facilities and potential naval radar developments. In executive session, the Panel reviewed the results of an intelligence search in the tactical SAM area and discussed analogous RDT&E schedules. The Panel also addressed future areas of investigation.

The third full Committee meeting was held on 5-6 September 1979 at the Pentagon, Washington, D.C. Briefings included Soviet missile programs; surface vessel and selected submarine developments; aircraft in various stages of the RDT&E process; advanced air defense systems; and unique

intelligence collection systems. In executive session the Committee: reviewed, discussed and approved the special report prepared on the implications of specific Soviet SRBM developments. The Committee also reviewed the status of the three ad hoc Panels and initial planning for a fourth, the [redacted]. Special briefings and sessions were also held on other areas of high interest to the Command Element where the scientific and technical assistance of the Committee was solicited. Individual members agreed to assist the Agency in various aspects of the problems discussed. For problems which appeared broad in scope, the Committee agreed to conduct preliminary investigations on potential approaches to investigate each area. The Committee chairman agreed to report, to the Director, DIA, on the findings of these investigations.

(b)(3):10 USC 424

The fifth meeting of the [redacted] was held on 9-10 July 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel reviewed potential capabilities of various intelligence collectors against the special signals environment. The Panel also received presentations of special processing techniques and capabilities and projected tactical signals intelligence capability. The Panel also addressed specific other planned intelligence capabilities at the request of the Director, DIA.

The first meeting of the [redacted] Panel was held 22 July 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel, in executive session, discussed proposed terms of reference, goals and objectives for the effort. The Panel then received briefings on selected Soviet intelligence systems and capabilities and their utilization.

The sixth and final meeting of the [redacted] was held 15 August 1980 at Pomponio Plaza, Rosslyn, Virginia. The meeting was entirely devoted to executive session wherein the Panel discussed findings, conclusions and recommendations and developed an executive summary for the final report. The Panel chairman made writing assignments for developing the final report.

The fourth meeting of the TWR&D Panel was held on 25 August 1980 at Pomponio Plaza, Rosslyn, Virginia. The discussions centered on broad methodologies used by the Intelligence Community to analyze specific tactical R&D efforts. Successes and failures of these approaches were discussed. The Panel discussed conclusions and findings to date in executive session and outlined plans for future Panel activities.

(b)(3):10 USC 424

The second meeting of the [redacted] was held on 16-17 September 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel continued its investigation of selected Soviet intelligence capabilities and their utilization. In addition, the Panel investigated similar U.S. capabilities in an effort to provide a basis from which to evaluate Soviet effectiveness. The Panel also evaluated the tasking, organization and product usefulness associated with these systems. In executive session, the chairman developed and discussed a proposed outline for the final report.

The fourth full Committee meeting was held on 16-17 October 1980 at the Pentagon, Washington, D.C. The Committee received updated and detailed briefings on surface vessel and submarine developments; IRBM, ICBM and ABM technical and operational uncertainties; advanced tactical air defense systems; and developments in energy area. During, executive session, individual Committee members briefed on the results of special studies of interest to the Command Element in the DIA and on the results of current ad hoc Panels of the Committee. The Committee chairman prepared a paper on the results of discussions and provided recommendations to the Director on several items of high interest. The Committee also discussed plans for a forthcoming Navy Panel and defined broad objectives and goals for the Panel.

The third meeting of the [redacted] was held 27-28 October 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel continued its comparison of [redacted] (b)(3):10 USC 424 Briefings concentrated on U.S. utilization and exercise capabilities and selected specific exploitation programs. The second day was devoted entirely to executive session in which the Panel discussed the outline for the final report; preliminary findings, conclusions and recommendations; and the nature of any further information needed.

The fifth meeting of the TWR&D Panel was held 13-14 November 1980 at Pomponio Plaza, Rosslyn, Virginia. The first day was devoted to a series of NSA presentations that addressed specific U.S. collection capabilities; results of selected signal analyses; and studies on various elements of the Soviet R&D cycle. Briefings on the second day highlighted the development cycles of certain Soviet tactical SAM systems. The Panel also discussed preliminary findings, conclusions and recommendations and the nature of future Panel activity.

(b)(3):10 USC 424,(b)(6)

Chairman, DIA Advisory
Committee

FILE DESIGNATION

CONCURRENCES

U-3/AC

5 January 1982

DT/AC

Closed Meeting Report of the DIA Advisory Committee

RCC-1 (ATTN: (b)(3):10 USC 424

Reference: OASD (Administration) Memorandum, 2 December 1981, subject: Federal Advisory Committees - Closed Meetings Report.

Enclosed is the closed meeting report as required by PL 92-463.

1 Enclosure a/s

for (b)(3):10 USC 424,(b)(6)

Executive Secretary,
AC

RETURN FOR FILING TO:

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1981 Report of Closed Meetings of the
ADVISORY COMMITTEE
under Section 10(d)
of the Federal Advisory Committee Act

All twelve committee and panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10(d) of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities. The issues are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The sixth meeting of the Tactical Weapons R&D (TWR&D) Panel was held on 14-15 January 1981 at Plaza West (formerly known as Pomponio Plaza), Rosslyn, Virginia. The panel continued its ad hoc investigation on the development cycles of tactical weapon systems. The panel received briefings on the results of special data analysis investigations; an overview of the Soviet weapons system development cycle; a discussion on the [redacted] program; a review of current HUMINT capabilities; and an overview of current and planned collection capabilities pertinent to the panel's activity. The second day was devoted to executive session wherein the panel outlined tentative conclusions and recommendations and described plans and tasking for preparation of the final report.

(b)(3):10 USC 424

The fourth meeting of the [redacted] Panel was held 27-28 January 1981 at Plaza West, Rosslyn, Virginia. The panel continued its [redacted] Briefings to the panel concentrated on the results of [redacted] investigations conducted at the request of the panel. The panel also received an overview of the DIA program for the [redacted] and an overview of a specific National Intelligence Estimate. During the second day the panel received a briefing on specific U.S. capabilities and potentials for accomplishing military functions through alternate means. The panel devoted the remainder of the day to executive session to review its tentative conclusions and recommendations.

The first full committee meeting was held on 24-25 February 1981. The meeting on 24 February was held at the [redacted] while the session on the 25th was held at the Pentagon. The first day was devoted to a series of presentations on present collection capabilities and plans for future modernization of those capabilities. The members of the committee also toured specific collection facilities and were briefed by [redacted] on various aspects of intelligence capabilities from his perspective. The second day included briefings on [redacted] incidents and a presentation on Soviet armor developments. The committee also received an update on current intelligence estimates and predictions, and an overview of Soviet antiballistic missile, intercontinental ballistic missile and naval developments. The remainder of the meeting was devoted to executive session wherein the committee reviewed the progress of the ad hoc panel investigations and approved the initiation of a new panel to study Soviet naval trends. The chairman prepared a memorandum on the results of the two-day session for submission to the Director, DIA.

(b)(3):10 USC 424

(b)(3) 10 USC 424

The fifth meeting of the [redacted] was held on 10-11 March 1981 [redacted] The meeting on the 10th was devoted to reviewing results and pertinent information from the Navy Space Conference. The meeting on the 11th encompassed a tour of the [redacted] and other related activities. The remainder of the session was allocated for the review and modification of the panel's final report.

The sixth and final meeting of the [redacted] was held on 13 May 1981 at Plaza West, Rosslyn, Virginia. The panel reviewed the final report and evaluated member comments for incorporation. The panel also developed a briefing of the conclusions and recommendations of the study to be presented to the Director, DIA and the parent committee during the June meeting.

The second full committee meeting occurred on 2-3 June 1981 at the Pentagon. The membership received update briefings on potential worldwide crisis areas, latest imagery highlights and U.S. and Soviet space program developments. The committee also heard briefings on the [redacted] an update on the Soviet TYPHOON and OSCAR submarines and an overview of a unique methodology for evaluating the [redacted] Other briefings included analysis of [redacted] and an estimate of Soviet [redacted] capability. In executive session, the ad hoc panel chairmen briefed the status of the Tactical Weapons R&D (TWR&D) and the [redacted] investigations respectively. Finally, the committee toured the National Photographic Interpretation Center where they were apprised of current capabilities and projected plans for future development. The committee chairman prepared a memorandum for the Director, DIA that documented the committee's opinions on several areas where substantive committee views were developed. The [redacted] and TWR&D panel chairmen modified their final reports based on the comments received during the meeting and submitted their final reports to the Director, DIA.

The initial session of the Soviet Naval Trends Panel was held on 4-5 August 1981 at Plaza West, Rosslyn, Virginia. The panel discussed their plans for conducting the study and heard several overview briefings portraying various Intelligence Community estimates of Soviet naval doctrine and strategy, power projection capabilities, operational concepts and patterns, submarine capabilities, and projections for the development of additional capability by the end of the century. The panel also explored possible sub-investigations that might be conducted in specific technical areas that would support the overall effort.

The second session of the Soviet Naval Trends Panel convened on 10-11 September 1981 at Plaza West, Rosslyn, Virginia. The panel explored in more detail Soviet naval doctrine and received several different briefings on the Soviet design and production cycles as they pertain to naval weapon systems. The panel also received briefings on the Soviet naval organization, tactical operations and supporting command, control and communications. The panel chairman made assignments to the individual panel members for development of mission area briefings to be presented during the next session.

The third full committee meeting occurred on 17-18 September 1981 at the Pentagon, Washington, D.C. The committee received update briefings on current intelligence, imagery highlights and U.S. and Soviet space developments. The committee also received a special briefing on the results of a specific observables test, an update on a [redacted] a status briefing

(b)(3) 10 USC 424

(b)(3):10 USC 424

and demonstration on [redacted] and a review of [redacted] program. On the second day, the committee heard briefings on Project SUNSTREAM, an update on Soviet ABM developments and an overview briefing on the Department of Defense Intelligence Information System (DODIIS). During executive session, the panel chairman briefed the status of the investigation on Soviet naval trends, and the committee reviewed a proposed terms of reference for two newly proposed panel efforts on [redacted] and on a review requested by the Director, DIA on the DODIIS program. Following the session, the committee chairman prepared an extensive memorandum outlining committee views on several subjects covered during the two-day meeting and on recommendations for conduct and panel composition of the DODIIS and [redacted] Panels. The chairman also recommended that the AC create [redacted] for a more extensive review of the status of that program.

The first meeting of the [redacted] took place on 19-20 November 1981 at Plaza West, Rosslyn, Virginia. The panel reviewed the terms of reference and received briefings from various organizational elements. Briefings included overviews of OSD communications and intelligence programs, planning initiatives undertaken to support [redacted] and specific design solutions proposed to satisfy the [redacted] Following these presentations, the panel identified topics to be discussed during future sessions.

The first meeting of the DODIIS Panel occurred on 25 November 1981 at Plaza West, Rosslyn, Virginia. Selected DIA elements provided overview briefings on the many facets of the DODIIS program and the constituency of representative user files. The panel also received a presentation on the [redacted] program from the [redacted] Office. Following these presentations, the panel discussed the terms of reference for conduct of the study, outlined the nature of the subjects to be covered in future sessions, and set meeting dates and milestones for the development of study products.

(b)(3):10 USC 424

The third meeting of the Soviet Naval Trends Panel was held on 8-9 December 1981 at Plaza West, Rosslyn, Virginia. The panel continued its detailed study of Soviet naval doctrine and tactics and received several briefings on these subjects. The panel also received presentations on critical naval technologies, Soviet nuclear doctrine, and the mine warfare, antiship and sea-based naval aviation mission areas. The panel also heard briefings from the U.S. Navy Office of Naval Warfare on the critical issues confronting today's naval planners. A large portion of the second day was devoted to the preparation of the panel's assessment of probable Soviet naval developments in certain critical mission areas. The resulting product will be provided as an interim report to the Director, DIA after review during the next meeting.

(b)(3):10 USC 424.(b)(6)

Chairman,
Advisory Committee

133

UNITED STATES GOVERNMENT

memorandum

U-16/AC

DATE: 25 JAN 1983

REPLY TO ATTN OF: DT/AC

SUBJECT: Federal Advisory Committees - Closed Meetings Report

TO: RCC (ATTN: (b)(3):10 USC 424

ference: OASD(C) Memorandum, 14 December 1982, subject as above.

Enclosed is a narrative description on the closed activities of the DIA Advisory Committee for Calendar Year 1982. Questions should be directed to (b)(3):10 USC 424, Executive Secretary, DIA Advisory Committee.

(b)(3):10 USC 424,(b)(6)

1 Enclosure a/s

for Assistant Vice Director for Scientific and Technical Intelligence

OPTIONAL FORM NO. 10
(REV. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

U.S. GOVERNMENT PRINTING OFFICE: 1982-361-526:7210

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1982 Report of Closed Meetings of the
ADVISORY COMMITTEE
under Section 10(d)
of the Federal Advisory Committee Act

All twenty-one committee and panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10(d) of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities. The issues are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The second meeting of the Department of Defense Intelligence Information (DoDIIS) Panel was held on 11 January 1982 at Plaza West, Rosslyn, Virginia. The panel continued its ad hoc investigation of the implementation of DoDIIS. The panel received briefings that highlighted the individual Service perspectives focusing on their unique initiatives regarding the program. The panel also examined the performance of the [redacted] and participated in demonstrations of current and future system capabilities.

(b)(3):10 USC 424

The first full committee meeting during 1982 was held on 20-21 January at the Pentagon. The first day was devoted to a series of update presentations on current intelligence, imagery and signals intelligence. During the afternoon, the committee toured a local area facility and reviewed the status of future collection systems. The second day included briefings on a computer generated imagery process, the Soviet space program, antitank guided missiles and antiradiation missiles. The remainder of the meeting was devoted to executive session wherein the committee reviewed the progress of the ad hoc panel investigations and approved the initiation of a new panel to study intelligence support to tactical commanders. The committee members prepared individual narratives on the results of the session which the chairman approved for submission to the Director, DIA.

The first meeting of a panel on [redacted] occurred on 28-29 January 1982. The session on 28 January was held at Plaza West, Rosslyn, Virginia, while the session on 29 January was held at the Pentagon. The panel received briefings on [redacted] during the first day. The panel also reviewed the results of several analyses on [redacted] and on the heritage of specific launch vehicles. During the second day, the panel received briefings on pertinent DoD policy issues; an overview of national emergency planning; an overview of U.S. communications satellite procurement; and a briefing on various command center programs. The meeting concluded with an executive session in which the panel discussed preliminary conclusions, outlined the scope and content for the final report, and decided what further information would be required to complete the study.

(b)(3):10 USC 424

The third session of the DoDIIS panel was held 22 February 1982 at Plaza West, Rosslyn, Virginia. The panel continued its review of the program elements of DoDIIS and heard briefings from selected Unified & Specified (U&S) Commands and Service Science & Technology Centers on DoDIIS perspectives and unique initiatives.

The fourth meeting of the Soviet Naval Trends Panel was held on 4-5 March 1982 at Plaza West, Rosslyn, Virginia. During the first day, the panel heard several briefings on differing perspectives of naval trend patterns. On the second day, the panel continued to hone its methodology for assessing these trends and discussed preliminary conclusions and recommendations. The chairman made writing assignments for the final report.

The DoDIIS Panel met for the fourth time on 15 March 1982 at Plaza West, Rosslyn, Virginia. The panel heard a special presentation on a sophisticated language development program, examined DoDIIS networking issues, and reviewed the DoDIIS planning documents in more detail. During the afternoon, the panel examined selected U&S Command programs and reviewed DIA long-range automated data processing requirements and supporting technology needs.

(b)(3):10 USC 424

The second meeting of the [redacted] was held on 6-7 April 1982 at Plaza West, Rosslyn, Virginia. The panel reviewed studies on [redacted] capabilities, received an expanded briefing on various program requirements, and reviewed the current status of several pertinent programs. During the second day, the panel prepared an interim report that was sent to the Director, DIA.

The fifth meeting of the DoDIIS panel was held on 12-13 April 1982 at Plaza West, Rosslyn, Virginia. During the first day, the panel heard various briefings that examined the perspectives of the DoDIIS manager. The panel also explored an advanced exploitation system and various dissemination systems. The panel also heard a presentation on advanced technology from the Intelligence Research and Development Committee. The second day was devoted to an examination of DoDIIS budget and future technical issues. During executive session, the chairman led discussions on the planning for future sessions and assigned individual responsibilities for preparation of the final report.

(b)(3):10 USC 424

On 29-30 April 1982, the first and only meeting of the Bomber Prelaunch Survivability Panel was held at Plaza West, Rosslyn, Virginia. The panel received various detailed briefings by the [redacted] DIA, the [redacted] Support Center and the [redacted] on estimations of U.S. bomber survivablity. The panel also reviewed Soviet submarine launched ballistic and cruise missile capabilities. At the conclusion of the meeting, the panel prepared a substantive memorandum which was transmitted to the Director, DIA and the Under Secretary of Defense for Research and Engineering.

The Soviet Naval Trends Panel met for its fifth session on 4 May 1982 at Plaza West, Rosslyn, Virginia. The panel evaluated draft products as prospective inputs to the final report and held detailed discussions on those findings to be highlighted. During the executive session, the panel chairman made additional writing assignments for topics to be developed and discussed during the next meeting.

The second full committee meeting was held 19-20 May 1982 at Headquarters North American Air Defense Command (NORAD), Colorado Springs, Colorado. During the first day, the committee received NORAD mission briefings, J2 and J3 support briefings, an overview of the [redacted] and a briefing on unique intelligence data handling system interfaces. In the afternoon, the committee toured the [redacted] and received briefings on [redacted] On the second day, the NORAD staff briefed the committee on [redacted] In the afternoon, the committee chairman led an executive session which updated the Director, DIA on the status of the committee's ad hoc panels.

(b)(3):10 USC 424

The third meeting of the [redacted] occurred on 26 May 1982 at Plaza West, Rosslyn, Virginia. Briefings were presented on various [redacted] The panel also received an overview of [redacted] program. During executive session, the panel reviewed the outline and specific writing assignments for the final report.

The sixth meeting of the DoDIIS panel occurred on 27 May 1982 at Plaza West, Rosslyn, Virginia. Supplemental information was presented on acquisition and management techniques for automated data processing programs. The panel also received detailed DIA presentations on the overall DoDIIS architecture. Future long range requirements were discussed for research and development within the DoDIIS framework, and the panel reviewed and edited drafts of its interim report that was subsequently submitted to the Director, DIA.

The first meeting of the Intelligence Support to Tactical Commanders Panel was held on 10-11 June 1982 at Headquarters U.S. European Command (USEUCOM), Vaihingen, Germany. The main discussion topics included the intelligence related areas that are of greatest importance to the commands with respect to a potential European confrontation involving U.S. and Soviet forces. Specific presentations included mission overviews by USEUCOM, U.S. Army Europe and U.S. Air Forces Europe elements, discussions of their concerns and recommendations on the U.S. initiatives needed to upgrade their capabilities.

The seventh meeting of the DoDIIS panel occurred on 14 June 1982 at Plaza West, Rosslyn, Virginia. Briefings were presented to the panel on DoDIIS network security. The remainder of the meeting was devoted to the status of specific DoDIIS program initiatives and the review of individual member inputs to the panel's final report.

The eighth and final meeting of the DoDIIS panel was held on 13 July 1982 at Plaza West, Rosslyn, Virginia. Presentations made to the panel included an overview of the [redacted] and the long-range DoDIIS architecture. The panel also received more information on DoDIIS computer and network security. Preparations and further writing assignments for the final report were discussed during executive session.

(b)(3):10 USC 424

The sixth meeting of the Soviet Naval Trends Panel was held on 30 July 1982 at Plaza West, Rosslyn, Virginia. The purpose of the meeting was to review individual member draft inputs to the final report. The chairman agreed to consolidate the inputs and modify the current draft.

The second meeting of the Intelligence Support to Tactical Commanders Panel was held on 1 September 1982 at Plaza West, Rosslyn, Virginia. Topics included a series of briefings on various tactical support programs presented by the Services and intelligence staffs. The panel also received a detailed presentation on the operations of the [redacted] and the programmed future upgrades. Finally, the Defense Advanced Research Projects Agency discussed several exploratory technology initiatives that they are pursuing.

(b)(3):10 USC 424

The third and final full committee meeting for the year was held at the Pentagon on 29-30 September 1982. DIA analysts updated the committee on the significance of recent world events and on recent specific collection highlights. The committee also was given a detailed look at the Falkland Islands campaign, an update on the Soviet space program, an overview of the Soviet antiballistic missile system and a briefing on certain surface-to-air missiles. During executive session, the committee updated the Director, DIA on the activities of the several ad hoc panels. As a subset of the meeting, the Director requested that a small segment of the committee provide the Agency with their evaluation of the potential Soviet responses to the proposed [redacted] The chairman subsequently formed such a panel that provided a comprehensive assessment of various analyses which was formally transmitted to the Director.

(b)(3):10 USC 424

On 1 December 1982, the Intelligence Support to Tactical Commanders Panel met at MacDill Air Force Base in Tampa, Florida for its third meeting. In the morning, the panel met with key staff personnel at U.S. Readiness Command (USREDCOM) and was given an overview brief of the command's responsibilities. The command stressed the importance of communications and logistics in fulfilling their specific missions. The panel also received specific briefings on the USREDCOM indications and warning capabilities and their automated support and computer modeling capabilities. During the afternoon, the panel met with key personnel from the Rapid Deployment Joint Task Force for similar discussions. Highlights included the command's views on the initiatives required to better support their intelligence capabilities.

The final meeting for 1982 was held by the Intelligence Support to Tactical Commanders Panel on 13 December at Headquarters Strategic Air Command, Offutt Air Force Base, Omaha, Nebraska. Complete and thorough tours were given of the facility. Particular attention was given to the role of strategic targeting. Other items of discussion included intelligence support to war planning, the intelligence aspects of military capabilities planning, strategic connectivity, adaptive planning, and the impact of future programs. The panel concluded the meeting with a DIA briefing as preparation for a forthcoming trip to Headquarters U.S. Southern Command.

(b)(3):5 USC 574.(b)(6)

Chairman,
Advisory Committee

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1983 Report of Closed Meetings of the
ADVISORY COMMITTEE
under Section 10(d)
of the Federal Advisory Committee Act

All twenty committee and panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10(d) of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities. The issues are classified and sensitive, and they are specifically required to be kept secret in the interest of national security.

The first meeting for the year was the seventh and final meeting of the Soviet Naval Trends Panel. The meeting was held on 11 January 1983 at the Plaza West Building in Rosslyn, Virginia. The members of the panel met to review and discuss the final draft of their report to the Director. The report was subsequently published as Report 83-1 of the Advisory Committee, Soviet Naval Trends.

On 12 January 1983 the Survivable and Enduring Intelligence System (SEIS) Panel held its fourth meeting at the Plaza West Building in Rosslyn, Virginia. The panel received briefings from the Air Force and DIA on efforts to ensure a reliable chain of command for the United States defense and intelligence network. The panel chairman concluded the meeting by determining that this ad hoc panel would review these efforts on a quarterly basis.

The Intelligence Support to Tactical Commanders Panel held its fifth meeting on 27-28 January 1983 at the U.S. Southern Command (SOUTHCOM) Headquarters in Panama. On the first day, the panel members toured the command headquarters and the intelligence facilities in the area of the Panama Canal Zone. The second day was spent receiving a series of area briefings which included military, economic, sociological, and geographical aspects of the region. During the afternoon of the second day, the panel members participated in formal and informal discussions with the Commander (CINCSOUTH) and his staff on suggested methods to improve SOUTHCOM's receipt of national level intelligence products on a timely basis.

The first full Advisory Committee meeting for 1983 was held on 15-16 February at the Headquarters U.S. Atlantic Command (LANTCOM) in Norfolk, Virginia. On the morning of the 15th, the committee received intelligence briefings on the mission and area responsibilities of the command. LANTCOM's chief intelligence officer met with the committee members during the afternoon session to discuss his primary concerns. During the committee's executive session, the individual panel chairmen reported to the Director on the achievements and findings of their efforts to date. On the second day, the committee continued its executive session during the morning hours to conclude the reports by the panel chairmen. The committee then toured the aircraft carrier USS Eisenhower (CVN-69) and its intelligence spaces. During the

afternoon, tours of the Fleet Intelligence Center and the Fleet Ocean Surveillance Information Center were taken. Briefings at each location, provided detailed exposure to LANTCOM's mission requirements.

On 25 March 1983 the Intelligence Support to Tactical Commanders Panel held its sixth meeting at the Plaza West Building in Rosslyn, Virginia. The panel met to receive briefings on communications related equipment used to support the tactical commander. At the conclusion of the day's briefings, the panel held an expanded executive session to discuss the items for inclusion in the final report.

Because of hazardous traveling conditions in the Northeast and Midwest, not all the members of the Intelligence Support to Tactical Commanders Panel were able to attend the seventh meeting of the panel on 11 April 1983 at the U.S. Central Command (CENTCOM) in Tampa, Florida. However, the Chairman and the Executive Secretary of the Advisory Committee did meet with representatives of the CENTCOM intelligence staff for a series of briefings. The meeting concluded in the afternoon after formal discussions of several planned intelligence upgrade projects and programs.

The first meeting of the Chemical and Biological Warfare (CW/BW) Panel took place on 2-3 May 1983 at the Plaza West Building in Rosslyn, Virginia. The meeting served to bring community focus on the topic of the CW/BW threat to U.S. Forces. The panel met with representatives of DIA, CIA, the Department of State, and the Air Force Systems Command Foreign Technology Division for a discussion of the problems to be faced in improving the intelligence efforts to counter the CW/BW threat.

The Intelligence Support to Tactical Commanders Panel held its replacement seventh and final meeting on 13 May 1983 at the Plaza West Building in Rosslyn, Virginia to discuss the draft of the panel's final report to the Director. The panel received briefings on the current Intelligence Communications Architecture (INCA) Program, and devoted the remainder of time to the preparation of the final report. The report was subsequently sent to the Director, DIA as Report 83-2 of the Advisory Committee, Intelligence Support to Tactical Commanders.

The Reconnaissance Requirements Panel held its first meeting on 2 June 1983 at the Plaza West Building in Rosslyn, Virginia. The purpose of the meeting was to discuss and develop the Terms of Reference for the panel's study. The panel also received briefings on related topics.

The second full Advisory Committee meeting was held on 14-15 July 1983 in Denver, Colorado. The first day was spent receiving briefings and touring operations at the Aerospace Defense Facility on Buckley Air National Guard Base. During the second day, the committee held technical discussions with representatives from Martin-Marrietta Aerospace Corporation concerning two major DoD production projects. An executive session of the committee was held to discuss the Advisory Committee's various activities with the Deputy Director, DIA.

The second meeting of the Reconnaissance Requirements Panel was held on 25 July 1983 at the Plaza West Building in Rosslyn, Virginia. The members of the panel met during the morning to receive briefings from the National Photographic Interpretation Center (NPIC) and the Defense Mapping Agency (DMA). Later, a representative from the Navy gave a presentation on the [redacted] The panel met during an afternoon executive session to discuss the results of the morning briefings and to select topics for a future meeting.

(b)(3):10 USC 424

The third meeting of the Reconnaissance Requirements Panel was held on 29 August 1983 at the Plaza West Building in Rosslyn, Virginia. The panel members received briefings from the National Aeronautics and Space Administration (NASA) on the LANDSAT program. The panel also was briefed by the Naval Intelligence Support Center (NISC), and DIA on the concept of operations, support, and the utility of several proposed reconnaissance systems.

The CW/BW Panel met for the second time at the Plaza West Building in Rosslyn, Virginia, on 13-14 September 1983. During the first day, the panel met with Army representatives to discuss their requirements, plans, and programs regarding CW/BW. Other briefings included a comparison of the current CW/BW portion of the defense budget with previous years. On the second day of this meeting, the panel held discussions with CW/BW analysts in the Directorate of Scientific and Technical Intelligence of DIA, and representatives of the Air Force. An executive session during the afternoon was devoted to preparation of an interim report of the panel's findings to be sent to the Director.

The SEIS Panel met on 14 September 1983 to receive briefings on the progress of the DIA efforts to ensure a reliable chain of command for defense intelligence. The meeting took place at the Plaza West Building in Rosslyn, Virginia.

The fourth meeting of the Reconnaissance Requirements Panel was held on 17 October 1983 at the Plaza West Building in Rosslyn, Virginia. The panel received briefings on LANDSAT and the results of studies regarding multispectral data from these platforms. A representative from the Intelligence Community staff presented the panel with plans for an architecture to address future imagery requirements. The panel members also utilized the time to record preliminary results for a final report.

The third meeting of the CW/BW Panel was held on 2-3 November 1983 at the Plaza West Building in Rosslyn, Virginia, and the National Security Council Office in the Old Executive Office Building (OEOB), Washington, D.C. On the first day, the members of the panel traveled to the OEOB to meet with two members of the National Security Council staff to discuss national perspectives of the CW/BW threat and to assess Congressional perspectives regarding the DoD CW program. The panel continued its activities in Rosslyn and focused on the preparation of a final report.

The third and final full Advisory Committee meeting for the year was held on 17-18 November 1983 in the Pentagon. The purpose of the meeting was to

brief the committee members on the intelligence assessment of the world situation, as well as to acquaint the members with current DIA projects and operations. During the first day, representatives from the Armed Forces Medical Intelligence Center and U.S. Army Intelligence and Security Command made presentations on Soviet biological warfare programs. Other topics briefed during the two-day meeting included problems with arms control monitoring and a review of the U.S. airland battle for the year 2000. The meeting also provided a forum for the panel chairmen to report on the results of their various panels.

On 6 December 1983 the Reconnaissance Requirements Panel held its fifth meeting. The meeting was held at the Plaza West Building in Rosslyn, Virginia. The panel met to receive briefings from the Air Force Space Systems Office. During the afternoon session, the members prepared a draft of the final report for the Director.

The fourth meeting of the CW/BW Panel was held at the Plaza West Building in Rosslyn, Virginia, on 14-15 December 1983. During the afternoon of the 14th, the members of the panel met with members of the Intelligence Community Staff to discuss community efforts in focusing on issues in the CW/BW arena. The morning of the 15th was used to prepare the final report to the Director.

The first meeting of the SIGINT Support to Naval Operations Panel met on 16 December 1983 in the Pentagon. The members reviewed the Terms of Reference as approved by the Director. Additionally, several briefings were presented to the panel on topics related to the stated Terms of Reference. The briefings outlined Navy programs which have been proposed to supply early warning to the Fleet.

(b)(3):10 USC 424

Chairman,
Advisory Committee

DEFENSE INTE[illegible] AGENCY
WASHINGTO[illegible] [illegible]01

1 FEB 1985

U-015/RCC-3

MEMORANDUM FOR THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (ADMINISTRATION), OASD(C)

SUBJECT: Federal Advisory Committees - Closed Meetings Report

Reference: DASD(C)(Admin) memo, 4 Dec 84, same subject.

1. In compliance with the referenced memorandum, the Defense Intelligence Agency's annual report of closed and partially closed Advisory Committee meetings is provided in an original and eight copies at the enclosures.

2. The Agency has two advisory committees subject to this report.

FOR THE DIRECTOR:

(b)(3):10 USC 424.(b)(6)

Deputy Director for
Resources and Systems

2 Enclosures
1. CY84 Closed Meetings Report for DIA Scientific Advisory Committee
2. Not responsive to the request.

Department of Defense

Defense Intelligence Agency

1984 Report of Closed Meetings of the

DIA Scientific Advisory Committee

Under Section 10(d)

of the Federal Advisory Committee Act

Enclosure 1

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1984 Report of Closed Meetings of the
SCIENTIFIC ADVISORY COMMITTEE
under Section 10(d)
of the Federal Advisory Committee Act

All twenty-five committee and panel meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions within Section 10(d) of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that the issues being considered pertained to U.S. intelligence information and activities that are classified and sensitive and are specifically required to be kept secret in the interest of national security.

On 31 January 1984 the Survivable and Enduring Intelligence System (SEIS) Panel met at the Plaza West Building in Rosslyn, Virginia. The panel received briefings from the U.S. Army and the DIA on the impact of budget decisions on the efforts to build a specific defense and intelligence network.

The Chemical and Biological Warfare (CW/BW) Panel met on the afternoon of 31 January 1984 and all day on 1 February 1984 at the Plaza West Building in Rosslyn, Virginia. The panel received no presentations and used this time to draft its final report. The report was subsequently sent to the Director, DIA as Report 84-1 of the Advisory Committee, Chemical/Biological Warfare.

On 16 February 1984 the SIGINT Support to Naval Operations Panel met at the Plaza West Building in Rosslyn, Virginia for its second meeting. Presentations were made by the NSA and the Navy concerning the support value of the resources in a national system. A near-term capability assessment was made by the panel during the executive session.

The initial meeting of the Arms Control Verification Panel took place on 8 March 1984 at the Plaza West Building in Rosslyn, Virginia. The panel reviewed the Terms of Reference and discussed its objectives. The status of existing and proposed treaties was also received. During this meeting the panel heard from representatives from DIA, OSD, ACDA, and the JCS.

On 14-15 March 1984, the SIGINT Support to Naval Operations Panel met at the Plaza West Building in Rosslyn, Virginia for its third meeting. During these sessions the panel received presentations on specific collection assets and engaged in discussion on certain threat platforms. With the formulation of a final report in mind, the panel began the process of assimilating the data which had been presented in the previous meetings. Report 84-3, SIGINT Support to Naval Operations of the Scientific Advisory Committee was later sent to the Director, DIA.

The first full Scientific Advisory Committee meeting in 1984 was held on 12-13 April 1984 at the Headquarters, Electronic Security Command, USAF in San Antonio, Texas. The committee was hosted by the Commander, ESC who arranged a command briefing and a tour of the Alert Center. Subsequently, the committee received several briefings on ESC programs that are either supporting DIA or being supported in part by DIA.

The Arms Control Verification Panel met on 27 April 1984 at the Plaza West Building in Rosslyn, Virginia. The theme of this meeting was the national level mechanism for supporting and formulating monitoring and verification policy. Discussions of on-site inspections and technical means were held. Panel was held on 10 May 1984 at the MITRE Building, 7600 Old Springhouse Road in McLean, Virginia. The Director, DIA provided opening remarks in which he explained the Congressional interest in improving communications support to intelligence functions. The panel received an overview briefing on the INCA concept and how the results of this study effort could be implemented through Service programs. The preliminary work plan of the contractor was discussed.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

On 21 and 22 May 1984 the [redacted] Panel met in the Pentagon. This panel was formed to investigate ways to improve support to analysts involved in [redacted] The panel reviewed its Terms of Reference and established its objectives. During the two-day session the panel visited the [redacted] for familiarization and later reviewed an assortment of briefings from intelligence and operations activities in DoD.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

The [redacted] Panel had an opportunity to hear from a member of the Long Commission during the meeting on 14 June 1984 in the Pentagon. In addition, the panel was briefed on a proposed program that would provide technical support to [redacted] Also the panel discussed the [redacted] of DIA with key personnel from the responsible office.

On 18 June 1984 the Arms Control Verification Panel met in the Plaza West Building in Rosslyn, Virginia and devoted the bulk of its time to discussions and presentations on proposed initiatives in the Intelligence Community to enhance the overall monitoring capability. Additionally, the requirements of on-site inspections for various treaties were discussed.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

In order to gain the Tactical Commander's perspective on the terrorism threat, the [redacted] Panel traveled to the United States Central Command at MacDill AFB, Florida for its meeting on 11 July 1984. During the day, the panel received a series of briefings which portrayed the probable threat to CENTCOM forces and it discussed various intelligence support activities designed to enhance the [redacted] functions at the Command.

The INCA Panel met on 17 July 1984 at the MITRE Building, 7600 Old Springhouse Road, McLean, Virginia. The panel reviewed the unique Service programs designed to achieve an intelligence communications plan for their needs. The programs focused on the relationship with the overall INCA project.

On 25 July 1984 the SEIS panel met in the Plaza West Building in Rosslyn, Virginia. This meeting consisted of a review of the current program status and the discussion of the conclusions resulting from an exercise. The panel noted that the value of exercises during the development cycle will be significant and that this process is the only way to further refine hardware, software and personnel requirements.

The second meeting of the full Scientific Advisory Committee in 1984 took place on 15 and 16 August in the Pentagon. The status of each panel of the committee was briefed by its respective chairperson or designee. Briefings on a wide range of high interest intelligence topics were made to the Committee.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

The [redacted] convened on 17 August 1984 in the Pentagon. The emphasis of this meeting was on analysts reporting and training programs. The [redacted] programs in the Services were briefed. Later in the day, the panel traveled to the [redacted] building in Rosslyn to see a demonstration of an ADP system designed to support [redacted] requirements.

When the INCA Panel reconvened on 28 August 1984 at the MITRE Building, 7600 Old Springhouse Road, in McLean, Virginia, it received a status report on the contractor's efforts and assessed the impact of this status on future milestones and objectives. The panel believed that certain problems identified to date would lend themselves to quick fixes. Such items could be accomplished locally in small programs with reasonable outlays and without a major programming process.

The Arms Control Verification Panel met on 13 September 1984 in the Defense Intelligence Analysis Center (DIAC), Bolling AFB, D.C. The panel heard a presentation on an initiative managed by the Intelligence Community Staff. This initiative could assist in characterizing verification options. A briefing on ASATs was also given. The remainder of the day was used in preliminary formulation of the final report.

During the meeting of the [redacted] Panel on 20 September 1984 in the Pentagon, the perspectives of several internal DIA directorates on intelligence support of [redacted] and functions were heard. The panel wished to eventually comment on the organization of DIA [redacted] functions. As a complement to a visit to USCENTCOM, the panel was briefed by a USEUCOM representative from the [redacted] who was in the Washington area.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

On 23 October 1984 the [redacted] Panel met in the Pentagon. After a brief executive session, the panel traveled to the State Department for discussions with key personnel in charge of their [redacted] The delineation of responsibilities between State and Defense in overseas areas was discussed. When the panel returned to the Pentagon the Chairman started a review of the preliminary draft inputs to the final report. Writing assignments were made.

The final meeting of the Arms Control Verification panel on 27 November 1984 in the DIAC, Bolling AFB was used to review and edit a draft of the final report. During this process the panel engaged in technical dialogue about various system, policy, intelligence and budgetary topics. The final report was projected for completion in the new year.

The initial meeting of the Advanced Air Defense Panel was held on 28 November 1984 in the DIAC, Bolling AFB. During this session the panel was briefed into a special compartmented program. Subsequently, the Program

Office gave the panel a status and overview briefing on technical developments. The Terms of Reference were reviewed and the panel outlined its objectives and future activities.

The INCA Panel convened on 4 December 1984 in the MITRE Building, 7600 Old Springhouse Road, McLean, Virginia. During this meeting the preliminary results of two surveys conducted in Europe were briefed by the contractor. Communication requirements to support intelligence functions down to major theater units was the topic of the surveys.

On 10 December 1984 the SEIS panel met in the DIAC, Bolling AFB. The purpose of the meeting was to receive an overall status report on the portion of a national program being managed by DIA. The panel provided recommendations to the program manager. A representative from OSD C^3I briefed the panel on a major plan and the panel provided substantive feedback.

The initial meeting of the Microelectronics and Computers Panel was held on 20 December 1984 in the DIAC, Bolling AFB. In this meeting the panel obtained an overview of intelligence related areas concerning foreign microelctronics and computer capabilites. The Terms of Reference were reviewed and accepted. Certain issues related to Technology Transfer were discussed. The panel refined its objectives and determined some of its future activities.

(b)(3):10 USC 424,(b)(6)

Chairman,
Scientific Advisory Committee

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301-6111

31 JAN 1986

U-078/RCC-3

MEMORANDUM FOR THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (ADMINISTRATION), OASD(C)

SUBJECT: Federal Advisory Committees - Closed Meetings Report

Reference: DASD(C)(Admin) memo, 9 Dec 85, same subject.

1. In compliance with the referenced memorandum, the Defense Intelligence Agency's annual report of closed and partially closed Advisory Committee meetings is provided in an original and eight copies at the enclosures.

2. The Agency has two advisory committees subject to this report.

FOR THE DIRECTOR:

(b)(3):10 USC 424.(b)(6)

Deputy Director for
Resources and Systems

2 Enclosures
1. CY85 Closed Meetings Report for DIA Scientific Advisory Committee
2. Not responsive to the request.

Department of Defense

Defense Intelligence Agency

1985 Report of Closed Meetings of the

DIA Scientific Advisory Committee

Under Section 10(d)

of the Federal Advisory Committee Act

Enclosure 1

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1985 Report of Closed Meetings of the
SCIENTIFIC ADVISORY COMMITTEE
under Section 10(d)
of the Federal Advisory Committee Act

All thirty-two committee and panel meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions within Section 10(d) of Public Law 92-463 and paragraphs 1 and 3 in Section 5526(c)(1) of Title 5 of the U.S. Code. The Director, DIA determined that the issues being considered pertained to U.S. intelligence information and activities that are classified and sensitive and are specifically required to be kept secret in the interest of national security.

On 8 January 1985 the Advanced Air Defense Panel met in the Defense Intelligence Analysis Center (DIAC), Bolling AFB. The panel received briefings on strategic air defense systems that could pose a threat to U.S. operations.

The first full meeting of the Scientific Advisory Committee for 1985 was held on 9-10 January 1985 in the Pentagon. On the first day the committee received a current intelligence briefing and four technical briefings on armor developments, tactical sensors, technology in intelligence collection, and Over-the-Horizon Radar (OTHR) Systems. On the following day the committee received briefings on nuclear and space programs.

On 5 February 1985 the Microelectronics and Computers Panel met in the DIAC at Bolling AFB. The panel received briefings that provided a comparative analysis of U.S. and foreign R&D procedures and activities. The panel also discussed methods of protecting U.S. computer and microelectronic technology.

An Advanced Air Defense Panel meeting was convened at the DIAC on Bolling AFB on 4 March 1985. The panel members received briefings on the components of an Air Defense and Command, Control and Communications (C^3) System, and held discussions on the communication requirements necessary to support the Air Defense System.

The INCA Panel met on 27 March 1985 at the Mitre Building, 7600 Old Springhouse Road, McLean, Virginia. The members received a status report on the contractor's efforts and assessed the impact of this status on future milestones and objectives. The panel then provided recommendations to the Program Manager.

On 28 March 1985 there was a meeting of the Microelectronics and Computers Panel in the DIAC at Bolling AFB. The panel was briefed on the tasking of Human Intelligence (HUMINT) and Signals Intelligence (SIGINT) collection systems requiring data on the use of microelectronics and computers in threat weapons systems. Briefings from various components of the Intelligence Community were provided. Plans were made for a follow-on session at a national laboratory to discuss technical aspects of foreign computer capabilities.

The Advanced Air Defense Panel met on 11 April 1985 in the DIAC, Bolling AFB. The panel developed a list of topics which needed to be reviewed prior to developing the outline of the panel report. The panel also received several briefings on avionics packages currently used on fighters and discussed the current threat to U.S. tactical aviation platforms.

The Survivable and Enduring Intelligence System (SEIS) Panel met at the DIAC on Bolling AFB on 18 April 1985. The panel received several briefings on the status of DIA special plans and the national program was reviewed.

On 16 May 1986 the Advanced Air Defense Panel had a meeting in the DIAC at Bolling AFB. The panel had technical deliberations with experts in the field of strategic air defense systems. The panel was able to engage these experts in technical discussions on the capability of these new generation systems to counter low radar cross-section targets, and was also able to estimate from the presentations what the future deployment configuration of these air defense systems will be.

On 4 and 5 June 1985 the Microelectronics and Computers Panel had a meeting at the Los Alamos National Laboratory (LANL) in Los Alamos, New Mexico. During the first day of the meeting, the panel was given several presentations by the Director of LANL and his staff on the historical activities of the Laboratory and on what the Laboratory is doing currently in the areas of connectivity, Strategic Defense Initiative (SDI), and super computers. On the second day of the meeting the focus of the discussions was on LANL's support of intelligence requirements through the combined work of its various internal divisions.

(b)(3) 10 USC 424.

There was a meeting in the DIAC at Bolling AFB on 10 and 11 June 1985 of the [redacted] Panel. The purpose of the meeting was to review the panel's Terms of Reference (TOR), to receive an update on [redacted] and to review [redacted] of the DIA Advisory Committee (predecessor to the DIA Scientific Advisory Committee). The [redacted] and the panel's Terms of Reference were reviewed, and it was decided that both a new report and a new Terms of Reference would have to be generated. It was decided to rename the panel the [redacted] Panel to reflect broader objectives in the proposed new draft Terms of Reference.

The Advanced Air Defense Panel met on 13 June 1985 in the DIAC at Bolling AFB. During the meeting the panel discussed the potential of using ABM systems in an air defense role. The remainder of the meeting was spent in executive session reviewing information acquired on air defense systems.

The Advanced Air Defense Panel met on 18 July 1985 in the DIAC, Bolling AFB. The focus of the meeting was on reviewing data on air defense systems and summarizing the data for inclusion in a final report. The panel received a series of briefings which attempted to define the threat to U.S. operations and, during the executive session, the panel developed an outline for the final report.

The [redacted] Panel met on 7 August 1985 in the DIAC, Bolling AFB. The panel was briefed on what was known about the status and possible configuration of [redacted] and on current [redacted] doctrine. The panel was also briefed on [redacted].

From the 21st to the 23rd of August 1985 the Scientific Advisory Committee held the initial meeting of the [redacted] Panel in the DIAC at Bolling AFB. Over the three day period the panel received a series of briefings on [redacted] activities. The panel used the information gathered from these briefings to examine methods of improving U.S. ability to detect and measure [redacted]

(b)(3):10 USC 424.

The Advanced Air Defense Panel held a meeting on 23 August 1985 at the DIAC on Bolling AFB. The panel held technical discussions on radars, infrared, and optical systems. The panel worked on the draft of its final report.

(b)(3):10 USC 424.

The [redacted] Panel held a meeting in the DIAC, Bolling AFB on 10 and 11 September 1985. The panel received several short presentations on [redacted] around the world then devoted the remainder of the day to developing the major highlights of the panel's study.

On the 11th of September 1985 the SEIS Panel held a meeting in the DIAC at Bolling AFB. The meeting started with an overview of the entire SEIS effort including budget allocation, infrastructure, and the communications architecture necessary to support the system as planned. Following the initial discussion, DIA efforts in the SEIS arena were briefed, then the meeting was opened for discussion. During the discussion several significant issues were raised, and it was determined that a meeting should be set up with the Directors of the National Program and the Army Program to review these issues.

On 12-13 September 1985 there was a full meeting of the Scientific Advisory Committee in the DIAC at Bolling AFB. The Committee was given a series of briefings to update them on significant developments on several intelligence programs. The Director, Strategic Defense Initiative Organization briefed on the current SDI research activities. On the second day the Committee reviewed the activities of several elements of DIA and concluded the meeting with a review of the efforts of the different ad hoc panels of the Committee.

(b)(3) 10 USC 424.

On 25 and 26 September 1985 there was a meeting of the [redacted] Panel in the DIAC at Bolling AFB. The members used the time to draft their final report. No presentations were made during this meeting. The report was subsequently sent to the Director, DIA.

The Advanced Air Defense Panel conducted its final meeting on 16 October 1985 in the DIAC at Bolling AFB. During the meeting a draft copy of the Committee's report was reviewed and edited. The report will subsequently be sent to the Director, DIA as Report 86-2 of the Scientific Advisory Committee.

(b)(3):10 USC 424.

The [redacted] Panel held a meeting on 18 October 1985 in the DIAC at Bolling AFB. The members developed a rough outline of the panel report and divided between themselves the responsibilities for writing the component sections of the report.

On 12 November 1985 the Microelectronics and Computers Panel had a meeting in the DIAC at Bolling AFB. The panel discussed the computer and microelectronic needs required to support a cruise missile program and analyzed the associated manufacturing capability that would be necessary to produce the integrated circuits and components. The panel reviewed the DoD Very High Speed Integrated Circuit Program.

The final meeting during the calendar year was a meeting of the Microelectronics and Computers Panel in the DIAC at Bolling AFB on 11 December 1985. The theme for the meeting was on navigation systems. Several briefings

on the subject were reviewed and an attempt to assess the extent that microelectronics and computers were embedded in navigation systems was made. During the executive session the panel reviewed their findings to date.

(b)(3):10 USC 424,(b)(6)

for Chairman,
Scientific Advisory Committee

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301-6111

29 JAN 1987

U-017/RCC-3

MEMORANDUM FOR THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (ADMINISTRATION), OASD(C)

SUBJECT: Federal Advisory Committees - Closed Meetings Report

Reference: DASD(C)(Admin) memo, 30 Dec 86, same subject.

1. In compliance with the referenced memorandum, the Defense Intelligence Agency's calendar 1986 report of closed and partially closed Federal Advisory Committee meetings is provided in an original and eight copies at the enclosures.

2. The Agency has two advisory committees subject to this report.

FOR THE DIRECTOR:

(b)(3):10 USC 424

Deputy Director for
Resources and Systems

2 Enclosures
1. CY86 Closed Meetings Report for DIA Scientific Advisory Committee
2. Not responsive to the request.

Department of Defense

Defense Intelligence Agency

1986 Report of Closed Meetings of the

DIA Scientific Advisory Committee

Under Section 10(d)

of the Federal Advisory Committee Act

Enclosure 1

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
FY 1986 Report of Closed Meetings of the
SCIENTIFIC ADVISORY COMMITTEE
under Section 10(d)
of the Federal Advisory Committee Act

All twenty-five committee and panel meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions with Section 10(d) of Public Law 92-463 and paragraphs 1 and 3 in Section 552b(c)(1) of Title 5 of the U.S. Code. The Director, DIA determined that the issues being considered pertained to U.S. intelligence information and are specifically required to be kept secret in the interest of national security.

The Microelectronics and Computers Panel meeting held on 15 January 1986 at the Defense Intelligence Analysis Center (DIAC), Bolling Air Force Base (AFB) was the first panel meeting of the year. The emphasis was on exploring the development and application of the foreign microelectronics industry. The panel concluded with a briefing by the panel chairman on engineering techniques.

On 29-30 January 1986 there was a meeting of the full Scientific Advisory Committee (SAC) held at the DIAC on Bolling AFB. The first day was initiated with remarks from the Director, DIA concerning interfacing the SAC and DIA with the National Intelligence Community. The first day was devoted to the challenge to U.S. security posed by Soviet military power. The second day, in addition to allowing for an involved Executive Session, included briefings on various national programs.

The Microelectronics and Computers Panel met on 19 February 1986 at the DIAC on Bolling AFB to obtain specific information from various Government agencies which would be assimilated for use in the panel's study. The panel found that the agencies called upon concurred on several computer requirements. The subject of proliferation of various systems was discussed at length.

On 3 March 1986 the Strategic Defense Initiative (SDI) Panel met at the DIAC on Bolling AFB. The prime objective of the meeting was for the panel to establish for itself a useful definition of the SDI so that it could better pursue the objectives established in the Terms of Reference. An additional objective was to establish what DIA's role would be with regard to supporting the SDI program. The challenges to and implications of the SDI program were discussed in various briefings.

The Survivable and Enduring Intelligence System (SEIS) Panel met at the DIAC on Bolling AFB on 4 March 1986. The panel received several briefings on the status of DIA special plans.

On 5 March 1986 the (b)(3) 10 USC 424, Panel met at the DIAC on Bolling AFB. The meeting was for the express purpose of discussing the Terms of Reference for the panel and reviewing previous related Committee efforts. The panel concluded late and spent the entire day on the Terms of Reference.

The Air Defense Panel met on 25 March 1986 at the DIAC on Bolling AFB. This was the last meeting of the panel series. The purpose of the meeting was to finalize the panel's report. To secure this objective, each panel member added comments and made changes to draft copies provided to them. The entire day was spent in this process.

The Microelectronics and Computers Panel met on 3 April 1986 at the DIAC on Bolling AFB. Briefings from various agencies of the Intelligence Community were provided. The Foreign Technology Division of the U.S. Air Force provided a capabilities briefing and selected experts provided details of important developments in the field of foreign microelectronics and computers. The presentations were very broad in range. The briefings ended with a discussion of future foreign systems and technology.

The SDI Panel met at Sandia National Laboratories, Albuquerque, NM on 7 May 1986. The SDI Panel, stimulated by its previous briefings, sought to obtain more direct knowledge of the technology programs that are underway at the National Laboratories. Through arrangements made by an SDI Panel member and a former Executive Vice President of Sandia National Laboratories (SNL), the panel received briefings and a tour of facilities at SNL.

On 8-9 May 1986 there was a meeting of the full Scientific Advisory Committee held in Sunnyvale, California for the purpose of giving the Committee greater insight into a variety of intelligence related activities. The meeting concluded with a brief Executive Session to review and discuss panel activities and set the date for the next full Committee meeting. There was a consensus that this meeting was beneficial and rewarding and that it enhanced the Committee's ability to address topics requiring specialized knowledge.

The Microelectronics and Computers Panel met on 21 May 1986 at the DIAC on Bolling AFB. The panel heard three briefings dealing with the subject of microelectronics with relationship to industry and Government. The third briefing dealt with observations made by one of the panel members while on one of his many trips. The panel agreed that they were prepared to begin the panel's final report.

On 29 May 1986 the Signals Intelligence (SIGINT) Panel met at the DIAC on Bolling AFB. This was the first meeting for the panel. The day was devoted to three briefings, all centered around future SIGINT plans and programs. Topics discussed included procurement costs and SIGINT requirements and constraints.

An SDI Panel meeting was held on 18 June 1986 at the DIAC, Bolling AFB. The panel had decided to hear more about the threat facing the SDI as currently envisioned. To this end, several presentations were given by members of DIA knowledgeable in the subject. Of particular interest to the members was how the SDI Program planned to deal with future challenges facing SDI technology. The meeting ended with an Executive Session during which a preliminary outline of a final report was established.

On 25 June 1986 the Microelectronics and Computers Panel met at the DIAC, Bolling AFB. The panel members received no briefings as the research for the report was already complete. The panel members reviewed and discussed a variety of topics previously addressed and agreed on the issues to be covered in the report. An outline of the report was made and left with the panel chairman to be put into final form.

On 11 July 1986 the SDI Panel met at the DIAC on Bolling AFB. The panel was briefed on various technical achievements of the SDI Program. A technical assessment was made regarding system dependability, accuracy and utility. The panel members felt that they had a good grasp of the program objectives. The Executive Session resulted in writing assignments for panel members and concluded after meeting the day's objectives.

On 5 August 1986 the SIGINT Panel met for its second session at the DIAC on Bolling AFB. The meeting day had a very full schedule. The briefings covering various SIGINT topics were both detailed and broad in scope. The panel discussions were lively, involving DIA, the National Security Agency (NSA) and industry views. It was hoped that given significant detailed information, the panel would identify the specific direction to pursue in satisfying the Terms of Reference.

On 26 August 1986 the SDI Panel met at the DIAC on Bolling AFB. The morning session was devoted to several briefings and the afternoon session devoted to executive discussions. The majority of the briefings and resultant discussions were about SDI intelligence requirements, and the Intelligence Community response to stated intelligence requirements. The Executive Session lasted the entire afternoon. During the session the members attempted to focus the information provided into a meaningful framework to satisfy the panel's Terms of Reference.

The full Scientific Advisory Committee met on 3-4 September 1986 at the DIAC on Bolling AFB. The Committee was given a series of briefings of significant and current interest to the Intelligence Community. Although the briefings were varied in their subjects, the members felt that they had received a very good and chronologically ordered presentation of the most current intelligence issues pertaining to science and technology. Present and future capabilities superimposed on requirements of the present and future dominated the panel's interest.

On 5 September 1986 the Survivable and Enduring Intelligence System (SEIS) Panel met at the DIAC on Bolling AFB. The panel heard and discussed the status of DIA special plans.

On 16 September 1986 the [redacted] Panel met at the DIAC on Bolling AFB. The meeting was held to finalize the panel's report. A draft copy of the report was given to each member to review and edit, after which the report was finalized and prepared for approval.

The SDI Panel met on 23 September 1986 at the DIAC on Bolling AFB. The express purpose of the meeting was to finalize the panel's report. This was accomplished by distributing a copy of the draft report for each member's review and edit. A date was set for the final review of the report before submitting it for approval.

The last SDI Panel meeting was held on 14 October 1986 at the DIAC on Bolling AFB. This meeting was designed to wrap up the panel's final report. Each member reviewed a copy of the working draft. The draft report had been reviewed and annotated by DIA experts in the subject. To obviate the need for another meeting of the entire panel, the panel agreed to have the chairman incorporate the various inputs from each panel member into the finished report.

(b)(3):10 USC 424,(b)(6)

Chairman
Scientific Advisory Committee

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~~SECRET~~

[redacted]

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

TWO PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED.

MEMORANDUM FOR GENERAL CARROLL (b)(3):10 USC 424,(b)(6) 19 July 1966

SUBJECT: Annual Report of the DIA Scientific Advisory Committee

1. The DIA SAC completed its first year of operations in July 1966. During the year the following were accomplished:

a. Completed organization and selection of members Feb. 1965 to June 65. Fifteen members were initially selected, one of whom resigned (b)(3):10 USC 424 to devote more time to the President's Scientific Advisory Committee; and one resigned (b)(3):10 USC 424 to become Director, DDR&E. Present membership is 13.

b. Five priority projects were assigned by the Director for study with initial priority given to three. They were:

(b)(1),(b)(3):10 USC 424,1.4 (c)

c. Subsequently the SAC was asked to assist DIA in developing a response to a JCS memo on Soviet accomplishments in the nuclear area and to evaluate the (b)(1),(b)(3):10 USC 424,1.4 (c) Against these requirements the SAC initially established three panels and later organized the Committee as a whole to address the ABM problem. The Committee has responded with eight formal actions as follows:

(1) On (b)(1),(b)(3):10 USC 424,1.4 (c) the report has undergone many revisions and reviews under the Panel Chairman, (b)(3):10 USC 424 It has been reviewed and approved by the SAC and was completed this month. It will be presented to

Review On 19 July 1986

~~SECRET~~

you at the meeting on 22 July as 66-3. As a result of the deliberations of the Panel a paper was drafted on intelligence relationships. It addresses the desired but not yet attained relationships between production and collection; and between the consumer and the producer. This paper has not been approved primarily because the subjects treated have not been adequately discussed in Committee and all interested parties in DIA have not yet participated in the subject, especially collection. This paper may never be submitted to you by the SAC.

(b)(1),(b)(3):10 USC 424:1.4 (c)

(2) On [redacted] the Panel under (b)(3):10 USC 424 has completed its report. The SAC reviewed and approved the report and it was disseminated by DIA as 66-1. Dissemination was to OSD, JCS, the Military Departments, DIA, NSA and CIA. [redacted] was designated as responsible for follow-up action. (b)(3):10 USC 424 [redacted] have been provided with a proposed plan of action.

Pursuant to a verbal request from the Director, DIA, when the [redacted] was presented a letter has been prepared by the Panel and approved by the SAC, indicating their views on the adequacy or inadequacy of the collection and analysis effort on [redacted] This letter (copy enclosed) will be presented to you at the meeting on 22 July.

(b)(1),(b)(3):10 USC 424,1.4 (c)

(3) On the question of [redacted] a Panel was established (b)(3):10 USC 424. After extensive discussion and review, a memorandum reply was made to DIA on 3 December 1965 indicating that: (a) considering the number of factors involved and the range of value for each, the apparent [redacted] (b) [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

The advice of the SAC on this problem has already been reflected in the latest version of the NIPP - Section 4, which was prepared initially (b)(3):10 USC 424

The Panel continues to study this problem and a report is in draft now (after several attempts) to fulfill the requirement. A tentative conclusion, still subject to Committee review, is that the nuclear materials production is a long lead time factor; (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) On this basis the following conclusions are derived:

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(or some combination of (1), (2), (3), and (4) above.

(b)(1),1.4 (c)

[redacted] The SAC response and consultations were used by DIA in preparing a memorandum reply to the JCS.

(4) [redacted] the SAC, acting as a full Committee with [redacted] chairing, has submitted three papers: an initial report in relation to NIE-11-3-65, and an initiative memorandum [redacted] These two responses were used only within DIA. After an extensive study of the [redacted] problem the SAC prepared a third paper, 66-2. This paper contained essentially a summary conclusion on the [redacted] program and a brief supporting discussion. In addition the SAC worked closely with DIA in the development and review of a comprehensive paper on the [redacted] program. In response to a requirement from [redacted] both the SAC report and the DIA report were disseminated to OSD, JCS, the Military Departments, CIA, NSA, certain USIB members, and to PSAC.

The SAC, at the request of the Director, DIA, reviewed the DIA study [redacted] on two occasions prior to that study being presented to the JCS and its subsequent dissemination to the Military Departments, OSD and CIA.

(b)(1),1.4 (c)

2. The workload has been such that the [redacted] has not yet been undertaken by the SAC. It is a problem that is now in the planning stage and is discussed under the heading of future SAC projects.

During the year the SAC has provided a most useful forum for competent technical review of the analytical work done by the Army, Navy, Air Force and DIA technical analysts. This review has been of direct technical

assistance to the analysts and at the same time has stimulated them to higher quality performance. A typical example was the SAC review of the [redacted] study. (b)(1),1.4 (c)

The SAC has provided individual and various size group consultation to DIA. This consultation has been especially valuable to DIAST personnel and the continuing access to leading scientists of the nation is a valuable part of the overall SAC operation.

Finally, the SAC has provided a mechanism for obtaining additional part time consultants. The procedure was used in connection with [redacted] problem; is being used in the present Over-the-Horizon radar problem and we are now in the process os using it to bring together a group to assist in the evaluation (b)(1),1.4 (c)

We have obtained the services of the SAC for this year for about $30,000. In addition, direct salaries of the Secretariat amount to less than $20,000, or a total of under $50,000.

3. Future SAC projects:

a. The [redacted] and the [redacted] have essentially completed their projects. However, the [redacted] did recommend further study on Soviet unconventional [redacted] It would appear desirable for DIA to do some further work on this problem before the SAC undertakes additional study.

b. No specific project effort is indicated for the SAC [redacted] at this time. However, the SAC assistance is needed to evaluate the possible significance of the "Over-the-Horizon" electronics and their possible relationship to [redacted] Tentative plans are being made to do this using some additional consultants to the SAC. (b)(1),1.4 (c)

c. The [redacted] Panel is nearing completion of its project. Some follow-up action may be indicated after the SAC presents the report. (b)(1).1.4 (c)

d. The [redacted] although one of the initial projects listed, was put in a lower category at that time - recognizing that the SAC could not undertake all five projects simultaneously - and perhaps not in the first year. This problem is now of greater importance and could now be addressed by the SAC. However, it is proposed that DIA prepare a study on this problem somewhat as we did on [redacted] The SAC role could be devoted to the following:

(1) A review of the production requirements for data and information and of the existing [redacted] This review could lead to recommendations for improvements, modifications or [redacted] and deletion of some [redacted] (b)(1).1.4 (c)

(2) A review of processing and exploitation methodology.

(3) A technical evaluation of the DIA study when it is completed.

(4) Consultants to DIA during the study.

3. Recommendations: On the basis of the past year's experience the following recommendations are made:

a. The SAC should be continued in essentially its present form but its membership increased by at least three persons as follows:

(1) Command and control

(2) Space systems and technology

(3) Tactical warfare systems and techniques.

b. All future projects for the SAC should be described in writing to the Chairman and signed by the Director or Deputy Director.

c. The SAC reports should be expanded to include additional rationale and evidence to support the conclusions.

d. The frequency and length of meetings of the SAC should be modified to reduce the demands on the SAC members in recognition of the heavy demands of their primary duties.

4. A copy of the agenda for the 22 July meeting is attached (enclosure 2).

(b)(3):10 USC 424,(b)(6)

Assistant Director for Scientific
and Technical Intelligence

2 Enclosures a/s

~~SECRET~~

FILE DESIGNATION

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S-131/AC

26 July 1968

DIAST (b)(3):10 USC 424

DIAAC (b)(3):10 USC 424

Input to FY-68 Report to the PFIAB

Per your request for the subject input, the attached sheet contains a brief summary of the DIA/SAC activities for FY-68.

(b)(3):10 USC 424,(b)(6)

Secretary, DIA/SAC

1 Enclosure
FY-68 DIA/SAC Activity (S)

DISTIRUBITON: 1 forward
1 coord

(b)(3):10 USC 424

~~SECRET~~

RETURN FOR FILING TO:
DIAAC

DIA FORM 343 (12-66)

FISCAL YEAR 1968 DIA/SAC ACTIVITY

The DIA Scientific Advisory Committee (SAC) continued to provide the Director, DIA, with expert technical advice on critical technical intelligence matters. Committee membership was maintained at seventeen members. (b)(1),1.4 (c) [redacted] This Panel consists of two regular Committee members plus seven additional consultants. The DIA/SAC continued a substantial level of activity with 26 formal meetings of the full Committee or its panels or working groups. In addition, individual members of the Committee provided consultant services to DIA in a wide variety of areas, such as satellite collection approaches, U.S. OTH radars for collection, assessment of a variety of Soviet and CHICOM installations and activities, requirements for [redacted] Soviet ASW capabilities, evaluation of [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] and others. Formally published DIA/SAC reports covered the SS-X-6 [redacted] the [redacted] the Soviet/CHICOM threat to the command and control for POLARIS, and information needs and collection approaches against the Chinese strategic missile program. In addition, advisory letters were furnished to the Director, DIA, on such topics as the ASW threat, activities possibly related to Soviet OTH radar development, and a variety of aspects of (b)(2),(b)(3):10 USC 424,1.4 (c) [redacted] The Committee has continued to monitor Soviet developments in relation to the overall ABM problem and

Review On 26 July 1988

DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED DOD DIR. 5200.10

other key technical intelligence areas related to Soviet and CHICOM activity. Formal studies are currently underway on the Soviet detection and tracking threat against POLARIS submarines and on specific aspects of the Soviet effort to upgrade its ICBM performance.

140

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FILE DESIGNATION

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S-180/AC

DIAST (b)(3):10 USC 424

7 July 1969

DIAAC

DIA/SAC Activities FY 1969

Per your telephone request, the attached description of the DIA/SAC activity for FY-69 is provided for inclusion with the description of other DIA activity in a report to the PFIAB.

(b)(3):10 USC 424

DIA/SAC Secretary

1 Enclosure
DIA/SAC Activity (~~SECRET~~ Working Paper)

(b)(3):10 USC 424

~~SECRET~~

RETURN FOR FILING TO:

DIA FORM 248 (12-66)

~~SECRET~~ WORKING PAPER

FISCAL YEAR 1969 DIA/SAC ACTIVITY

1. ~~(S)~~ The DIA Scientific Advisory Committee (SAC) continued to provide the Director, DIA, with expert technical advice and consultation on critical technical intelligence matters. The DIA/SAC maintained a substantial level of activity with 7 meetings of the full Committee and 23 meetings of its panels or working groups. [redacted] In addition, individual members of the Committee provided consultant services to DIA in a wide variety of areas, such as application of information sciences, [redacted] and newly proposed efforts to [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

2. ~~(S)~~ Formally published DIA/SAC reports covered:

a. The recommended use of a satellite platform for [redacted]

(b)(1),1.4 (c)

b. A technical evaluation of the capability of the U.S. [redacted]

(b)(1),1.4 (c)

c. An evaluation of the need for and the utility of [redacted]

(b)(1),1.4 (c)

Review On 7 July 1989

~~SECRET~~

(b)(1),1.4 (c)

d. A comprehensive evaluation by the [redacted]

e. An interim evaluation of the Soviet SS-9 [redacted] based on [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

3. ~~(S)~~ Formal studies currently underway include:

a. Analysis of the [redacted] to be expected from Soviet/CHICOM ICBM accuracy, [redacted] and evaluation of possible U.S. collection approaches against such efforts.

(b)(1),(b)(3):10 USC 424,1 4 (c)

b. Analysis and evaluation of the threat to the Fleet Ballistic Missile System (POLARIS and POSEIDON) posed by the extant and evolving ASW capabilities of the Soviet Union and China.

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(b)(2),(b)(3):10 USC 424

S-164/AC

DIACC (b)(3):10 USC 424

23 June 1969

DIAAC

Committee Review - RCS: DD-A(OT) 6912

Per your request, enclosed is the review of the DIA Scientific Advisory Committee.

(b)(3):10 USC 424

Assistant Director for Scientific
and Technical Intelligence

1 Enclosure
Review of the DIA/SAC (S)

UPON REM[illegible]
DOCUMENT [illegible]

SECRET

RETURN FOR FILING TO:

DIA FORM 243 (12-66)

COMMITTEE REVIEW - RCS: DD-A(OT) 6912

1. (U) Name of Committee: Defense Intelligence Agency Scientific Advisory Committee

2. (U) Date of Establishment: 12 February 1965

3. (U) Date Through Which Committee is Authorized: 10 February 1971

4. (U) Identity of Charter: "Defense Intelligence Agency Scientific Advisory Committee Charter"
Approved 12 February 1965
Reapproved 31 December 1968

5. (U) Statement of Mission:

The Committee will provide DIA with up-to-date scientific and technical knowledge and thought bearing on the DIA mission. Its scope will include advice and assistance on any problem that may affect the scientific and technical mission of DIA. Its function will be solely advisory. Specifically, the Committee will report to the Director of DIA in performing the following advisory functions:

a. Reviewing and evaluating selected current and projected DIA scientific and technical intelligence collection and analytical projects and programs; and providing advice on the technical adequacy.

b. Making selected studies aimed at improving the DIA scientific and technical intelligence effort and results. These studies may involve the scientific and technical methods used in carrying out the DIA mission, the analytic techniques for processing and evaluating data, and the results obtained from analyses.

Review On 23 June 1989

DOWNGRADED AT 12 YEAR INTERVALS;
NOT AUTOMATICCALLY DECLASSIFIED
DOD DIR. 5200.10

c. Recommending and advising on unusually promising scientific and technical ideas, techniques, developments and analyses for DIA consideration.

d. Serving as a pool of expert advisors, either as individuals or in groups, to various DIA activities. This service will be provided at the convenience of individual Committee members.

6. (U) Name of Chairing Activity, Chairman and Secretary:

Chairing Activity: Defense Intelligence Agency

Chairman: (b)(3):10 USC 424

Secretary: (b)(3):10 USC 424

7. ~~(C)~~ Membership:

(b)(3):10 USC 424,(b)(6)

(b)(3):10 USC 424,(b)(6)

8. (U) Funding and Staffing Arrangements:

The funds to support the DIA/SAC are primarily for travel and per diem and are provided as part of the operating expense funds of the Assistant Director for Scientific and Technical Intelligence, DIA. The staff support for the DIA/SAC is provided by the DIA/SAC Secretariat consisting of four persons:

Executive Secretary: LtColonel, USAF

Assistant Secretary: Major, USA

Administrative Officer: GS-8

Clerk-Stenographer: GS-6

9. (U) Number of Meetings Held or to be Held During Current Fiscal Year:

Full Committee: 7 Meetings - 8 Days

Panels and Working Groups: 23 Meetings - 29 Days

10. ~~(S)~~ Subcommittees and Panels:

a. Name of Subcommittee:

(b)(1),1.4 (c)

c. Date of establishment: September 1966

11. ~~(S)~~ Background and Accomplishments:

The Scientific Advisory Committee to DIA was formed in 1965 to provide consultant and advisory services to the Director, DIA, on all technical aspects of the DIA mission. The first meeting was held in July 1965. During its 4 years of activity the DIA/SAC has held 30 full Committee meetings and 118 Panel or Working Group meetings. It has published 26 formal DIA/SAC Reports or Memoranda. In addition, it has submitted a number of informal letters containing recommendations and other advice to the Director, DIA, and has provided extensive group and individual consultant assistance to the DIA staff. The following are examples of major advisory service provided by the DIA/SAC:

(b)(1),(b)(3):10 USC 424,1.4 (c)

12. ~~(S)~~ Evaluation and Justification for Continuation:

The activity of the DIA/SAC has remained at a high level throughout FY-69, and its continuing high value to DIA and DoD has been demonstrated. Five formal documents were published during the year: four reports and one memorandum. In addition, the DIA/SAC has three reports and one memorandum in the final stages of review and preparation for publication. The reports were prepared in direct response to requests from the Director, DIA, for technical assistance and advice in areas of critical importance to the mission of DIA.

Accordingly, these reports address areas vitally affecting the strategic posture of the Soviet Union and Communist China in relation to that of the United States. Areas covered include the following:

a. The use of a satellite platform for basing [redacted] concurrently with the formalization by USIB of the national intelligence requirements and objectives [redacted] (b)(1),1.4(c)

b. A technical evaluation of the capability of the U.S. [redacted] (In response to a specific requirement by the Deputy Secretary of Defense)

(b)(1),1.4 (c)

c. An evaluation of the need for and the utility of [redacted]

d. A comprehensive evaluation [redacted] This evaluation considered numerous questionable areas and possible technical and cost trade-offs identified by DIA. This report included further [redacted]

e. An interim evaluation of the Soviet SS-9 multiple RV capability based on analysis of data from the first six flight tests and knowledge of the occurrence of a seventh test flight.

f. An analysis of the likely Soviet approaches to improved ICBM accuracy and penetration aids and likely achievement in terms of improved performance and capability.

g. An analysis of the observables to be expected from Soviet/CHICOM ICBM accuracy, penetration aid and multiple RV efforts, and an evaluation of possible U.S. collection approaches against such efforts.

(b)(1),1.4 (c)

[redacted]

i. An analysis and evaluation of the threat to the Fleet Ballistic Missile System (POLARIS and POSEIDON) posed by the extant and evolving ASW capabilities of the Soviet Union and China.

In addition to the formal publications discussed above, the DIA/SAC prepared and submitted to the Director, DIA, letters presenting advice and recommendations on very specific matters or as follow-ups to the formal reports or memoranda. Such letters addressed areas including the

(b)(1),1.4 (c) [redacted] the possible formation of an information sciences panel under the DIA/SAC, and additional considerations in relation to the Soviet SS-9 multiple RV capability.

Still another area of the Scientific Advisory Committee support to DIA is individual consultant service to various elements of the DIA staff. For instance, individual members of the DIA/SAC have provided valuable technical support and advice to newly proposed efforts to collect data by

(b)(1),1.4 (c) [redacted]

In general, the DIA/SAC provides a broad spectrum of technical perspective as well as a high level of expertise in areas critical to the DIA technical intelligence mission. Such perspective and expertise are highly important to the formulation of assessments and judgements in the technical intelligence area, because the available data and information is always fragmentary. These judgements play a strong role in the evaluation of the relative strategic posture of the U.S. vis-a-vis the Soviet

Union, China, etc., in the world today and for the foreseeable future, and hence have a major impact on our national defense policies and programs.

The DIA/SAC is a vital contributor to the formulation of the technical intelligence assessments of the DIA and to the formulation of collection approaches and procedures. It provides valuable assistance toward the accomplishment of the DIA mission.

13. (U) Recommendation:

The DIA Scientific Advisory Committee should be continued as an advisory committee to DIA.

DEFENSE INTELLIGENCE AGENCY 23 June 1969

U-12/SAC

CC-2B

DT /SAC/(b)(3):10 USC 424/8 Jan 74

Annual Report of the DIA Scientific Advisory Committee

Reference: Your Memo, C-737/CC-2B, 8 Nov 73, subj: Annual Report of Advisory Committees, RCS: DD-A(A)1195

Enclosed is the annual report of the Scientific Advisory Committee for CY-73.

1 Encl a/s

(b)(3):10 USC 424
Deputy Director for Scientific
and Technical Intelligence

Three pages are denied in full and are not included.

DISTR:
1 fwd
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ANNUAL REPORT OF ADVISORY COMMITTEES

Report Period: CY 1973

DEFENSE INTELLIGENCE AGENCY

1. Scientific Advisory Committee

2. Continuing Committee

3. Date of Continuation: 17 January 1973

4. Establishment Authority: DASD(A) Memo for the Director, DIA, 17 Jan 73, subj: Advisory Committees

5. Established by: c - Agency authority.

6. Termination date: 5 Jan 75.

7. Function of the Committee: To provide the Director, DIA with scientific and technical advice and assistance in those areas and disciplines of major importance to the DIA. Its scope covers any scientific or technical matter affecting the DIA mission. Specifically, the Committee performs the following advisory functions:

a. Reviews and evaluates selected areas of the DIA scientific and technical intelligence program and recommends improvements, as appropriate. These studies may involve the scientific and technical methods used in carrying out the DIA mission, the analytic techniques for processing and evaluation data, and/or the results obtained from the analyses.

b. Recommends and advises on unusually promising scientific and technical ideas, techniques, developments, and analyses which may be usefully applied to the DIA mission.

c. Serves as a pool of expert advisors and consultants either as individuals or in groups, to advise individual DIA activities. This service is provided at the convenience of the individual committee members.

d. Performs other special projects as requested by the Director, DIA.

8. Reports Submitted:

73-1	[redacted] Panel Report	Mar 73
73-2	Interim Report of the Silo Panel	Apr 73
73-3	The Antiship Missile Report	May 73
74-1	Project [redacted]	Aug 73
74-2	Second Interim Report of Silo Panel	Sep 73
S-262	Advanced Missile Guidance Panel Report (Memo)	Oct 73

9. Actual dates of all meetings (See encl 1)

   a. (See encl 1).
   b. None
   c. (See encl 1 - all closed).
   d. None open, 33 closed.
   e. Director DIA Memorandum to Chairman, DIA Scientific Advisory Committee, U-520/CC-2B, 2 Feb 73, subject, "Meetings of the DIA Scientific Advisory Committee," copy attached (Encl 2).

10. Names, occupations, and addresses of Members (Encl 3).

11. Annual cost to maintain Committee. $80,000.

12. Two man-years of staff support annually.

13. (b)(3):10 USC 424

14. Defense Intelligence Agency Scientific Advisory Committee

15. Justification for the Committee:

The DIA/SAC is composed of eminent civilian scientists, engineers, managers and academicans possessing a vast depth of knowledge on a wide range of subjects applicable to the scientific and technical portions of the DIA mission. This includes matters relating to the collection, processing and dissemination of intelligence data as well as the technical assessments of foreign weapons systems. Specific areas of expertise possessed by the Members include propulsion, aerodynamics, nuclear technology, guidance and control theory, radar technology, signal processing, ADP and computer sciences, information theory, optics, lasers, infra-red technology and many more. Most of the Members have been directly involved in the design, production or deployment of U.S. strategic and tactical missiles and aircraft, space systems, and collection and processing systems, or of major components of these systems, and as a group they afford the Director DIA with advice and counsel which is not otherwise available within the organization. The Committee review in detail those problems arising in accomplishment of the DIA mission which are specifically directed for review by the Director. They make recommendations only and actions are taken on these recommendations only after review by full-time DIA employees.

16. Evaluation of the SAC during CY-73.

During this reporting period the SAC has been productive and effective. In addition to the five regularly scheduled meetings to review a variety of topics, there have been 10 sub-groups or panels actively reviewing specific problem areas which required in-depth study. Formal reports resulting from these Panel studies, and an unclassified resume of recommendations and actions taken on the reports follow:

A. Report 73-1 (b)(3):10 USC 424 Panel Report

The Panel reviewed one of the critical monitoring programs of the U.S. and made a major recommendation concerning proposed changes to the system. Action was taken through appropriate channels to ensure that any changes would not degrade the current capability of the system.

B. Report 73-2 Interim Report of the Silo Panel

The Panel made recommendations in 5 specific areas for work which needs to be accomplished in order to reduce uncertainties in our knowledge of the subject. These recommendations have all been used in directing the on-going analytic efforts of DIA and Service agencies.

C. Report 73-3 The Antiship Missile Report

As a result of this in-depth study, the Panel made 4 specific recommendations for the abolishment, continuation or reorientation of certain programs. The recommendations were forwarded to appropriate officials in DoD and Service agencies for their consideration and have been used in modifying DIA plans.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

D. Report 74-1 [redacted]

This Panel made 6 specific recommendations for analyses or actions which should be accomplished. Two of the recommendations have been rejected by the DIA due to the low likelihood of success, two recommendations are being initiated, one recommendation was already being accomplished, and the sixth recommendation has been held in abeyance pending the outcome of those being pursued.

E. Report 74-2 Second Interim Report of the Silo Panel

The Panel made recommendations for six new or continued analyses which need to be accomplished to answer specific questions relating to this nationally important subject. The recommendations are being used by DIA to guide the analytical work being done in this area.

F. Advanced Missile Guidance Panel Report (Memo)

This Panel was created to provide guidance for analytical work being done on this subject. Most of the Panel's recommendations were provided verbally to analysts during Panel meetings and were acted on during the life of the Panel. In their final report the Panel made one additional recommendation, which has been acted upon by the appropriate agencies.

Eight letter reports were sent by the Chairman DIA/SAC to the Director DIA during this period concerning items which were discussed during the regularly scheduled Committee meetings. In these letters the Chairman passed to the Director the Committee's conclusions and recommendations on 29 separate subjects or problem areas. These reports were staffed in the DIA and actions were initiated on those items which were deemed to be appropriate and feasible.

A letter was forwarded to the Director by the Chairman of the Imagery Panel, currently studying possible future systems, regarding concerns of the Panel members in two areas for which answers need to be developed before future decisions can be made by appropriate individuals. The concerns were concurred with by the Director and appropriate agency was asked to investigate the problems.

A great amount, probably at least half, of the SAC's effectiveness is not reflected in the above reports, but is derived from the discussions which take place between the Members and the agency technical analysts during the Committee and Panel meetings. The Committee is purposely used as a sounding board on approaches being used in technical assessments of new systems as well as to pass judgment on the validity of assumptions which must be made by the analysts. Because of the knowledge and experience of the Committee Members, analysts are eager to obtain the SAC's views and the real value of this exchange is impossible to quantify. Much of the credit for the success of the DIA to arrive at sound and supportable technical assessments must be given to these discussions.

17. Recommendation for a specific period of continuation.

During the past calendar year, 4 ad hoc Panels of the SAC have been discontinued, 2 have been continued and 4 new ones have been established. This reflects the level of activity of the SAC beyond the regularly scheduled Committee meetings and it is anticipated that a similar pattern will exist during CY-74.

It is strongly recommended that the DIA/SAC be continued through 5 January 1975 as approved in ODASD(Administration) Memorandum to the Director DIA on 17 Jan 1973. The need to continue the SAC beyond that time will be critically reviewed by DIA before that date, and appropriate justification will be forwarded to ODASD(A) if it is desired to further continue the Committee.

3 Encls a/s

Full Committee

5-6 Feb (postponed from 18-19 Jan)
4-5 Apr
21-22 Jun (postponed from 20-21 Jun)
18-19 Sep
13-14 Nov

Sub-Committee (Panels)

4-5 Jan
9 Jan
18 Jan
20 Jan (postponed from 25 Jan)
23 Feb
19 Mar
5 Apr
11 Apr
30 Apr-1 May
2 May (postponed from 1 May)
15 May
30 May
6 Jun
14 Jun (postponed from 13 Jun)
11-12 Jul
16-17 Jul
18 Jul
24-25 Jul
26-27 Jul
20-21 Aug
31 Aug
2-3 Oct
29 Oct
2 Nov (postponed from 18 Oct)
12 Nov
15 Nov
13 Dec
14 Dec

Total: 33 Meetings

Encl 1

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(41 CFR) 101-11.6

'ED STATES · VERNMENT

Memor: dum

U-520/CC-2B

TO : Chairman, DIA ·ientific Advisory Committee

DATE: 2 FEB 1973

FROM : DR

SUBJECT: Meetings of the DIA Scientific Advisory Committee

1. The Federal Advisory Committee Act (P.L. 92-463) which became effective 5 January 1973, requires advisory committees to hold open meetings unless certain conditions exist which fall within policies analogous to those recognized in Section 552(b), Title 5 of the U.S. Code.

2. I have determined that meetings of the DIA Scientific Advisory Committee and its several panels cannot be open to the public because the matters to be considered pertain to U.S. intelligence information and activities that are classified and sensitive, and are specifically required to be kept secret in the interest of national defense. For the same reason, the detailed records of meetings of the committee and its panels should not be made available to the public. However, in accordance with provisions of the above cited Public Law, it is respectfully requested that you arrange for the preparation of an unclassified annual summary of the committee's activities which can be made available to the public.

3. This memorandum provides for closed meetings under the provisions of The Federal Advisory Committee Act, whereas my similar memorandum of 2 October 1972 concerned closed meetings under Executive Order 11671, which was superseded by the Act on 5 January 1973. Both of these should be retained in the permanent records of the committee.

(b)(6)

V. P. de POIX
Vice Admiral, USN
Director

cc:
DT

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

U-3/SAC

CC (ATTN: (b)(3):10 USC 424

DT /SAC/(b)(3):10 USC 424 mb/2 Jan 75

Annual Report on Federal Advisory Committee, P.L. 92-463

Reference: Your Memo, U-729/CC-2B, 22 Nov 74, subject as above.

1. The following information on the DIA Scientific Advisory Committee is forwarded to satisfy the reporting requirements of the Federal Advisory Committee Act, P.L. 92-463:

a. SF 248 Annual Report of Federal Advisory Committee.

b. SF 249 Membership List of Federal Advisory Committee

c. Annual Report on Closed Meetings of the DIA Scientific Advisory Committee

2. Supplemental information as requested is provided as follows:

a. Estimated total cost to fund and maintain the Scientific Advisory Committee in calendar year 1975:

Two man-years support	$37,000
Travel & TDY costs	38,000
Other	5,000
	$80,000

b. All meetings of the Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463, and paragraphs 1 and 3, Section 552(b) of Title 5 U.S. Code.

c. To insure a balanced membership on the Committee, the Members at Large who attend the regularly-scheduled Committee meetings, and who form the nucleus for ad hoc panels, normally serve terms of not more than 4 consecutive years, although the membership of the Committee is subject to annual review and approval by the Director. Membership for 25 percent of the Members at Large will normally expire each June 30th. Associate Members are appointed to the Committee on the basis of their special qualifications, to participate in studies by temporary ad hoc panels of the Committee. Associate members serve for the duration of the panel for which they have been selected.

(b)(3):10 USC 424,(b)(6)

Deputy Director for Scientific and and Technical Intelligence

3 Encls a/s

DISTRIBUTION:
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OPTIONAL FORM NO. 10
JULY 1973 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

U-729/CC-2B

TO : DT (Attn: (b)(3):10 USC 424 USAF)

DATE: 22 NOV 1974

FROM : CC

SUBJECT: Annual Report on Federal Advisory Committee, P.L. 92-463

1. The following information on the Scientific Advisory Committee is required to satisfy the reporting requirements of the Federal Advisory Committee Act, P. L. 92-463:

a. The completion of SF 248 and SF 249 for each advisory committee or subcommittee. Preparation instructions are attached. An original and six copies are required. (enclosure 1)

b. A separate report in narrative form for all closed meetings conducted by the Scientific Advisory Committee or subcommittees in calendar year 1974. Preparation instructions are attached. An original and nine copies are required. (enclosure 2)

c. A transmittal memorandum that includes the following information:

(1) A summarized estimate of the total cost to fund, supply and maintain the Scientific Advisory Committee in calendar year 1975.

(2) A recapitulation of exemptions under the Freedom of Information Act used as a basis for closed meetings in calendar year 1974.

(3) Actions taken to ensure balanced membership on the Scientific Advisory Committee.

2. Since the information required in paragraph 1 above, will be made available to the general public, only unclassified information will be included in reported information.

3. To ensure timely submission to DASD(Administration), it will be necessary that this office receive submissions no later than COB 6 January 1975.

4. Questions should be referred to (b)(3):10 USC 424

(b)(3):10 USC 424,(b)(6)

2 Enclosures a/s

Comptroller

5010-110

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

Interagency Report Control No. [illegible]

ANNUAL REPORT OF FEDERAL ADVISORY COMMITTEE	1. DEPARTMENT OR AGENCY: Defense Intelligence Agency	2. CALENDAR YEAR: 1974

3. EXACT NAME OF ADVISORY COMMITTEE

Scientific Advisory Committee

4. COMMITTEE STATUS

a. [ ] NEW THIS YEAR
b. [X] IN EXISTENCE AT END OF YEAR
c. [ ] MERGED INTO ANOTHER COMMITTEE DURING YEAR
d. [ ] ABOLISHED DURING YEAR
e. [ ] EXPIRED DURING THE YEAR
f. [ ] EXISTING COMMITTEE-FIRST CHARTER

5. ESTABLISHMENT AUTHORITY (Check one)

a. [ ] SPECIFICALLY DIRECTED BY LAW
b. [ ] AUTHORIZED BY LAW
c. [X] AGENCY AUTHORITY
d. [ ] PRESIDENTIAL DIRECTIVE

6. SPECIFIC ESTABLISHMENT AUTHORITY

DASD(A) Memo for the Director, DIA, 17 Jan 73, subj: Advisory Committees

7. COMMITTEE TYPE	8. ESTABLISHMENT DATE	9. LAST CONTINUATION DATE	10. TERMINATION DATE	11. NEXT CONTINUATION DATE	12. COMMITTEE CHARTER REVISED DURING YEAR?
a. [ ] PRESIDENTIAL b. [ ] AD HOC c. [X] CONTINUING	Feb 1965	Jan 1975	None	Jan 1977	a. [ ] YES b. [X] NO

13. BRIEF STATEMENT OF FUNCTION

The Committee provides a valuable link between the DIA and the scientific and industrial communities of the nation. It provides the Director with scientific and technical (S&T) advice and assistance in those areas and disciplines of major importance to the DIA. The scope of topics considered by the Committee covers any scientific matter affecting the DIA mission, including the application of S&T knowledge to fulfilling the DIA mission. Its function is solely advisory and determination of actions to be taken on Committee findings and recommendations is made by full-time, salaried employees or officers of DIA. Specifically, the Committee performs the following advisory functions:

a. Reviews and evaluates selected current and projected DIA S&T intelligence efforts and results and recommends improvements, as appropriate. These studies may involve the S&T methods used in carrying out the DIA mission, the analytic techniques for processing and evaluating data, and the results obtained from technical analyses. (Cont'd.)

14. TOTAL NUMBER OF ALL REPORTS SUBMITTED BY THE COMMITTEE DURING THE CALENDAR YEAR 4

TITLES	DATES
Ltr report to Director, DIA	13 Jun 74
Panel Report 74-3	Jun 74
Interim Report 75-1	Oct 74
Ltr report to Director, DIA	20 Dec 74

15. MEETINGS

a. TOTAL NUMBER OF OPEN MEETINGS 0

b. TOTAL NUMBER OF CLOSED MEETINGS 22

c. TOTAL NUMBER OF PARTIALLY CLOSED MEETINGS 0

d. ACTUAL DATES OF ALL MEETINGS

15 Jan 74	5-6 Feb 74
24 Jan 74	15 Mar 74
29 Jan 74	2 Apr 74
31 Jan - 1 Feb 74	(Cont'd.)

16. ESTIMATED ANNUAL MAN-YEARS OF FEDERAL STAFF SUPPORT FOR THE COMMITTEE 2

17. TOTAL ANNUAL COST TO THE U.S. TO FUND, SUPPLY AND MAINTAIN THE COMMITTEE $ 80,000

18. STATEMENT OF ANY INFORMATION EXCLUDED FROM THIS REPORT FOR REASONS OF NATIONAL SECURITY

19. TOTAL NUMBER OF COMMITTEE MEMBERS 27, ATTACH SF-249, MEMBERSHIP LIST OF FEDERAL ADVISORY COMMITTEE

(See Instructions on reverse)

[illegible]

Continuation Sheet

Item No. 13

b. Advises on new or improved methods for evaluating the effectiveness of various intelligence sources which will aid the Director, DIA, in establishing resource allocations among these programs, consistent with national intelligence requirements.

c. Serves as a pool of advisors, individually or in groups, to various DIA activities. This service is provided at the convenience of the individual Committee members.

d. Performs other special projects as requested by the Director.

Item No. 15.d.

3-4 Apr 74
9 Apr 74
6-7 May 74
8 May 74
31 May 74
4 Jun 74
5-6 Jun 74
7 Jun 74
14 Jun 74
23 Aug 74
10-11 Sep 74
1-2 Oct 74
21-22 Nov 74
9 Dec 74
10-11 Dec 74

MEMBERSHIP LIST OF FEDERAL ADVISORY COMMITTEE	1. DEPARTMENT OR AGENCY Defense Intelligence Agency	PAGE 3 OF
3. EXACT NAME OF COMMITTEE Scientific Advisory Committee		4. CALENDAR YEAR 1974

5. NAME AND ADDRESS OF CHAIRMAN	6. NAME AND ADDRESS OF AGENCY REPRESENTATIVE
(b)(3) 10 USC 424,(b)(6)	

(See Instructions on reverse)

STANDARD FORM
August 1974

MEMBERSHIP LIST OF FEDERAL ADVISORY COMMITTEE	1. DEPARTMENT OR AGENCY	2. PAGE 2 OF 3 PAGES
3. EXACT NAME OF COMMITTEE		4. CALENDAR YEAR

5. NAME AND ADDRESS OF CHAIRMAN	6. NAME AND ADDRESS OF AGENCY REPRESENTATIVE
TITLE: OCCUPATION:	TITLE: TELEPHONE:

7. LIST MEMBERS ALPHABETICALLY

(b)(3):10 USC 424,(b)(6)

(See Instructions on reverse)

STANDARD FORM [illegible]
August 1974-GSA

MEMBERSHIP LIST OF FEDERAL ADVISORY COMMITTEE	1. DEPARTMENT OR AGENCY	PAGE 3 OF 3
3. EXACT NAME OF COMMITTEE		4. CALENDAR YR

5. NAME AND ADDRESS OF CHAIRMAN	6. NAME AND ADDRESS OF AGENCY REPRESENTATIVE
TITLE: OCCUPATION:	TITLE: TELEPHONE:

7. LIST MEMBERS ALPHABETICALLY

(b)(3):10 USC 424 (b)(6)	

(See Instructions on reverse)

STANDARD FORM
August 19[illegible]

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1974 Report of Closed Meetings of the
Scientific Advisory Committee
under Section 10(d)
of the Federal Advisory Committee Act

All of the twenty-two Committee and working group meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552(b) of Title 5 U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities that are classified and sensitive, and are specifically required to be kept secret in the interest of national defense.

On 15 January 1974, a meeting of a Committee working group was held at the Electromagnetic Systems Laboratory, Sunnyvale, California to discuss imagery-related matters. The group met to review certain aspects of critical U.S. programs. Topics discussed were imagery mensuration problems and image enhancement techniques. A final report format was agreed upon and the Committee members formed teams for the purpose of writing an initial draft report.

(b)(3):10 USC 424

A meeting of a [redacted] panel was held at Headquarters, National Security Agency (NSA) Fort Meade, Maryland on 24 January 1974. A new development area which deals with the modernization of automatic systems for processing and distributing intelligence data was discussed. The group also considered new capabilities and developments in collection programs. As a result of the group's efforts, a coordinating committee was formed in early 1974 to facilitate the interagency exchange of valuable information needed for planning and budgeting decisions. The committee also recommended to the Director a program of increased coordination between scientific and technical intelligence users and intelligence collection system developers.

(b)(3):10 USC 424

On 29 January 1974, a working group met at the Electromagnetic Systems Laboratory, Sunnyvale, California. The group addressed the subject of [redacted] They received briefings and reviewed the available data base, the most beneficial analytical approach, and the probable potential payoff to be gained from a concerted study effort on this subject. As a result of this meeting, a recommendation was made to increase the intelligence community coordination in this area.

A two-day meeting of a working group was held at the Pentagon on 31 January - 1 February 1974. Representatives from DIA discussed launch complex activities, construction techniques and missile characteristics. The results of recent tests were also reviewed and analyzed. The group worked on a draft report addressing a number of questions regarding the [redacted] Several recommendations were drafted for submission to the Director.

(b)(3):10 USC 424

On 5-6 February 1974, a two-day meeting of the Committee was held at the Pentagon. Representatives from DIA reviewed the results of current intelligence efforts, a proposed new program and foreign ground equipment capabilities. Several analysts discussed foreign R&D facilities and lessons learned from the Yom Kipper War. [redacted] reviewed. In a letter to the Director, DIA, The Committee Chairman made several recommendations relating to most of the agenda items mentioned above. As a result of these recommendations, new and existing programs and techniques were evaluated and considered. Several recommendations were staffed in the DIA and actions were initiated on those items which were deemed to be appropriate.

(b)(3):10 USC 424

On 15 March 1974, a meeting of the imagery working group was held at the Pentagon. The purpose of the meeting was to review the initial draft reports which were written by the Committee members. The reports were discussed in detail and it was agreed that a final Committee draft report addressing several imagery-related problems would be written prior to the next meeting.

On 2 April 1974, a working group met in Los Angeles, California. The Committee was tasked by the Director to study and aid DIA in the analysis of [redacted] associated with strategic forces. The purpose of this meeting was to receive briefings on [redacted] thus giving the group the benefit of the knowledge and experience of U.S. practice and experience in this area. The briefings and discussions enabled the group to formulate a productive course of action in addressing the assigned task.

(b)(3):10 USC 424

A two-day meeting of the Committee was held on 3-4 April 1974 in Denver, Colorado. Briefings were presented which familiarized the Committee with current intelligence operations and procedures. As a result of the briefings and related discussions, the Committee made several recommendations to the Director. A few of the recommendations related to U.S. efforts and [redacted] characteristics were staffed within DIA for additional study.

(b)(3):10 USC 424

On 9 April 1974, a meeting of an imagery working group was held at the Pentagon. The purpose of the meeting was to review a draft report

and to receive an additional briefing on the results of a recently completed imagery-related project. A considerable number of changes were made to the draft report and it was agreed that another meeting would be necessary to finalize the report and to include additional technical data which was needed to support the Committee's conclusions and recommendations.

On 6-7 May, a two-day panel meeting was held at the Pentagon. The purpose of the meeting was to provide a common background base for the panel, to help them carry out their assigned task of [redacted] and to make recommendations to the Director regarding future DIA actions. Briefings covering relevant intelligence material and selected areas of U.S. R&D were provided. Such topics as advanced energy technology and capabilities, and advanced power technology were discussed. This meeting provided the basis for analysis by the panel of specific intelligence questions. (b)(3):10 USC 424

On 8 May, an imagery group met at the Pentagon. The group received two technical briefings on the results of a recent imagery-related project. It was decided that the data presented should be included in the Committee's final report. The draft report was reviewed and it was determined that an executive summary should be written to summarize the Committee's conclusions and recommendations.

On 31 May, a working group held a meeting at the Pentagon. The purpose of the meeting was to consider technical changes made to the Committee's final report on [redacted] A copy of the report was sent to each member prior to the meeting. At this meeting the Committee Report, which was in direct response to a request by the Director, DIA, was approved for publication. The group which was created to examine [redacted] made three specific conclusions. The report was provided to the Director. (b)(3):10 USC 424 (b)(3):10 USC 424

On 4 June 1974, there was a meeting of a working group at the Pentagon. The group reviewed the efforts of two existing working groups and decided on what was believed to be the most productive course of action to satisfy the Director's request. The important intelligence issues which both groups were addressing were closely related and the discussions were quite valuable to all of the Committee members.

A two-day Committee meeting was held at the Pentagon on 5-6 June 1974. Briefings were presented on such items as electronic warfare, a proposed new U.S. system, [redacted] intelligence issues learned from the October War and [redacted] The final report on a [redacted] was reviewed and approved by the Committee and submitted to the Director, DIA. As a result of the discussions at the meeting, the Chairman of the Committee in a letter to (b)(3):10 USC 424

the Director, summarized four specific Committee conclusions with regard to a [redacted] and recommended further study which would aid DIA in the accomplishment of its mission.

(b)(3):10 USC 424

On 7 June 1974, an imagery group held a meeting at the Pentagon. The entire meeting was devoted to finalizing the Committee's letter report to the Director. The report discussed two specific conclusions related to R&D efforts and the modification of procedures and equipment. The report was provided to the Director and it served as a valuable input in the determination of important intelligence issues.

On 14 June 1974, a working group held a meeting at the Pentagon. The primary purpose of the meeting was to discuss and analyze in detail the information presented at a previous meeting. As a result of the discussions, the group prepared an initial draft of a portion of its interim report on [redacted] In addition, the group received a briefing on low power energy devices.

On 23 August 1974, a panel meeting was held at the Pentagon. New intelligence information on [redacted] was reviewed by the panel and the majority of the session was devoted to the preparation of the Committee's interim report. On 10-11 September 1974, the panel held a two-day meeting at the Pomponio Plaza Building, Rosslyn, Va. At this meeting new intelligence data was presented by several panel members and DIA personnel. Specific facilities were discussed and evaluated. Work continued on the Committee's interim report.

A two-day Committee meeting was held on 1-2 October at the Pentagon. Representatives from DIA reviewed recent intelligence data, [redacted] and global nuclear activities. The Committee made several recommendations to the Director as a result of these intelligence briefings. The Committee received a briefing on [redacted] and discussed and analyzed the system in response to a request from the Director. As a result of these discussions, additional data was reviewed by the Committee and a letter report to the Director was prepared which answered five specific questions relative to the system. In the letter report the Committee made two additional recommendations which are presently being considered by the Director.

On 21-22 November 1974, a panel held a two-day meeting at Pomponio Plaza Building, Rosslyn, Va. The meeting began with a discussion of the Committee's Interim Report. Several new developments had occurred which impacted on the panel's conclusions. The report assessed [redacted] and made several related recommendations to the Director. The remainder of the meeting was devoted to the presentation of intelligence data relating to [redacted] The panel devoted much of its time to summarizing and recording its impressions on the significance of these data. Work continued on the Committee's final report.

(b)(3):10 USC 424

On 9 December 1974, the first meeting of a strategic working group was held at the Pentagon. The group received briefings on two technical areas and as a result of this meeting specific recommendations were made to the Director by the Chairman. The Director has requested that the Committee investigate two specific intelligence questions which could significantly affect our nation's defense.

On 10-11 December 1974, a two-day Committee meeting was held at the Pentagon. Representatives from DIA reviewed recent intelligence data which provided the Committee with a data base for subsequent analysis and conclusions. Briefings were presented on both [redacted] and related activities and two briefings were presented on DIA-sponsored studies. As a result of these briefings and related discussions, the Committee made several verbal recommendations to the Director. During Executive Session, the Committee members briefed the Director, DIA on the results of several Committee efforts and in the course of these briefings several specific recommendations were made which impact on the mission of the DIA.

(b)(3):10 USC 424

(b)(3):10 USC 424

Chairman
Scientific Advisory Committee

U-6/SAC

CC

22 JAN 1976

SAC /(b)(3):10 USC 424/mb/20 Jan 76

Annual Report on Federal Advisory Committee, P.L. 92-463

eference: ~~CC Memo~~, U-890/CC-2B, 16 Dec 75, subject as above.

1. In accordance with paragraphs 1.b. and 1.c. of above reference, the annual report and the comprehensive review of the Defense Intelligence Agency Scientific Advisory Committee are attached.

2. A summary of the review procedures follows:

a. Committee membership is reviewed to ensure a balanced range of experience, expertise, and length of appointment on the Committee.

b. All activities of the Committee, including the number of full Committee and Panel meetings, are reviewed to ensure that DIA needs are being adequately satisfied.

c. Committee findings and recommendations are evaluated in terms of timeliness, completeness, usefulness ~~and cost-effectiveness~~.

d. Committee activities are reviewed to ensure that they cannot be accomplished within normal DIA resources.

2 Enclosures a/s

/s/

(b)(3):10 USC 424

Executive Secretary, SAC

DISTRIBUTION:
1 fwd
1 coord
1 DT-XO (encl w/d)

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1975 Report of Closed Meetings of the
Scientific Advisory Committee
under Section 10(d)
of the Federal Advisory Committee Act

All of the seventeen Committee and Panel meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552(b) of Title 5 U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. Intelligence information and activities that are classified and sensitive, and are specifically required to be kept secret in the interest of national defense.

A two-day meeting of the Laser Panel was held at Pomponio Plaza, Rosslyn, Virginia on 22-23 January 1975. The Panel reviewed the description, function, and potential applications of a particular facility. A draft report concerning another facility was also reviewed and additional comments were suggested. The second day of the meeting was devoted to discussions of portions of the final report. The discussions resulted in the preparation of a final report which was submitted to the Director.

(b)(3):10 USC 424

A meeting of the [redacted] was held at the Space and Missile Systems Organization (SAMSO), Los Angeles Air Force Station, California, on 5 February 1975. The Panel reviewed the Terms of Reference provided by the Director and defined a series of questions that would have to be answered. The Panel was provided with an overview of [redacted] and of current and proposed methods of satisfying those requirements. The Panel was also briefed on the value of [redacted] After the briefings, the Panel agreed on a three-phase approach to evaluating the utility of current and proposed systems.

A meeting of the [redacted] was held at the Pentagon, Washington, D.C. on 14 March 1975. (The meeting was originally scheduled for 7 March, but had to be postponed due to unavoidable conflicts.) The Panel defined additional questions that should be addressed. Briefings and discussions on the potential of [redacted] followed, with particular attention on the comparative merits of existing and proposed systems.

(b)(3):10 USC 424

(b)(3):10 USC 424

A meeting of the [redacted] Panel was held at the Pentagon on 18 March 1975. The meeting was a round table discussion with the Director and representatives from agencies which are highly dependent on accurate, current intelligence information. The visitors were asked a variety of questions regarding the impact on their respective areas of responsibility of not having adequate data collection capabilities. Panel members recorded their own interpretation of the questions and answers for use at a later date.

A two-day meeting of the Committee was held at the Pentagon on 19-20 March 1975. DIA representatives provided a current intelligence briefing on [redacted] logistics activities and troop movements, and nuclear test activities. The Committee also received briefings on foreign space activities, air defense systems, current and proposed intelligence collection systems, relative Naval capabilities, and intelligence support to Unified and Specified Commands. The Committee reviewed the activities of the Telemetry Panel and examined the final report of the Imagery Panel and approved it for publication. Other topics for possible Committee investigation were discussed but none were specifically recommended for action.

A meeting of the [redacted] Panel was held at the Pentagon on 2 April 1975. The Panel was briefed in depth on the relative value of [redacted] Subsequently, a round table discussion was held with representatives from the S&T intelligence production agencies on the specific uses and values of [redacted] The consensus was that adequate [redacted] The Panel members then expressed their individual preliminary conclusions regarding the systems being evaluated.

A meeting of the [redacted] Panel was held at Pomponio Plaza on 29 April 1975. The Panel received a detailed briefing on various [redacted] The Panel then reviewed projected cost estimates of various alternative collection approaches. Activities of the Panel to date were reviewed and plans were made for drafting the final report, particularly those issues which should be addressed to ensure satisfying the Terms of Reference.

(b)(3):10 USC 424

(b)(3):10 USC 424

A meeting of the [redacted] Panel was held at Pomponio Plaza on 19 May 1975. The Panel was briefed on the preliminary results of an evaluation of the [redacted] Subsequently, the Panel reviewed a proposed draft of the final report and noted areas that required further effort.

A meeting of the [redacted] Panel was held at Pomponio Plaza on 29 May 1975. The Panel received an update briefing on the [redacted] A second draft of the final report was reviewed and additional changes were suggested. These efforts resulted in the preparation of a report which was submitted to the Director and which subsequently became the basis of several DIA assessments.

(b)(3):10 USC 424

A two-day meeting of the Committee was held at the Pentagon on 10-11 June 1975. The Committee was provided a current intelligence briefing on significant military developments which had been noted since the previous Committee meeting. The topics were related to weapons systems development and deployment, laser developments, radar developments, and Middle East activity. Other briefings addressed the utility of infrared data for systems analyses, the perceived role of a foreign space system, and a possible data collection system. Proposed panel activities were discussed, and the formation of two panels was recommended. One of these, a radar panel was subsequently established to address a subject of great concern to the Director.

The first meeting of the Radar Panel was held at Pomponio Plaza on 27 August 1975. The Panel discussed the organization of the Panel, its Terms of Reference, and its plan of action. An earlier study on a similar subject was described and suggested as a baseline reference. Preliminary discussions on systems and requirements to be evaluated were also held.

A two-day meeting of the Committee was held at the Pentagon on 8-9 September 1975. The Committee was provided a current intelligence briefing on Naval related weapons and activities, strategic weapons deployment, nuclear test activities, and tactical weapons targeting and performance characteristics. Other briefings addressed the intelligence potential of proposed systems, chemical and biological developments, and the technical capabilities of various foreign

Naval forces. Several of the briefings were designed to give the Committee updated information in areas being considered for panel activity. The Committee discussed the Laser Panel report and recommended that no further effort be devoted in that area (The Director has subsequently concurred with the recommendation.). Discussions of panel activity regarding changes in Soviet doctrine resulting from technological advances were postponed until the next meeting.

A two-day meeting of the Radar Panel was held at Pomponio Plaza and at the Naval Intelligence Support Center (NISC), Suitland, Maryland on 26 and 27 September 1975. On the first day, discussions were held with representatives from several contractors regarding the feasibility and technological risks involved with developing radar systems. Transmitters, antennas, signal processors, and vulnerability to countermeasures were addressed. At NISC, the Panel toured the facilities and discussed various aspects of radar data interpretability and utility.

A meeting of the Radar Panel was held at Pomponio Plaza on 8 October 1975. Various aspects of the study were assigned to Panel members for further investigation and subsequent reporting. Briefings on the interpretability of radar data, on the requirements for radar data, and on data processing techniques followed. The subsequent Panel discussions focused on the key issues that should be addressed by the Panel.

A meeting of the Radar Panel was held at Pomponio Plaza on 7 November 1975. The Panel prepared an interim report to be given to the Director. Included were comments on system capabilities, technical risks, and system vulnerabilities. An outline of the final report was established and sections assigned to Panel members for action. The discussions resulted in the preparation of an interim briefing which was subsequently given to the Director.

A two-day [redacted] Panel meeting was held at the Naval Intelligence Support Center, Alexandria, Virginia on 12-13 November 1975 to evaluate a [redacted] (b)(3):10 USC 424 The Panel was briefed on the nature and source of data perturbations, the development of new reporting procedures, the incorporation of new detectors, the feasibility of performing real-time analyses, and the utility of advanced analytical techniques. The Panel found that the

project had responded very well to guidance it had been given and noted that project personnel are aware of significant items requiring additional effort. The Panel made three specific recommendations which are being staffed by project personnel.

A two-day meeting of the Committee was held at the Electromagnetic Systems Laboratory and the Lockheed Missiles and Space Company, Sunnyvale, California on 2-3 December 1975. The Committee was provided with current intelligence briefings on a variety of developments related to tactical and strategic weapons systems, electromagnetic systems, and test and evaluation facilities. Other briefings addressed the results of two Defense Science Board studies, a variety of advanced signal processing and encoding techniques, and details of signal collection capabilities. In Executive Session, the Committee reviewed the preliminary findings of the Radar Panel and discussed the Director's letter outlining desired areas of future investigation. As a result of the discussions, two areas dealing with the impact of technology on military doctrine were recommended for investigation. The Director has since concurred with the recommendation and two new panels are being formed.

(b)(3):10 USC 424

Chairman
Scientific Advisory Committee

EXHIBIT
CIRCULAR NO. A-63
Transmittal Memorandum No. 3

ANNUAL COMPREHENSIVE REVIEW of FEDERAL ADVISORY COMMITTEE	1. Department or Agency Defense Intelligence Agency	2. Calendar Year 1975

3. Name of committee (and subcommittee, if appropriate)

Scientific Advisory Committee

4. If this committee held closed or partially closed meetings during the year, cite the number(s) of the specific exemption(s) in the Freedom of Information Act used as a basis for closure(s). Title 5 U.S. Code, Section 552(b), paragraphs 1 and 3.

5. a. Was this committee established, renewed, or reestablished since October 1 last year?

☐ Yes (No further review necessary) ☒ No (Complete the format)

b. Has the committee been terminated since January 1 of this year?

☐ Yes (No further review necessary) ☐ No (Complete the format)

6. Agency recommendation for this committee (check only one recommendation in a through e; Block 7 indicates factors in required narrative):

a. ☒ Continue as determined to be necessary and in the public interest

b. ☐ Revise responsibilities (Explain as noted in 7 below), and indicate revised responsibilities).

c. ☐ Merge (Explain as noted in 7 below, and provide name of committee(s) with which it is to be merged).

d. ☐ Terminate (If this is a statutory committee, indicate whether legislation is required to carry out the recommendation and whether such legislation is contemplated or pending).

e. ☐ Requires further review (Specify the problem holding up recommendation and the date decision can be expected).

7. Explain agency recommendation checked above. Use numbered bond sheets; indicate the agency and the name of the committee on each sheet. Justification for continuation of a committee should include details on factors listed below.

a. Number of times the committee has met in the past year.
b. Number of reports submitted by the committee in the past year.
c. Describe the value of the committee's reports, recommendations, or information to the agency's programs or operations (an overall substantive statement).
d. Detail the extent of agency utilization of the committee's recommendations or information in policy formulation, program planning, decision making, accomplishing program objectives more effectively, achieving economies, etc. (a breakdown of the value judgment given in c above).
e. Explain why the recommendations or information cannot be obtained from sources within the agency, in other agencies, or from other advisory committees.
f. Explain any degree of duplication of efforts of other committees or within the agency or in other agencies.
g. Annual cost of the committee.
h. Outline the agency's plan for achieving balance in the membership of the committee or state basis for view that adequate balance has been achieved. In general, consider (1) the functions to be performed and (2) the points of view to be represented.
i. Describe any other criteria used in the agency review that indicated continuation of the committee is necessary and in the public interest. An example might be the future plans of the committee, expressed in specific and well-defined elements -- not merely a conceptual framework.

DEFENSE INTELLIGENCE AGENCY
SCIENTIFIC ADVISORY COMMITTEE

7. Justification of Recommendation.

a. There were ~~four~~ full Committee meetings and thirteen working Panel meetings during the past year. All of the meetings were closed to the public.

b. Committee efforts resulted in producing ~~three~~ written reports, one interim briefing, and numerous verbal contributions to DIA analysts during the Committee and Panel meetings.

c. The analyses, findings, and recommendations have been extremely valuable inputs to the formulation of DIA positions on key intelligence issues as well as to current and proposed analytical techniques and evaluations of foreign weapons systems' capabilities.

d. The formal Committee report~~s~~ addressed issues of essential importance to the nation and provided an indispensable input to the decision making process. The report~~s~~ contained ~~an~~ amalgamation of analyses on critical research developments and on a variety of subjects intimately related to the utility of advanced collection systems. The conclusions presented in the report~~s~~ have enabled the Director to make sound recommendations to the Office of the Secretary of Defense and to the Joint Chiefs of Staff. Recommendations made by the Committee have been forwarded to appropriate offices and agencies for consideration and action.

A significant aspect of the Committee's effectiveness is not reflected in the above report~~s~~, but is derived from discussions which take place between the Members and DIA technical analysts during the Committee and Panel meetings. The Committee is purposely used as a sounding board on approaches being used in technical assessments of new systems as well as to ~~pass judgment~~ comment on the validity of assumptions which must be made by the analysts. Because of the knowledge and experience of the Committee Members, analysts are eager to obtain their views, and the real value of this exchange is difficult to quantify. Much of the credit for the success of the DIA in arriving at sound and supportable technical assessments must be given to these discussions.

e. The Committee is composed of eminent civilian scientists, engineers, managers, and academicians possessing a vast depth of knowledge on a wide range of subjects applicable to the scientific and technical aspects of the DIA mission. This includes matters relating to the collection, processing and dissemination of intelligence data as well as the technical assessments of foreign weapons systems. Most of the Members have been directly involved in the design, production, or deployment of U.S. strategic and tactical missiles and aircraft, space systems, and collection and processing systems, or of major components of these systems. As a group, they afford the Director, DIA with advice and counsel which is not otherwise available within DIA or other agencies of the Defense Department. The magnitude of the Committee's activities precludes the use of other scientific advisory groups.

f. The Director, DIA asks the Committee to address in detail those issues which cannot adequately be addressed within the Agency; hence duplication of effort with other DIA activities is held to a minimum. Duplication of effort with other advisory groups is minimized by virtue of DIA's unique mission.

g. Annual cost of operating the Committee is estimated at ~~$60,000~~, including one and one half man-years of staff support.

h. To insure a balanced membership on the Committee, the Members at Large, who attend the regularly scheduled Committee meetings and who form the nucleus for ad hoc panels, normally serve terms of not more than four consecutive years; however, the membership is subject to annual review and approval by the Director. Associate Members are appointed to the Committee on the basis of their special qualification, to participate in studies by temporary ad hoc panels of the Committee. Associate Members normally serve for the duration of the panel for which they have been selected.

i. During the past year, five ad hoc panels were active; four of these were terminated upon completion of their deliberations and one has been continued. Two new panels are in the process of being established and others will be established as the need arises during CY-76.

FILE DESIGNATION

U-8/SAC

CONCURRENCES

DD
CS
SC
SAC
IG
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DS
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DT

RCC

SAC/(b)(3):10 USC 424/cml/17Jan77

Annual Report on Federal Advisory Committee, P.L. 92-463

Reference: CS-6989, 17 November 1976, subject: Reporting Requirements - Federal Advisory Committees.

1. The closed meeting report and the comprehensive review of the Defense Intelligence Agency Scientific Advisory Committee are enclosed for submission to OASD(A).

2. A summary of the review procedures to accompany the comprehensive review follows:

a. Committee membership is reviewed to ensure a balanced range of experience, expertise, and length of appointment on the Committee. The normal term of appointment is four years.

b. All activities of the Committee, including the number of full Committee and Panel meetings, are reviewed to ensure that DIA needs are being adequately satisfied.

c. Committee findings and recommendations are evaluated in terms of timeliness, completeness, and usefulness.

d. Committee activities are reviewed to ensure that they cannot be accomplished within normal DIA resources.

2 Enclosures a/s

(b)(3):10 USC 424,(b)(6)

Executive Secretary, SAC

Distr:
1 Fwd
1 Coord
1 DM-3

M/R This completes parts 2 and 3 of action required in VP ACT 5674-76.

RETURN FOR FILING TO:
DT/SAC

EXHIBIT
CIRCULAR NO. A-63
Transmittal Memorandum No. 3

ANNUAL COMPREHENSIVE REVIEW of FEDERAL ADVISORY COMMITTEE	1. Department or Agency Department of Defense	2. Calendar Year 1976

3. Name of committee (and subcommittee, if appropriate)
Defense Intelligence Agency Scientific Advisory Committee

4. If this committee held closed or partially closed meetings during the year, cite the number(s) of the specific exemption(s) in the Freedom of Information Act used as a basis for closure(s). Section 10 P.L. 92-463 and Section 552(b), Title 5 U.S. Code, Par 1 and 3

5. a. Was this committee established, renewed, or reestablished since October 1 last year?

[X] Yes (No further review necessary) [ ] No (Complete the format)

b. Has the committee been terminated since January 1 of this year?

[ ] Yes (No further review necessary) [ ] No (Complete the format)

6. Agency recommendation for this committee (check only one recommendation in a through e: Block 7 indicates factors in required narrative):

a. [ ] Continue as determined to be necessary and in the public interest

b. [ ] Revise responsibilities (Explain as noted in 7 below), and indicate revised responsibilities).

c. [ ] Merge (Explain as noted in 7 below, and provide name of committee(s) with which it is to be merged).

d. [ ] Terminate (If this is a statutory committee, indicate whether legislation is required to carry out the recommendation and whether such legislation is contemplated or pending).

e. [ ] Requires further review (Specify the problem holding up recommendation and the date decision can be expected).

7. Explain agency recommendation checked above. Use numbered bond sheets; indicate the agency and the name of the committee on each sheet. Justification for continuation of a committee should include details on factors listed below.

a. Number of times the committee has met in the past year.
b. Number of reports submitted by the committee in the past year.
c. Describe the value of the committee's reports, recommendations, or information to the agency's programs or operations (an overall substantive statement).
d. Detail the extent of agency utilization of the committee's recommendations or information in policy formulation, program planning, decision making, accomplishing program objectives more effectively, achieving economies, etc. (a breakdown of the value judgment given in c above).
e. Explain why the recommendations or information cannot be obtained from sources within the agency, in other agencies, or from other advisory committees.
f. Explain any degree of duplication of efforts of other committees or within the agency or in other agencies.
g. Annual cost of the committee.
h. Outline the agency's plan for achieving balance in the membership of the committee or state basis for view that adequate balance has been achieved. In general, consider (1) the functions to be performed and (2) the points of view to be represented.
i. Describe any other criteria used in the agency review that indicated continuation of the committee is necessary and in the public interest. An example might be the future plans of the committee, expressed in specific and well-defined elements -- not merely a conceptual framework.

TAB "C"

DEPARTMENT OF DEFENSE
Defense Intelligence Agency
1976 Report of Closed Meetings of the
Scientific Advisory Committee
under Section 10(d)
of the Federal Advisory Committee Act

All of the fifteen Committee and Panel meetings of the DIA Scientific Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552(b) of Title 5 U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. Intelligence information and activities are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

A meeting of the Radar Panel was held at Pomponio Plaza, Rosslyn, Virginia on 28 January 1976. The panel heard the interim briefing on the panel's activities previously given to the Director. Briefings and discussions on two postulated European attack scenarios followed, with emphasis on the likely warning indicators that could be detected. The panel was also given an overview of the status of other proposed systems and how the various systems would complement each other. The panel subsequently reviewed its activities to date and earmarked areas that needed further research for the final report.

A meeting of the Air Defense Panel was held at Pomponio Plaza on 18 February. The panel reviewed the Terms of Reference that were forwarded by the Director DIA and received a series of briefings on air defense weapon systems. Characteristics, capabilities, and deployment were described, and the bases for the assessments were provided. Discussion topics included design bureaus, projected systems for future deployment, employment tactics, and perceived limitations. One of the presentations addressed various airborne platforms used in an air defense role and included a description of likely control procedures. Subsequently, the panel compiled a list of topics to be addressed at future meetings.

A two-day meeting of the Committee was held at the Pentagon, Washington, D.C. on 24-25 February. DIA and [redacted] presented current intelligence briefings on recent naval construction and test activity, missile and space tests, air defense related tests, radar developments, ground forces activity, and nuclear test activity. Other topics on the agenda included briefings and discussions on differences in U.S./Soviet warship design philosophy and practice, [redacted] Soviet military doctrine and strategy, maturing Soviet ground force and tactical aviation capability, [redacted] In executive session, the Committee discussed likely changes in the Intelligence Community, reviewed the activity of its ad hoc panels, and recommended topics for future Committee consideration.

(b)(3):10 – USC 424

A meeting of the Air Defense Panel was held at Pomponio Plaza on 26 March. Test activities related to the development of new air defense weapons were reviewed, with emphasis on tactical application and likely deployment and utilization patterns. The panel also reviewed and discussed Soviet design, research and development, and production trends and suggested indicators that should be monitored more closely. The use of electronic warfare techniques and their impact were also considered, along with the anticipated deployment levels, priorities, and likely targets. In executive session, the panel discussed the importance of air superiority and the interrelationship of aircraft and surface to air missiles in the same airspace; finally the panel made tentative assignments of areas requiring individual research.

A meeting of the Navy Panel was held at Pomponio Plaza on 1 April. The meeting began with a review of the Terms of Reference and a discussion of possible methodology; the panel decided to focus only on the most important issues. Briefings and discussions included topics such as naval policy and strategy, growth of seapower including description of platforms and weapons characteristics and capabilities, applicability of aerospace systems to naval activities, and command and control of naval forces. Subsequently, the panel talked about future activities and topics for consideration.

A two-day meeting of the Committee as held at the Foreign Technology Division (FTD), Building 828, Wright-Patterson Air Force Base, Ohio on 22-23 April. The meeting began with a review of current intelligence items which occurred since the previous meeting. The remainder of the meeting was devoted to briefings and disucssions regarding FTD analyses and assessments of foreign weapon systems and other military-related technical developments. Specific topics included a review of FTD's mission, functions, organization, and resources; in-depth descriptions of the assessed characteristics of various space, missile and aircraft systems; implications of new weapon systems development; electronic systems and energy conversion related activities; tactical aviation doctrine; and procedures and policies for system development and acquisition. During the briefings and discussions, the Committee commented to the individual analysts regarding the weak points of their analyses. In executive session, the Committee addressed uncertainties and enigmas related to weapon development, reviewed activities of the ad hoc panels, and discussed the recent reorganization of the Intelligence Community.

A meeting of the Navy Panel was held at Pomponio Plaza on 19 May. The panel was briefed on various technological advances noted in naval forces, and there was considerable discussion on their impact on future naval missions, force levels, and deployment. The findings of an earlier study on the differences between U.S. and Soviet naval forces and their capabilities were reviewed, and the discussion focused on the impact of the observed differences. The panel was also briefed on naval deployments related to a particular crisis situation. In executive session, the panel continued its

discussion of various issues raised during the earlier briefings and discussions and subsequently established methods to be used in preparing the panel's report.

A meeting of the Navy Panel was held at Pomponio Plaza on 10 June. The meeting began with a review of previous panel activities and tentative identification of missions and roles that would be further investigated for their applicability. Subsequent briefings and discussions addressed policies, broad views/interests, and naval deployments and strategies in various parts of the world, as well as the applicability of operations research techniques to the development and acquisition of naval systems and to the deployment and operation of forces. Specific naval exercises were reviewed for the forces involved and the operating and control procedures used. The discussions resulted in the assignment of specific topics to panel members for individual research and reporting.

A two-day meeting of the Committee was held at the Pentagon on 22-23 June. The meeting began with the introduction of the new Director to the Committee. Current intelligence topics included briefings and discussions on naval-related construction activity, test and deployment of new missiles, and aircraft-related activity. Detailed analysts' briefings and discussions addressed various techniques for assessing weapon system accuracy, targeting concepts for weapon systems, unusual test activities and their implications, potential roles of a number of special complexes, results of a recently completed interagency study, and overall military trends and capabilities. Executive session topics included an update on laser activities, areas being addressed by the Navy and Air Defense Panels, and a review and discussion of the conclusions and recommendations of the Radar Panel report.

A meeting of the Navy Panel was held at Pomponio Plaza on 26 August. Most of the meeting was devoted to reviewing and discussing material presented by the panel members on the areas of their assignments. Comments were made on each area addressed, additional items for inclusion or deletion were considered, and a basic outline for the report was established. There were also discussions with an analyst to clarify certain points raised at an earlier meeting of the panel.

A two-day meeting of the Committee was held at the Pentagon on 27-28 September. The meeting began with the current intelligence briefing which addressed missile construction and test activity, nuclear test preparations, and earthquake effects. Detailed analysts' briefings and discussions addressed space system operations; data flow and tasking and dissemination procedures associated with specialized intelligence data; applicability of computer support for intelligence operations; descriptions of specific exploitation activities, future plans for data collection, tasking, and dissemination; assessments of aircraft characteristics and

capabilities; descriptions and roles of various facilities that have been noted; data analysis and subsequent assessments regarding a specific naval platform; and a new deployment of an electronic support system. In executive session, the Committee discussed ways for improving its usefulness, the delegation of production activities, and the final conclusions and recommendations of the Radar Panel report, commented on the various briefings presented, and reviewed the activities of the other Ad Hoc panels.

A meeting of the Navy Panel was held at Pomponio Plaza on 11 October. The entire meeting was devoted to reviewing draft material prepared by the panel members for the final report. Recommended modifications were discussed and a due date for revised drafts was established.

A meeting of the Air Defense Panel was held at Pomponio Plaza on 21 October. The panel was provided an extensive review of pertinent test activities which had occurred since its last meeting, and analysts were available to discuss a number of questions previously asked by the panel. The panel was also briefed on the potential use of a new weapon system under development on the mobility of various air defense weapons, and on recent reassessments of aircraft capabilities. In executive session, the panel made several observations which would be included in its report and established a basic structure for the report.

A two-day meeting of the Committee was held at Headquarters Strategic Air Command (SAC), Offutt Air Force Base, Nebraska on 2-3 December. The theme for the meeting was: "At SAC--Intelligence in a Demand Environment". A wide variety of briefings and discussions were held to demonstrate how intelligence is used by SAC and to solicit the Committee's thoughts on potential improvements. The topics included an overview of the Command's mission and resources, methods used in targeting strategic forces, how SAC controls its forces, selection and planning of bomber penetration routes, typical aids provided to aircrews, integration of current intelligence assessments to the overall data base and their impact on mission planning, conventional mission planning activities, strategic reconnaissance resources and activities, the role of computers in the process of mission planning, and SAC participation in exercises designed to evaluate the effectiveness of proposed data collection and dissemination processes. In executive session, the Committee discussed future prospects for producing accurate, timely intelligence in light of diminishing resources; the makeup and plans of the [redacted] and HUMINT Panels; the basic findings of the Navy Panel; the membership of the Committee, including those being processed for appointment; and specific Committee thoughts, impressions, and recommendations regarding the briefings that had been presented.

(b)(3):10 USC 424

A meeting of the HUMINT Panel was held at Pomponio Plaza on 16 December. The meeting began with a review of the Terms of Reference. The remainder of the meeting was devoted to describing the Department of Defense program. The briefings and discussions addressed sources, methods, tasking and reporting procedures, research efforts, and future prospects. Subsequently, topics for future consideration were defined.

(b)(3):10 USC 424,(b)(6)

Chairman, DIA Scientific Advisory Committee

24 March 1981

U-29/AC

DT/AC

Reporting Requirements - Federal Advisory Committees

RCC-1 (ATTN: (b)(3):10 USC 424

Reference: OASD (Administration) Memorandum, 4 March 1981, subject: Reporting Requirements-Federal Advisory Committees.

Enclosed is the Advisory Committee's response to above memorandum.

1 Enclosure a/s

(b)(3):10 USC 424

Executive Secretary,
AC

ANNUAL COMPREHENSIVE REVIEW OF FEDERAL ADVISORY COMMITTEE

INTERAGENCY REPORTS CONTROL NUMBER: 0264-GSA-AN

INSTRUCTIONS: Complete one form for each committee in existence at the end of the calendar year being reported. If additional space is required, attach a separate sheet of paper and cite appropriate item number(s).

1. DEPARTMENT OR AGENCY: Department of Defense

2. CALENDAR YEAR: 1980

3. NAME OF COMMITTEE *(and subcommittee, if appropriate)*: Defense Intelligence Agency Advisory Committee

4. DATE ESTABLISHED OR LAST REESTABLISHED OR RENEWED *(most recent)*: 1 October 1980

5. MEETING EXEMPTIONS — For closed or partially closed meetings, list for each meeting the date and number(s) of all Government in the Sunshine Act (5 U.S.C. 552b) exemptions used.

DATE OF MEETING	NUMBER(S) OF EXEMPTIONS USED	DATE OF MEETING	NUMBER(S) OF EXEMPTIONS USED
a. *See Enclosure 1		e.	
b.		f.	
c.		g.	
d.		h.	

6. ESTABLISHMENT AUTHORITY FOR COMMITTEE *(Mark "X" in appropriate box)*

- [ ] a. Specifically directed by law
- [ ] b. Authorized by law
- [X] c. Agency authority
- [ ] d. Presidential directive

7. AGENCY RECOMMENDATION FOR COMMITTEE *(Mark "X" in appropriate box)*

- [ ] a. Terminate
- [X] b. Continue

8. IF ITEMS 6(a) AND 7(a) ARE MARKED, ANSWER THE FOLLOWING QUESTIONS: N/A

	YES	NO		YES	NO
a. Is legislation required to terminate?			c. Is such legislation pending?		
b. Is such legislation contemplated?			d. Has such legislation been enacted?		

9. IF ANY ANSWER IN ITEM 8(a) THROUGH (d) IS MARKED "NO", PROVIDE A BRIEF EXPLANATION

N/A

10. IF THE ANSWER TO ITEM 8(c) *OR* (d) IS MARKED "YES", PROVIDE THE FOLLOWING INFORMATION

a. BILL OR PUBLIC LAW NUMBER: N/A

b. PROPOSED OR EFFECTIVE DATE: N/A

11. IF ITEM 6(b) *OR* 6(c) AND 7(a) ARE MARKED, PROVIDE THE PROPOSED OR EFFECTIVE DATE: N/A

12. IF ITEMS 6(d) AND 7(a) ARE MARKED, PROVIDE A BRIEF EXPLANATION: N/A

13. IF ITEM 7(b) IS MARKED, ATTACH A JUSTIFICATION STATEMENT TO THIS FORM USING NUMBERED BOND SHEETS WITH ITEMS 1, 2, AND 3 ON EACH SHEET. THE JUSTIFICATION SHOULD:

*See Enclosure 2

a. Describe how the committee accomplishes its purpose.

b. State why there is a compelling need for the committee.

c. Describe the balance of membership in terms of points of view represented and functions performed.

d. Describe the frequency of meetings and the relevance to continuing the committee.

e. Describe the effect of committee reports, advice, or recommendations on agency operations.

f. Explain why the advice or information cannot be obtained from other sources.

g. Explain any duplication of effort with other committees, within the agency, or with other agencies.

h. Describe the relationship of the cost of the committee to the advice or information provided.

DEPARTMENT OF DEFENSE
Defense Intelligence Agency 1980
Report of Closed Meetings of the
ADVISORY COMMITTEE

All eighteen Committee and Panel meetings of the DIA Advisory Committee were closed to the public based upon the provisions within Section 10 of Public Law 92-463 and paragraphs 1 and 3 in Section 552b (c)(1), of Title 5 of the U.S. Code. The Director, DIA determined that all of the issues considered pertained to U.S. intelligence information and activities are classified and sensitive, and they are specifically required to be kept secret in the interest of national defense.

The first full Advisory Committee meeting was held on 7-8 February 1980 at the Pentagon, Washington, D.C. In addition to the normal update briefings on various scientific and technical areas, the Committee received eight detailed briefings on areas of high interest to the Director, DIA. Based upon these briefings and subsequent discussions, the Committee chairman prepared an extensive paper on the findings, conclusions and recommendations related to each area. The paper was coordinated in the executive session before forwarding to the Director. In addition, in executive session, the Committee reviewed current plans in several technical intelligence areas; reviewed and discussed the final report of the Master Intelligence Data Base Panel (MIDB); discussed the current status, findings and anticipated goals of the three ad hoc Panels, and reviewed some of the key areas the Committee would address at the next full Committee meeting.

The first meeting of the Tactical Weapons R&D (TWR&D) Panel was held on 25 February 1980 at Pomponio Plaza, Rosslyn, Virginia. Briefings were presented which included audit trails of currently deployed and future Soviet tactical SAM systems and the techniques and methods used to extract this data under various conditions; and, the depth and quality of the data bases available. In executive session, discussions centered on potential additional data sources and objectives and goals of the Panel.

The first meeting of the [redacted] Panel was held on 17 March 1980 at Pomponio Plaza, Rosslyn, Virginia. In executive session, the Panel reviewed terms of reference, goals and objectives for the study. Briefings were presented that assessed the results of previous studies of [redacted] and that discussed [redacted] and the projected impact on tactical reconnaissance and surveillance systems. (b)(3):10 USC 424

The second meeting of the TWR&D Panel was held on 1 April 1980 at the National Security Agency, Fort George G. Meade, Maryland. Briefings and discussions centered on the trends and/or technical intelligence on tactical

Enclosure 1

air defense and targeting systems. The emphasis was placed on the chronological development of these systems and associated technical intelligence.

The second meeting of the full Committee was held on 10-11 April 1980 at Sandia Laboratories, Albuquerque, New Mexico. Briefings and tours were focused on specific science and technology areas in nuclear physics and related weapons development programs. Additionally, the Committee reviewed special presentations on particle beam fusion, sensor development and telemetry research. In executive session, the committee prepared a paper on the findings, conclusions, and recommendations on these specific technical intelligence areas. The Committee also reviewed the rewrite of the Final Report of MIDB Panel; the summary findings and conclusions of the Technology Panel and the progress of two ad hoc panels, the standpoint of candidate waveforms, likely application and operational implications.

(b)(3):10 USC 424

The second meeting of the [redacted] Panel was held on 1-2 May 1980 at Pomponio Plaza, Rosslyn, Virginia. The briefings and discussions centered on capabilities and predicted trends in the [redacted] area. Specifically, the panel discussed [redacted]

The third meeting of the [redacted] Panel was held 22-23 May 1980 at Pomponio Plaza, Rosslyn, Virginia. The briefings highlighted open literature searches in [redacted] and related technology development; research and engineering into [redacted] and signal processing; communications management; ground based jamming; microelectronics development and [redacted] In executive session, the Panel reviewed individual Panel member submissions on potential threats and the likely associated waveforms.

The fourth meeting of the [redacted] Panel was held 10 June 1980. The entire meeting consisted of executive session in which the Panel developed a discussion of the future signal environment in generic terms. The Panel developed a threat projection from that discussion which addressed the radar and communications areas from the standpoint of [redacted] likely application and operational implications. The Panel also developed an interim report for submission to the Director, DIA.

(b)(3):10 USC 424

The third meeting of the TWR&D Panel was held 23 June 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel reviewed presentations on radar test facilities and potential naval radar developments. In executive session, the Panel reviewed the results of an intelligence search in the tactical SAM area and discussed analogous RDT&E schedules. The Panel also addressed future areas of investigation.

The third full Committee meeting was held on 5-6 September 1979 at the Pentagon, Washington, D.C. Briefings included Soviet missile programs; surface vessel and selected submarine developments; aircraft in various stages of the RDT&E process; advanced air defense systems; and unique intelligence collection

systems. In executive session the Committee: reviewed, discussed and approved the special report prepared on the implications of specific Soviet SRBM developments. The Committee also reviewed the status of the three ad hoc Panels and initial planning for a fourth, the [redacted] Special briefings and sessions were also held on other areas of high interest to the Command Element where the scientific and technical assistance of the Committee was solicited. Individual members agreed to assist the Agency in various aspects of the problems discussed. For problems which appeared broad in scope, the Committee agreed to conduct preliminary investigations on potential approaches to investigate each area. The Committee chairman agreed to report, to the Director, DIA, on the findings of these investigations.

(b)(3):10 USC 424

The fifth meeting of the [redacted] Panel was held on 9-10 July 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel reviewed potential capabilities of various intelligence collectors against the [redacted] The Panel also received presentations of special processing techniques and capabilities and projected tactical signals intelligence capability. The Panel also addressed specific other planned intelligence capabilities at the request of the Director, DIA.

The first meeting of the [redacted] Panel was held 22 July 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel, in executive session, discussed proposed terms of reference, goals and objec-ives for the effort. The Panel then received briefings on selected Soviet intelligence systems and capabilities and their utilization.

The sixth and final meeting of the [redacted] Panel was held 15 August 1980 at Pomponio Plaza, Rosslyn, Virginia. The meeting was entirely devoted to executive session wherein the Panel discussed findings, conclusions and recommendations and developed an executive summary for the final report. The Panel chairman made writing assignments for developing the final report.

The fourth meeting of the TWR&D Panel was held on 25 August 1980 at Pomponio Plaza, Rosslyn, Virginia. The discussions centered on broad methodologies used by the Intelligence Community to analyze specific tactical R&D efforts. Successes and failures of these approaches were discussed. The Panel discussed conclusions and findings to date in executive session and outlined plans for future Panel activities.

(b)(3):10 USC 424

The second meeting of the [redacted] Panel was held on 16-17 September 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel continued its investigation of selected Soviet intelligence capabilities and their utilization. In addition. the Panel investigated similar U.S. capabilities in an effort to provide a basis from which to evaluate Soviet effectiveness. The Panel also evaluated the tasking, organization and product usefulness associated with these systems. In executive session, the chairman developed and dis-cussed a proposed outline for the final report.

The fourth full Committee meeting was held on 16-17 October 1980 at the Pentagon, Washington, D.C. The Committee received updated and detailed briefings on surface vessel and submarine developments; IRBM, ICBM and ABM technical and operational uncertainties; advanced tactical air defense systems; and developments in energy area. During, executive session, individual Committee members briefed on the results of special studies of interest to the Command Element in the DIA and on the results of current ad hoc Panels of the Committee. The Committee chairman prepared a paper on the results of discussions and provided recommendations to the Director on several items of high interest. The Committee also discussed plans for a forthcoming Navy Panel and defined broad objectives and goals for the Panel.

(b)(3):10 USC 424

The third meeting of the [redacted] Panel was held 27-28 October 1980 at Pomponio Plaza, Rosslyn, Virginia. The Panel continued its comparison of Soviet and U.S. intelligence collection capabilities. Briefings concentrated on U.S. utilization and exercise capabilities and selected specific exploitation programs. The second day was devoted entirely to executive session in which the Panel discussed the outline for the final report; preliminary findings, conclusions and recommendations; and the nature of any further information needed.

The fifth meeting of the TWR&D Panel was held 13-14 November 1980 at Pomponio Plaza, Rosslyn, Virginia. The first day was devoted to a series of NSA presentations that addressed specific U.S. collection capabilities; results of selected signal analyses; and studies on various elements of the Soviet R&D cycle. Briefings on the second day highlighted the development cycles of certain Soviet tactical SAM systems. The Panel also discussed preliminary findings, conclusions and recommendations and the nature of future Panel activity.

DEPARTMENT OF DEFENSE

DEFENSE INTELLIGENCE AGENCY

ADVISORY COMMITTEE

CALENDAR YEAR 1980

1. The Committee in full session or in ad hoc Panels composed of members of the Committee, met eighteen times in calendar year 1980. The ad hoc Panels of the Committee conducted in-depth investigations on selected current and projected scientific and technical intelligence methods used in carrying out the Defense Intelligence Agency's mission including the analytic techniques for processing and evaluating data; the results obtained from analysis; and new or improved methods for evaluating the effectiveness of various intelligence sources. Findings, recommendations and conclusions of the individual Panels were extensively discussed at the full Committee meetings to take advantage of the broad expertise resident in the entire membership. Based upon these efforts, verbal and written reports were given to the Director for his consideration in establishing resource allocations among programs consistent with National and tactical intelligence requirements.

2. Committee efforts resulted in producing eight written reports and numerous verbal contribution to the DIA analysts during the Committee and Panel meetings. In addition, the Committee also produced several short memoranda for the DIA Director on various timely and sensitive intelligence matters of National concern.

3. The formal Committee reports addressed issues of essential importance to the Nation and provided an indispensable input to the decision making process. The reports contained evaluations on the techniques and approaches to improve various intelligence collection, analysis and disseminating systems during times of peace, crisis and war; appraisals on the impact of recent changes in Soviet offensive and defensive capabilities; projections of the near and farther term complex signals environment and the associated intelligence needs; and a comprehensive and in-depth analysis of the potential implications resulting from

Enclosure 2

the long term and continuous growth of the Soviet technological base. The conclusions presented in the reports; and in the short memoranda, have enabled the DIA Director to make sound recommendations to the Office of the Secretary of Defense and to the Joint Chiefs of Staff. Recommendations made by the Committee are also forwarded to appropriate officers and agencies for consideration and action.

4. A significant aspect of the Committee's effectiveness is not reflected in the above reports and memoranda, but is derived from discussions which take place between the Members and the DIA technical analysts during the Committee and Panel meetings. The Committee is purposely used as a sounding board on approaches being used in technical assessments of new systems as well as to comment on the validity of assumptions which must be made by the analysts. Because of the knowledge and experience of the Committee Members, intelligence analysts seek their views, and the real value of this exchange is difficult to quantify. Much of the credit for the success of the DIA in arriving at sound and supportable technical assessments must be given to these discussions.

5. The Committee is composed of eminent civilian scientists, engineers, managers, and academicians possessing a vast depth of knowledge on a wide range of subjects applicable to the scientific and technical aspects of the DIA mission. This includes matters relating to the collection, processing and dissemination of intelligence data as well as the technical assessments of foreign weapons systems. Most of the Members have been directly involved in the design, production, or deployment of U.S. strategic and tactical missiles and aircraft, space systems, and collection and processing systems, or of major components of these systems. As a group, they afford the Director, DIA with advice and counsel which is not otherwise available within DIA or other agencies of the Defense

Department. The magnitude of the Committee's activities precludes the use of other scientific advisory groups.

6. The Director, DIA asks the Committee to address in detail those issues which cannot adequately be addressed within the Agency, hence duplication of effort with other DIA activities is held to a minimum. Duplication with other advisory groups is minimized by virtue of DIA's unique mission.

7. The annual cost of operating the Committee is estimated at $103,000, including two and one-quarter man-years of staff support. The cost per report is therefore approximately $12,875 assuming eight reports as was the case in CY80.

8. The Membership is reviewed annually to ensure that the available expertise is consistent with DIA's needs. Members-at-Large, who attend the regularly scheduled Committee meetings and who form the nucleus of the ad hoc panels, are normally retired from the Committee after four years to ensure the introduction of new Members with fresh viewpoints. Associate Members are approinted to the Committee to provide added specialized skills needed by the temporary ad hoc panels. Associate Members normally serve for the duration of the panel(s) for which they have been selected. Members are selected from government, industrial and academic institutions to insure a variety of viewpoints.

8

~~TOP SECRET~~ [redacted]

MEMORANDUM 80-6

of the

ADVISORY COMMITTEE

to the

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

35 PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED.

FINAL REPORT

OF THE

TECHNOLOGY PANEL

DECEMBER 1980

[redacted]

~~CLASSIFIED BY DOD INSTR S-5210.51 (M-1)~~
~~REVIEW ON 16 DECEMBER 2000~~
2010

(b)(3):50 USC 403-1(j)

COPY ___ OF ___

~~NOT RELEASABLE TO FOREIGN NATIONALS~~

~~TOP SECRET~~ [redacted]

DIA ADVISORY COMMITTEE MEMBERSHIP

(b)(3):10 USC 424

LIAISON TO THE COMMITTEE

(b)(3):10 USC 424

Executive Secretariat

THIS MEMORANDUM WAS PREPARED BY THE TECHNOLOGY PANEL

(b)(3):10 USC 424

(b)(3):10 USC 424

TECHNOLOGY PANEL REPORT

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TECHNOLOGY PANEL REPORT

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(b)(1),(b)(3):10 USC 424,1.4 (c)

APPENDIX C.

APPENDIX D.

EXECUTIVE SUMMARY

(b)(3):10 USC 424,(b)(5)

(U) The Soviet investment in weapons research, development and production, particularly over the past twenty years, investment during the 1970's. Regardless of considerations of internal efficiency and resource allocations, this investment has resulted in a steady output of new and improved weapons systems over this period, and this seems likely to continue. The Soviet R&D program in military and military-related technology appears to cover all areas which have potential military application. The Panel found no important omissions.

~~(S/NOFORN)~~ The Soviet weapon systems developments of recent years have tended not only to improve greatly the weapon systems categories already in the inventory, e.g., ICBM's, SLBM's, strategic and tactical SAM's, etc,

(b)(1).1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c) [redacted]

(U) It is important to distinguish between weapon system effectiveness and the technological level of the embedded devices, components and subsystems. In most of the latter technology areas, the U.S. and its allies have had a substantial lead over the Soviets since World War II. Yet it is possible to produce effective weapon systems with various generations of device, component and subsystem technologies. This is evident from the fact that, for example, pulse-doppler radars have been produced in the U.S. since 1960 using electronic technologies ranging from discrete component circuit boards to integrated circuits and signal processing techniques from analog to digital. Much depends on the national industrial infrastructure which must be utilized and the economic imperatives imposed by that infrastructure. On the other hand, there are certain device, component and subsystem technologies which may be called "pivotal" in weapons systems in that they make possible system capabilities which have proven to be extremely difficult if not impossible to achieve otherwise. Thus, the doppler filtering and signal processing required for pulse-doppler radar demand certain levels of component performance. If components with these performance levels are not available, it has heretofore been nearly impossible to build an airborne fire-control radar with relatively long-range, look-down capabilities.

(b)(3):50 USC 403-1(i)

(TS [redacted]

(b)(1),(b)(3):10 USC 424,1:4 (c) [redacted]

(b)(3):50 USC 403-1(i) [redacted]

(b)(1),1.4 (c)

~~(S/NOFORN)~~ Aside from advances in device, component and subsystem technology which are significant and possibly pivotal in and of themselves, equally if not more important are those cases in which

(b)(1),(b)(3):10 USC 424:1 4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

(U) It is important to recall that the Free World lead in device, component and subsystem technology (derived in great measure from strong but fragmented interactions between military and civilian applications) does not necessarily result in a lead in military systems and forces. The decisions to build and deploy an anti-satellite system, a supersonic heavy bomber, a new tank, or a mobile intermediate range ballistic missile are essentially budgetary, political and military in nature, and these decisions often depend on the level of available technology only in a secondary way. Thus, the problem of forecasting Soviet weapon developments is at least as much one of predicting decisionmaking surprises as of anticipating technological surprises. The Soviet decisionmaking apparatus in recent years has been unhesitating, eclectic and almost all-encompassing in opting for development and production of new weapons by comparison with the U.S. and its allies which have been more cautious and selective. We see no reason to expect a change in this situation. Accordingly, it is to be expected that new weapons, [redacted]

(b)(3):10 USC 424,(b)(5)

(b)(3):50 USC 403-1(i)

(TS) [redacted]

(b)(1),1.4 (c)

[redacted]

(b)(3):50 USC 403-1(i)

(b)(1),1 4 (c)

these trends. As yet there appears to have been no noticeable effect of this unit cost growth on quantities procured, and none is predicted by the Intelligence Community, but clearly the growing burden on the Soviet economy must be significant.*

~~(S/NOFORN)~~ Another significant feature of Soviet R&D has been a bold willingness to take large risks in at least certain programs. Thus, in their supersonic transport program, presumably for reasons of national prestige, the Russians pushed ahead for earliest operational utilization in spite of known technical difficulties,

(b)(1),(b)(3):10 USC 424,1:4 (c)

This risk-taking propensity for objectives deemed of suffi-

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*

cient military, political, prestige or other national value will undoubtedly continue, at least for the near future, and [redacted] of some sort may be thought to be attractive enough by one or more of these value measures to warrant a relatively high-risk or high-cost deployment program.

(b)(1),(b)(3) 10 USC 424,1 4 (c)

(U) The current size, scope and diversity of the current Soviet R&D program and the rapid rate of change in Soviet capabilities in many areas of science and technology make the intelligence collection, exploitation and analysis problems for the U.S. extremely difficult. These problems will grow even more severe in the future when, as a result of the relative sizes of the efforts, we must expect the Soviets to be working intensively in many areas not seriously pursued in the West. The Panel believes these problems require continuing management attention to assure properly responsive allocation and distribution of resources, but has no general solutions to offer.

(U) The intelligence assessment and forecasting process for Soviet technology and weapon systems would greatly benefit if the usual weapon by weapon detailed assessments and general materials, device, component and subsystem technology assessments were augmented by three types of integrated analyses. These are:

(b)(3):10 USC 424,(b)(5)

- o
- o
- o

(b)(3):50 USC 403-1(i)

[redacted] (b)(3):10 USC 424,(b)(5)

~~(C)~~ Although the Panel endeavored to examine a broad range of Soviet technology and reviewed virtually the entire spectrum of weapon systems, in order to keep the effort within manageable size and in consideration of the limited time available, the scope of the effort was necessarily restricted. The roles of technology in the economic and political warfare areas (e.g., "third world transfers") were omitted, and even in the strictly scientific and technical context, [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) We recommend that the Intelligence Community in the near future undertake specialized studies of these areas to supplement the present effort.

I. INTRODUCTION

A. BACKGROUND

~~(C)~~ The Ad Hoc Panel on Technology to the DIA Advisory Committee reviewed the current technical and operatonal estimates and assessments of Soviet weapon systems [redacted] along with available information (as of July 1980) on the supporting Soviet technology base.

(b)(1),(b)(3):10 USC 424,1.4(c)

~~(C)~~ The objective of the Technology Panel was to highlight and explore technology areas most likely to give the greatest leverage in military advantage to the Soviets if pursued to successful application (see Appendix A for terms of reference). To accomplish this, briefings and reports were obtained on Soviet weapon system capabilities and related R&D programs from DIA, [redacted] particularly oriented to the Panel objectives but with the additional aim of giving a broad overview of Soviet technologically based military capabilities identifying areas of deficiency, adequacy and superiority.(See Appendix B for Meeting Agendas) Also, since projections into the future are necessarily based on extrapolating existing trends, the Panel devoted considerable attention to examining [redacted] and the factors influencing [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(C)~~ The Panel is greatly indebted to the DIA and the technical and scientific agencies of the Military Services cited above for their unstinting assistance in providing briefings, reports and other information relevant to its task. Omitted because of limitations of time and the need to keep the membership of the Panel and the scope of the effort to manageable size were such areas as [redacted] and their potential military applications. Also

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] (b)(3):50 USC 403-1(i)

omitted was a substantive study of command, control, communications and intelligence, although some of the component device and subsystem technologies reviewed by the Panel had applications in these fields.

B. PROBLEMS OF DEFINITION AND MEANING

(U) A fundamental difficulty in discussing the state of Soviet science, technology, industry and the economy is semantic. The term "technology" is one which gives particular difficulty because as commonly used it spans such a wide range of meaning. Thus, the Panel defined various shades of meaning by letters from A to D:

- Technology A -- The theoretical aspects are well understood and documented from both the scientific and engineering standpoints;
- Technology B -- Laboratory "brass-board," "bread-board" and experimental device level research, development and demonstrations have been sucessfully conducted;
- Technology C -- Engineering design and development of completely configured items have been carried out and prototypes which are capable of performing virtually all operational functions have been constructed in small numbers and tested; and
- Technology D -- Design and engineering of production model items have been completed, all technical and operational aspects of production fabrication, assembly, finishing and quality control have been established and implemented in the industrial complex leading to volume or series production of items in sufficient quantity (at acceptable quality) to meet requirements or reasonable plans.

~~(S/NOFORN)~~ There is virtually no scientific or technical field of modern

military interest in which the Russians [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S/NOFORN)~~ It is probably realized but rarely acknowledged in intelligence assessments that all adjectives applied to equipment or programs such as "simple," "cheap," "rugged," "conservative," "cautious," "innovative," etc., must refer to some frame of reference. There is no "natural" time scale for introduction of a new development such as a laser or a new material into particular applications. Such assessments have a tendency to become "net assessments" without being identified as such. Thus, when the FOXBAT is

(b)(3):50 USC 403-1(i)

described as a "simple," "rugged" system, it is important to say whether this is relative to earlier Soviet aircraft such as the MIG 15, 19 and 21 or to the SU-9 (FISHPOT), which had the previous major role as an air-defense interceptor, or to the U.S. F-106 which was the last deployed interceptor in the U.S. or to late model U.S. tactical aircraft of the 1970's. In other words, when relative quality "x" is ascribed to something Russian, it is necessary to ask: "x" compared with what?

C. FORECASTING

(U) If technological trends in the Soviet Union are to be discerned and used as a basis for forecasting, it must be in terms of rates of change, not static pictures obtained by averaging over the past 15, 20 or 30 years. Unfortunately, analysts are loath to give up heavy reliance on a good part of their existing data bases, hard earned through blood, sweat and tears over many years. This historical data base is potentially of value in rate and trends analysis if it is properly used, but there is no doubt that to discern and extrapolate trends, greater weight must be given to more recent data, which are usually less plentiful and less firm and reliable. Too much weight given to the stable past and too little to changes and current trends which may be precursors of a wave of the future will as surely contribute to intelligence "failures" in the technology areas as they did in forecasting the military effectiveness of Egyptian troops in the 1973 Middle East War or in assessing the viability of the Shah's Iranian government in 1979.

(U) In its appraisals of Soviet technology and its future potentials, the Panel did attempt to give heavier weight to recent information and less weight to historic observation since World War II and previous. Future

trends were in some cases projected on the basis of data which many would regard as insufficient for high-confidence estimates. Such an approach seems unavoidable in any attempt to consider the range of possible future outcomes of an aggressive broad-ranging and well-financed R&D program such as we perceive in the Soviet Union at present. Moreover, Soviet technology (D) has recently reached significant new qualitative capability in some areas having significant application to a number of important weapon system categories, and we deemed it highly important to indicate these possibilities.

II. SELECTED AREAS OF TECHNOLOGY, SYSTEMS AND WARFARE

(b)(1),(b)(3):10 USC 424,1:4 (c)

~~(S/NOFORN)~~ The [redacted] Soviet investment in weapons research, development and production over the past twenty years has resulted in a steady output of new and improved weapons systems and this trend seems likely to continue. Although specific weapon system developments have been notable, the Panel was particularly impressed by the wide, diversified and sustained Soviet efforts into virtuallly every conceivable military related area. It is clear that these [redacted] efforts into military related RDT&E [redacted]

(b)(1),(b)(3).10 USC 424,1:4 (c)

(b)(1),1 4 (c)

strategic and tactical SAMs, tanks, etc., but also entirely new types of systems which are not currently in the Soviets' inventory, [redacted]

(b)(1),(b)(3):10 USC 424,1:4 (c)

Thus, both evolutionary and potentially revolutionary systems are expected to flow from the continually expanding Soviet technological base. Undoubtedly, these new and improved capabilities will provide the Soviets with opportunities to substantially improve the effectiveness of their current forces and open the door to new warfare arenas.

~~(c)~~ Although there is a wide-spectrum of military related technology, systems and warfare -- this report only focuses on those areas which the Panel believes would provide the Soviets with the greatest leverage

in military advantage if pursued to successful application. These areas were selected by the Panel [redacted] The thirteen areas selected by the Panel are grouped into four broad areas of potential utilization i.e., air and space,naval, ground forces and broad application technologies.

(b)(1),(b)(3):10 USC 424,1:4 (c)

A. AIR AND SPACE AREA

~~(c)~~ This general area includes aircraft systems, ballistic missiles, the Soviet space program, air defense and ABM systems. In each of the specific areas, a short description of the historical development is given along with the current and projected Soviet capabilities. The Panel concludes that although Soviet capabilities will continue to improve in these areas, there are no indications of substantial deviations from the normal evolutionary process.

1. AIRCRAFT SYSTEMS: (U) Modern Soviet aircraft are the end products of a line of development which began immediately after World War II when German swept-wing concepts and German and British jet engine technology and hardware became available to them. The acquisition of Rolls Royce Nene and Derwent licenses made possible the first generation of truly first-line operational jet aircraft including the MIG-15 fighter and IL-28 light bomber. However, following this initial step based on foreign engines, the Soviets embarked on and rapidly accomplished an intensive program for achievement of an indigenous engine development and production capability.

(U) The second generation of Soviet aircraft, the MIG-21, the YAK-25,

(b)(3):50 USC 403-1(i) [redacted]

etc., employing native engine developments, was unveiled to the world at the Tushino Air Show in 1961. As in the West, many of these second generation aircraft in the fighter/attack category were supersonic. Range and radius of action also generally showed substantial improvement over first generation.

(U) The third generation of Soviet jet aircraft was first exposed to public view at the Dodomedovo Air Show in 1967. Here the variable-sweep FLOGGER (MIG-23) as well a the Mach 2.8-3.0 FOXBAT MIG-25 made their appearance along with an assortment of experimental prototypes of Verticle/Short Take-off and Landing (V/STOL) aircraft, most of which explored lift-engine concepts. This display indicated the Soviet determination and commitment to maintain themselves on the forefront of aeronautical technology and exploit fully the military potential of this technology.

(b)(3):50 USC 403-1(i)

~~(TS~~

(b)(1),1.4 (e)

(U) Bomber and transport developments and deployments in the Soviet Union have paralleled the fighter/attack class. The medium bomber has been maintained as a separate class and has to some degree become indistinguishable from heavy bombers. Members of the medium bomber class range from the YAK-28 Brewer to the Blinder and thence to the Backfire. Transport types representing practically all aerodynamic configurations and passenger capacity classes

known and used in the West have also been built by the Soviets. Examples with equivalents are:

TU-154	Boeing 727
TU-144	Concorde SST
IL-62	BAC VC-10
IL-76	C-141
IL-134	Caravelle, DC-9

The Russians have not yet vigorously pursued the wide-body jet aircraft so significant for long-range, high-capacity air transportation in the West. However, the IL-86 is in this category [redacted]

(b)(3):10 USC 424,(b)(5) [redacted]

a. Engine Technology: ~~(S/NOFORN)~~ More is known in the West about the R11-F-300 engine from the early MIG-21's than about any other Russian engine. [redacted] The R11-F-300 engine has a remarkably good and efficient compressor design especially in the [redacted] achieved which is much superior to contemporary U.S. designs. This results in a smaller, simpler, and lighter engine for the same thrust. However, an engine is not composed of one optimized component or technology but rather depends on integration of many technologies, and what the R11-F-300 and certain other Soviet engines gained from their [redacted] Thus, its specific fuel consumption is [redacted] than contemporary U.S. designs.

(b)(1),1.4 (c) [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

(U) The R11-F-300 has also been complemented for its simplicity and

low parts count, which is certainly so in relation to our GE J-79 engine, with which it has often been compared. However, R11-F-300 seems to have been more or less tailored to one type of an inlet: the symmetrical centered installations (as in the MIG-21 and its variants and in the wing pods used in the FIREBAR and the BREWER; it was also used with side inlets in the FLOGGER A, C and D, although the engine was replaced by a major modification in the FLOGGER E, F, and G). On the other hand, the J-79's [redacted] have been essential in making the engine adaptable to a variety of inlet and installation conditions including fighters, supersonic cruise aircraft (B-58) and transports (Convair 880/890). There is no such thing as a free lunch -- one can either have engines designed for a narrower range of applications with a certain degree of simplicity as with the R11-F-300, or one can have a more complicated engine adaptable to a wider range of applications and more complicated as with the J-79, but not both -- (although both these characteristics are sometimes attributed to Soviet engine designs in general).

(b)(3):10 USC 424,(b)(5)

~~(S/NOFORN)~~ Once the notion of looking on Soviet engines as embodiments of all the puritan virtues is discarded, any assessment of their status and the trends for the future must be regarded as reflecting a distinctly positive direction. Their greatest shortcoming has been [redacted] since they apparently have been [redacted] But they know the fundamentals (technology A, B) and have the basic high temperature materials production metallurgy. The [redacted] in the FLOGGER [redacted] Soviet military aircraft. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),1.4 (c)

b. Airborne Radar, Fire-Control and Missile Systems: (U) The area of greatest operationally significant difference between Soviet and U.S. combat aircraft systems has been in the kinds and relative sophistication of airborne radar, fire-control and missile and guided munitions systems, and this is particularly true for air-to-ground operations although, as already noted, the most singular Soviet lacuna has been in

(b)(3):10 USC 424,(b)(5)

It is not clear even now whether former Russian inattention to air/ground operations resulted in neglect of development of systems for such operations or whether deficiencies in technology needed for such airborne systems impeded development and resulted in limited operational capabilities in these areas.

2. BALLISTIC MISSILES: ~~(S/NOFORN)~~ The Soviet emphasis on land-based intercontinental ballistic missiles (ICBM's) has led to four separate generations of ICBM's and many modifications, mainly reentry system variants (single and multiple), of each type.

~~(S/NOFORN)~~

(b)(1),(b)(3):10 USC 424.1.4 (c)

(b)(3):50 USC 403-1(i)

~~(S/NOFORN)~~ [redacted]

(b)(1),1.4 (c) [redacted]

~~(S/NOFORN)~~ Corresponding improvements have also been made in SLBM's with application of [redacted]

~~(S/NOFORN)~~ There are many indications that [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] As yet there is no evidence for a departure from this developmental pattern in the ballistic missile area.

3. SPACE PROGRAMS: ~~(S/NOFORN)~~ The Soviet space program since the initiation of the "space age" by the launch of a Soviet earth satellite has been broad-based and has covered virtually all areas of civil [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) application. However, the emphasis on [redacted] has on the whole been heavier than in the U.S. The Soviet space program has displayed the same evidences of continuity and steadiness of effort as characterize most of the Soviet military R&D and procurement. Over the last decade, the number of Soviet (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c) However, in general, Soviet [redacted] and this has tended to offset the advantage of the [redacted] Recently, there has been a noticeable Soviet trend toward [redacted] but on the whole these do not begin to approach the [redacted] of corresponding U.S. systems. (Nothing here

(b)(1),(b)(3):10 USC 424,1.4 (c) should be taken to be a normative judgement as to the relative merits of [redacted] this is a complex issue which is very much scenario-dependent and especially a function of the anticipated level of direct interdiction or indirect disablement of space systems in space).

(b)(3):50 USC 403-1(i) (TS [redacted]

(b)(1),1.4 (c) [redacted]

~~(S/NOFORN)~~ The Soviets were [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] civil [redacted] purposes than the U.S. The U.S. has utilized [redacted] since the early 1960's

[redacted] (b)(3):50 USC 403-1(i)

while the Soviets did not do so until the early 1970's. The reasons for this are probably manifold and include elements of need as well as capability/resource factors. The earlier Soviet [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

~~(TS~~ [redacted]

(b)(1),1.4.(c)

~~(S/NOFORN)~~ There is also no clear evidence concerning a Soviet recoverable launch vehicle or horizontal landing spacecraft of the kind represented by the U.S. Space Shuttle program. [redacted] some development along this line should be expected.

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

(TS [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(U) The Soviet space station program is characterized by continuity not found in any corresponding U.S. space station program. The U.S. program has included the military Manned Orbiting Laboratory (MOL) which was cancelled before first flight, the one-shot SKYLAB (with several revisits) using modified hardware left over from the Apollo program, and the future potential of the space shuttle program.

~~(S/NOFORN)~~ The Soviet Salyut space station program has had six space station vehicles launched since 1971 and the Soyuz "shuttle" vehicle which transports crews of up to 3 men and supplies to and from the space station. Since 1978 an unmanned expendable resupply vehicle (Progress) has been operated in conjunction with this system. The objectives of the program appear to be both military and civilian and from available information seem to cover the entire specturm of space laboratory operations and experiments, including earth observation, space observation, scientific experiments, equipment and component testing, space manufacturing,

biomedical research, etc. The Soviet space station program also possesses obvious international prestige and political aspects as exemplified by the occasional inclusion of a crew member from a Communist Bloc country.

~~(S/NOFORN)~~ Unmanned Soviet satellites have been used to carry out scientific [redacted] space environment monitoring and for applications to earth resources, [redacted] Lunar and planetary exploration missions have also been conducted. (b)(1),(b)(3):10 USC 424,1.4 (c)

~~(C)~~ In summary, the Soviets have given high priority to space programs for military, civil, scientific and prestige applications. This must be expected to continue, and as the Soviets attain and apply advanced sensors, computer and propulsion technology, even more capable space systems will be aggressively developed.

(b)(3):50 USC 403-1(i)

4. AIR DEFENSE AND ABM TRENDS: [redacted]

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

B. NAVAL AREA

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403-1 (i),1.4 (c)

(b)(1),1.4 (c)

C. GROUND FORCES AREAS

~~(S/NOFORN)~~ This section considers likely Soviet developments in the tank and tank armor fields which include: (1) the use of (2) potential sophisticated including their innovative use of non-uniform and and (3) follow-on developments in smooth bore guns.

(b)(1),(b)(3):10 USC 424,1.4 (c)

1. TANK AND TANK ARMOR: ~~(S/NOFORN)~~ The T-64 and the T-72 are the two newest tanks the Soviets have deployed. Both are classified as medium tanks, [redacted] but there are none larger in the modern Soviet inventory, excluding the 20 year old T-10M and the 35 year old JS-3. Both have smooth-bore main cannon with smaller auxiliary weapons. The Soviets adopted smooth-bore weapons in the early 1960's; the U.S. does not even have such a gun under development although it has been occasionally discussed in the technology base. Of course the XM-1 tank may eventually use the German 120 which is smooth-bore. While this is not the place to go into details of the relative advantages and disadvantages, the smooth-bore gun, with proper choice of propellants, can have significantly higher muzzle velocities, but the internal and external ballistic stabilities are more complicated. [redacted]

(b)(1),(b)(3):10 USC 424;1.4 (c)

[redacted] This is an interesting case where it seems the U.S. has adhered to the well known rifling-stabilized technology whereas the Soviets (and some of our NATO allies) decided early to develop higher-risk, higher-payoff systems.

~~(S/NOFORN)~~ Concerning the armor, [redacted]

(b)(1),(b)(3):10 USC 424;1.4 (c)

[redacted] which is a [redacted] Since the armor weight [redacted]

[redacted]

~~(S/NOFORN)~~

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S/NOFORN)~~ In other areas, the Soviet use of smooth-bores as their main choice for high velocity tank and anti-tank ordnance is impressive. In addition to allowing for higher velocity ordnance (as opposed to rifled

guns) and decreased barrel erosion, the smooth-bore cannon is [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

D. BROAD APPLICATION TECHNOLOGIES

~~(S/NOFORN)~~ This section concentrates on various basic technolgical areas of Soviet expertise which can be applied across a broad spectrum of weapon systems for the various military services. The areas selected by the Panel as systems potentially significant to future Soviet capabilities include: materials, structures and manufacturing technologies; [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] radar system technologies and signal processing trends; microelectronics with emphasis on medium scale integrated (MSI) and large scale integrated (LSI) circuits; and potential applications of [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

1. MATERIALS, STRUCTURES AND MANUFACTURING: (U) In materials and structures, as in most other technologies, the generalization can be made that the Soviets tend to cover the waterfront. They do not, insofar as the Panel could ascertain, [redacted] the relative emphasis on various areas is different in the two countries. The important aspect would be the total effort the Soviets are applying relative to that in other technologies or relative to the materials work in the U.S. Such a comparision is generally beyond the capabilities of the U.S. Intelligence Community, at least until the new material or structure has been incorporated into a military system.

(b)(1),(b)(3):10 USC 424,1:4 (c)

(U) Certain indicators do surface occasionally. For example, the USSR graduates about 3000 welding engineers per year; the corresponding U.S. figure is less than a couple of hundred. While one might argue that many of the Soviet welding engineers are used in non-engineering jobs or that they are really high-class welders (although FTD states that they are not technicians) and that most U.S. metallurgists are taught welding engineering, it is still clear that the Soviets have assigned a high priority to the technology of welding. This effort, for example, permitted the Soviets to introduce magnetic arc welding (a method of arc stabilization) into production use in about 1965. This was not done in the U.S. until about 1970.

~~(S/NOFORN)~~ Another interesting example of the Soviet interest in using their welding capabilities is the early decision [redacted]

(b)(1),(b)(3):10 USC 424,1:4 (c)

[redacted] (b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1 4 (c)

but it is believed that the use of such is prevalent. The U.S. does not seem to have generally adopted this technique; moreover Part of the problem, incidentally, is to find out About two years ago, the AF Wright Aeronautical Laboratories initiated a crash program ($1.4 million in FY 79) to (a) develop repair procedures for existing systems and (b) develop design and testing standards in new systems. Clearly, this sequence of events indicates a minor coup for the Soviet structural designers.

~~(S/NOFORN)~~ It should not necessarily be deduced that such a coup because the Soviet welding technology is necessarily superior to that of the U.S. More likely, as in so many other areas, it arose simply because of the early dedication to welding as a joining technique while the U.S. had an early dedication to rivets and other fasteners. It turns out the Soviets were correct but may not have been a primary factor in the choice of welded construction.

(b)(1),(b)(3) 10 USC 424,1.4 (c)

(c) The Soviets are playing catch-up and the only surprise in store is that they might get there sooner than we think. In the 1976 Paris Air Show, (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] However, one can speculate that the Soviets may leap-frog this system and move vigorously on to the more interesting [redacted] Particularly with their relatively easy access to new U.S. developments, the Soviets could easily [redacted].

(c) One turbine engine materials area where there seems to be no overt work is that of [redacted]. This country has widely publicized its efforts over the last five years in silicon carbide hot components. Perhaps the Soviets are just sitting back and waiting. But perhaps they have realized the great difficulties of using [redacted] for this purpose (which was not generally and fully appreciated in the U.S.) since they are doing much more R&D in [redacted] than we are.

(c) [redacted] FSTC believes, however, that, despite the impressive resources, [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] This could well be one of those sleeper areas where we may be in for a real surprise.

(b)(3):50 USC 403-1(i)

been recognized and, perhaps more importantly, accepted by their technical community. Hence, it appears that the military was in strong support of such a program from the start through the various complex of bureaucracies as disclosed by the briefings presented to the Panel.

(b)(1),(b)(3):50 USC 403-1(i),1.4(c)

(b)(1),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i) ~~(TS~~ [redacted]

(b)(1),1.4 (c) [redacted]

~~(S/NOFORN)~~ Much prior history indicates that their approach is often to field an early and somewhat crude model of such a system in order to gain as much practical operating experience as is possible. The best estimate that could be made at this time of the potential application of this system would probably be [redacted] It is probable that this will appear first in their inventory as part of an overall weapons mix and will be used as a defensive weapon.

(b)(1),(b)(3):10 USC 424,1.4(c)

(b)(1),1.4 (c) [redacted]

[redacted]

rather than admitting problems exist, which often leads to cancellation of U.S. programs. It is expected that the Soviets will keep pace with the U.S. [redacted] It is also possible, that despite our efforts in these areas, they may well succeed because of their persistence.

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

~~(TS~~ [redacted]

(b)(1),1.4 (c)

[redacted]

~~(S/NOFORN)~~ There is no lack of theoretical understanding on their part of any of the science involved but the generally fragile, technical, infrastructure in the Soviet Union sometimes prevents quick application of their theoretical skill. A further weakness of the Soviet program is the lack of a strong parallel commercial program. The extent to which this has grown in this country has been surprising even to many [redacted] Very often, exceptional technological strength derives from areas where an explosive civilian technology development program with good commercial payoff exists. However, such technological strength in the U.S. may not be translated quickly (or with timeliness) into fielded military systems. In the Soviet Union, the [redacted] inhibits the creation of a personnel, technology, and equipment pool of the kinds which we, for example, can draw heavily upon.

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S/NOFORN)~~ Soviet strengths stem however from persistence and doggedness in pursuing a committed goal even though many difficulties appear to arise, which would have long ago terminated one of our programs. This is expected to result in their early fielding of a weapon system of some type [redacted] (b)(1),(b)(3):10 USC 424.1 4 (c)

3. RADAR SYSTEM TECHNOLOGY AND SIGNAL PROCESSING: ~~(S/NOFORN)~~ This section focuses on the current status of those technological areas which are required for the development and fielding of significant operational capabilities followed by those time-ordered projections which can be reasonably supported with corollary comments on intelligence collection deficiencies. The technological areas include [redacted] (b)(1),(b)(3):10 USC 424.1:4 (c) The projections are contained in the "Expected Developments" section.

(b)(1),(b)(3):50 USC 403-1(i);1.4 (c)

[redacted]

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i)

~~(TS)~~ (b)(1),1.4 (c) open source material indicate that the Soviet

(b)(1),(b)(3):10 USC 424,1.4 (c)

developments in transitioned from theoretical to implementation problems in the general 1970-74 time period. It would appear to be reasonable to presume that this change in emphasis in Soviet literature corresponds to systems implementation activity.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

sources may presage a significant technological surprise within the next decade;

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c) [redacted]

4. MICROELECTRONICS: ~~(S/NOFORN)~~ One of the remaining major areas in which Soviet technology seems to be grossly deficient in supporting the development of weapon systems and their operation is in the area of production microelectronics. Although the Soviets have clearly evinced a capability and some success in catching-up with the West with regard to the development of microelectronic circuits, there appears to be a major gap in production quantities and yields of circuits, particularly of the medium scale integration (MSI) and large scale integration (LSI) categories (in general, in excess of 300 active elements per chip). This deficiency has been compensated in part by assignment of priorities to important defense areas, and by extensive use of hybrid technology wherein automation and compactness are sacrificed in favor of higher-yield, labor-intensive techniques.*

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*There is also a considerable interest in [redacted] in the literature.

(b)(1),(b)(3):10 USC 424,1.4 (c)

These include: an apparent continuing deficiency in the availability of large-scale computers to support aerodynamic and hydrodynamic research, and in some cases, large command and control systems; the current level of Soviet computer technology [redacted] comparable [redacted] the IBM 370 series, possibly limited by the availability of quality MSI and LSI to support architectures of more modern scope; and an attempt to thrust military computing into the present era by using [redacted] In the latter case, if the Soviets overcome the difficult learning experience of array-processor software, the total speed of the system [redacted] Overall however, it is believed that the Soviets have not yet "paid their tuition," with regard to large-scale complex software development for real-time and/or array systems. However, since Poland, Czechoslovakia, Hungary and the Soviet Union are engaged in serious research in this area, we believe this capability may be present by the mid to late 1980's.

(b)(1),(b)(3):10 USC 424;1:4 (e)

~~(S/NOFORN)~~ There are other indications that the Soviets are gradually closing the gap in this area. For example, although [redacted]

(b)(1),(b)(3):10 USC 424;1:4 (e)

* [redacted]

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

~~(S/NOFORN)~~ Thus, the Panel expects that by the mid 1980's the Soviets may have basically overcome their production and yield problems associated with LSI and possibly very large scale integration (VLSI) circuits employing hardened* technology, and that the latest generation computers will start appearing in large numbers, particularly for military applications. We also can expect that by 1985-88 the Soviets will have progressed substantially further toward building large scale, real-time and array-processor software We further speculate that by 1990-93, there will no longer be a technological gap in IC fabrication or computer systems as we know them today. Indeed, the Soviets will have commanding leads in some areas while the U.S. will lead in others.

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S/NOFORN)~~ This technological advantage, which may possibly be the cause of some technological shifts during the next 5-10 years lies in several elements of research and development:

(b)(1),(b)(3):10 USC 424,1.4 (c)

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- o
- o
- o

(b)(1),(b)(3):50 USC 403-1 (i),1.4 (c)

(b)(3):50 USC 403-1(i)

III. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

~~(S/NOFORN)~~ The Panel concluded that the heavy infusion of resources into the Soviet R&D and procurement programs in military and military-related areas since World War II and the high priority which these efforts have been accorded, especially with steadily growing investment over the past 10-20 years, have resulted in a steady output of improved Soviet weapon systems for virtually all military components. Although the relative priority and urgency for achievement of specific military capabilities obviously have had an important influence in determining the allocation of R&D resources, there appears to be no area of application of technology to military purposes which has been foregone by the Soviets for reasons of military doctrine or limited military-political objectives, as has sometimes been hypothesized by some Western analysts of Soviet political-military-technological interactions. In virtually all cases, this has meant program development beyond the theoretical scientific and engineering knowledge of technology (A).

(U) It is generally accepted that the Soviets view weapon systems and military forces as means to ends and not ends in themselves, but they also apparently realize that their national, political and strategic objectives and opportunities will evolve over time, and that weapon system developments and deployments may take so long as to preclude total reliance on prediction in detail of specific timing of requirements for the long-range future. Thus, forces and weapons systems seem to be regarded as military resources aimed at meeting the conceivable range of future contingencies and making the fullest use of technological opportunities.

~~(S/NOFORN)~~ Examples of areas in which important new Soviet military capabilities, some not previously emphasized, have been emerging over the past ten years are:

(b)(1),(b)(3):10 USC 424;1.4 (c)

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~~(S/NOFORN)~~ One of the main characteristics of the Soviet R&D program supporting military technology is, in fact, the

(b)(1),(b)(3):10 USC 424;1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S/NOFORN)~~ An important characteristic of the Soviet R&D system is its well recognized long range commitment of resources and its unwavering continuity of effort and resolve applied to technical objectives across practically the entire range of science and technology. As in any large community, intensity of effort is not uniform, quality is not uniform, and output is certainly not uniform, but few if any areas are left uncovered. If it is recognized that all R&D is to some extent a gamble, particularly in the early stages, the relentless, continuous pursuit of a large number of objectives even those which do not seem to offer promising near term payoffs is not an unreasonable strategy as long as resource limitations do not intervene. The

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),1.4 (c)

(U) The Soviet political system for control of the national economy appears to be as important a factor in weapon system acquisition as in other sectors of their industry, although somewhat differently applied. The five-year planning process with its rigid allocation of resources, coupled with bureaucratic rigidity in its administration, tends to produce the stability referred to above but also to restrict the ability to respond to unanticipated problems and opportunities. The latter factor and the prevailing incentives and motivations in the civilian sectors of the economy severely limit the

degree to which Soviet military R&D can benefit from the kinds of interaction with the civilian economy which have characterized U.S. progress in micro-circuits and computers. Nevertheless, there is evidence that in these newer areas, there is, if not an interactive relationship, at least a synchronism between civilian and military progress. The appearance of integrated micro-circuits in military equipment is being paralleled by its appearance in consumer electronics, e.g., pocket calculators, and the appearance of digital computers in a variety of Soviet military equipments in the past ten years is being paralleled by growing quality and quantity of output of general purpose digital computers from both Soviet and other Warsaw Pact sources. It is possible that the advances in military and civilian component technologies in these instances flow from the same underlying technology transfer from the U.S. and other nations in which they are highly developed. The relationships and interactions which may exist here will probably be increasingly important in the future and should receive the serious attention of the Intelligence Community.

(U) It is important to separate the overall performance and effectiveness of weapons systems from the devices, component and subsystem technologies incorporated into these systems. It is possible to develop and produce effective specific weapons systems with various generations of device, component and subsystem technologies. For example, the U.S. developed and produced airborne pulse-doppler radar systems (AN/ASG-18, AWG-9 and AWG-10) in the early 1960's using electronic circuit and computer technologies several generations older than those currently in vogue. The older technologies may

lead to weapon systems which are heavier, less compact, or more expensive (in a given country's industrial base) and which have lower speed of response and target handling capacity. However, if the necessary financial and military manpower resources are allocated in acquisition and deployment, it will often still be possible to field an effective military force with these weapon systems. The size, weight, numbers and manpower requirements of weapon system platforms and supporting vehicles may be significantly larger than for a similar system based on more advanced technology, but if this is recognized and taken properly into account, there is no necessary decrement in military capability.

(U) Sometimes the major need for new device and component technology may be to meet the requirements of the industrial infrastructure and its attendant wage-price disciplines, e.g., there is at present no miniature vacuum tube industry of any consequence in the U.S. and hand-assembled circuit boards with soldered connections of the kind prevalent in the early 1950's would in general be prohibitively expensive to produce here today. It is usually not necessary to be on the very frontier of device and component technology in order to excel in producing user equipments which are competitive in both performance and price, as exemplified by the commanding lead attained by Japan in consumer electronics over the past twenty years, a period during which they lagged several years behind the U.S. in solid state circuit technology (D).

(U) There are certain device, component and subsystem technologies which may be called "pivotal" in weapon systems in that they make possible system capabilities which have proven to be extremely difficult, if not impossible, to

achieve otherwise. Thus, the doppler filtering and signal processing required for pulse-doppler radar demand certain levels of component performance. If not available, it has heretofore been nearly impossible to build an airborne radar with relatively long-range, look-down capabilities.

(U) When a nation is engaged in "catching up" with another which has previously developed some pivotal technologies (D), the most important step is usually the achievement of the first significant level of capability; further improvements are usually easier to come by and often given successively smaller increments of performance relative to the required effort to achieve them.

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),1.4 (c)

~~(S/NOFORN)~~

Thus, while Soviet weapon systems are generally effective for their design missions, there is ample opportunity and need for improvements as well, and new technology can be profitably employed in many cases.

(b)(3):50 USC 403-1(i) ~~(TS/~~

(b)(1),1 4 (c)

~~(S/NOFORN)~~ In addition, diversified patterns of application seem to be developing for weapon system digital computers in general and also for integrated circuit technology over a range of systems from naval mines to avionics. However, it is difficult to identify specific capability improvements which can be regarded as pivotal across this broad range of applications.

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S/NOFORN)~~ Although the steadily increasing size of the Soviet technology base program relative to the West will lead more and more to areas in which they may lead Free World device, component and subsystem technologies (e.g., (b)(1),(b)(3):10 USC 424,1.4 (c) the overall lead of the U.S. and its allies in most of these technology base areas is not likely to be easily overcome since its strength derives from both military and commercial incentives and activities. Therefore, the continuing Soviet "mirror imaging with time delay" of U.S. and allied development, which has characterized the Soviet device, component and subsystem technologies, especially in the electronics and computer fields, is to be expected in many fields at least for the next decade. The time delays may be decreasing in many areas in view of the highly organized systematic efforts by the Soviets (including Institutes created especially for this purpose) to acquire and utilize Free World advanced technology (D). The "not invented here" attitude, while it may exist for individual Soviet technologists, is contrary to the party line.

(U) On the other hand, Soviet innovation and initiatives at the Weapon System level (regardless of the vintage of embedded device, component and

subsystem technology) should be expected to continue with many developments which have no counterparts in existing U.S. systems. With growing size and diversity of the Soviet military R&D effort, exceeding considerably that of the U.S., we must expect to see more Soviet "firsts" even in the device component and subsystems areas.

(U) It is important to realize that the Free World lead in device, component and subsystem technology (D) does not necessarily result in a lead in military weapons systems and forces. The decisions to build and deploy an anti-satellite system, a supersonic heavy bomber, a new tank or a mobile intermediate range ballistic missile are essentially budgetary, political, and military decisions; and these decisions often depend on the level of available technology only in a secondary way. The Soviet decisionmaking apparatus in recent years has been unhesitating, eclectic and almost all-encompassing in opting for development and production of new weapons by comparison with the U.S. and its allies who have been more cautious and selective. We have no reason to expect a change in this Soviet approach although the Western nations may accelerate their weapon decisionmaking and acquisition processes somewhat, changing the relative situation. Accordingly, it is to be expected that new, (b)(3):10 USC 424,(b)(5), weapons may often appear first in the Soviet inventory, albeit in a form we may regard as "primitive."

(U) Soviet adoption of "primitive" forms of new weapons is often interpreted as reflecting the practical workings of some doctrinal, ideological or philosophical devotion to simplicity in the Soviet Union weapon system acquisition processes. While the virtues of simplicity are no doubt extolled (and

often actually pursued), history reveals that simplicity in early versions of Soviet weapon systems is often abandoned for performance advantages as more advanced technology becomes available even though this requires substantial increases in the unit cost. Thus, variable-sweep wings on aircraft make them more complicated than aircraft with fixed wings. Yet most new Soviet military aircraft since the mid-1960's (FITTER C, FLOGGER, FENCER, BACKFIRE) have had variable-sweep wings. Turbofan engines are much more complicated than turbojets, yet they can confidently be predicted to be the wave of the future in the Soviet Union as in the West for their performance advantages. It is important that the Intelligence Community not interpret lags in technology (D) in components, devices and subsystems as evidence of a general Soviet policy or practice of not building complicated (relative to the U.S. is usually meant) weapon systems.

(U) The intelligence assessment and forecasting process for Soviet technology and weapon systems would greatly benefit if the usual weapon by weapon detailed assessments and general materials device, component and subsystem technology assessments were augmented by three types of integrated analyses. These are:

(b)(3):10 USC 424,(b)(3)

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(b)(3):50 USC 403-1(i)

(b)(3):10 USC 424,(b)(5)

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(C) Although the Panel endeavored to examine a broad range of Soviet technology and reviewed virtually the entire spectrum of weapon systems and technologies, it is important to note that, in order to keep the effort within manageable size and in consideration of the limited time available, the scope of the effort was necessarily restricted. The roles of technology in the economic and political warfare areas, [redacted] were omitted, and even in the strictly scientific and technical context, [redacted] areas were not included. Perhaps the largest and most broadly significant areas not considered in depth were command, control, communications and intelligence (C^3I), although some of the device and component technologies reviewed by the Panel had obvious C^3I applications, e.g., [redacted] and computer technology. We recommend that the Intelligence Community, in the near future, undertake specialized studies of these areas which were largely omitted from the present study.

(b)(1),(b)(3):10 USC 424,1:4 (c)

(b)(1),(b)(3):10 USC 424,1:4 (c)

(b)(3):10 USC 424

Chairman, Technology Panel

(b)(3):50 USC 403-1(i)

~~Top Secret~~ (b)(3):50 USC 403-1(i)

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REPORT 87-2

of the

DIA SCIENTIFIC ADVISORY COMMITTEE

to the

Director

DEFENSE INTELLIGENCE AGENCY

SPACE ACTIVITY PANEL

Information Cutoff date: April 1987

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~~DECLASSIFY ON: OADR~~

~~NOT RELEASABLE~~ (b)(3):50 USC 403-1(i)

~~Top Secret~~

DIA/SAC REPORT 87-2

This report was prepared and approved by the

DIA Scientific Advisory Committee's

SPACE ACTIVITY PANEL

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(b)(3):10 USC 424

(b)(3):10 USC 424 are no longer members of the Scientific Advisory Committee

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(b)(3):10 USC 424 USAF, Acting Executive Secretary

(b)(3):50 USC 403-1(i)

SPACE ACTIVITY PANEL

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PREFACE (U)

1. (U) In 1981 the Scientific Advisory Committee (SAC) of the DIA, through its Ad Hoc Panel on Soviet Space-Based [redacted] reviewed Soviet space-based [redacted] and their use by Soviet authorities. The Panel also compared Soviet and U.S. space assets and considered the purposes for which these assets are used. The Panel reviewed existing forecasts of Soviet trends and prepared its own predictions of Soviet trends in the future. The resulting document (DIA/SAC Report 81-4) became an often-used compendium of Soviet space activities. Since this time an NIE 11-1 has been published and revised, and it covers the Soviet Space Programs in detail.

(b)(3):10 USC 424,(b)(5)

2. ~~(S)~~ The Soviets have accelerated their military space activities since 1981 and this trend will likely lead to major new developments in future space programs. In view of U.S. plans for space, the U.S. Intelligence Community must determine how the Soviets will probably use space-based assets to support their strategic and tactical military operations. Towards this end, the Director DIA, requested in July 1985 that the original ad hoc panel reconvene to update the 1981 report, and include new forecasts of Soviet developments and trends in space-based military systems. Noting the profound impact that the Strategic Defense Initiative (SDI) should have on Soviet plans for space, the Panel was also requested to consider SDI while performing a comparative analysis of U.S. and Soviet space assets.

3. (U) The Terms of Reference for the reconvened Panel are given in Appendix A.

4. (U) The Panel reviewed existing evidence and assessments of Soviet space activities and plans since 1981, and was updated on U.S. space activities and plans. A listing of Panel activities is given in Appendix B.

5. (U) This report discusses several illustrative changes in Soviet military [redacted] and their utilization since 1981. It then compares these changes with the Panel forecasts made in 1981, in part to calibrate the accuracy of the forecasting methods used. Then, U.S. military implications of Soviet developments are assessed. The report concludes by forecasting probable future Soviet trends and their potential to shape the Soviet reactions to the SDI. The report also makes several recommendations aimed to add awareness of the possible indicators of Soviet reactions.

(b)(3):10 USC 424,(b)(5)

SECTION I.

EXECUTIVE SUMMARY (U)

(b)(3):10 USC 424,(b)(5)

1. (U) In 1981 the DIA Scientific Advisory Committee's ad hoc panel on Soviet Space-Based [redacted] completed a report (Report 81-4, Soviet Space-Based [redacted] (Trends and Their Impact on U.S. Operations and Programs) (U)) which assessed Soviet military [redacted] space activities. This report identified trends and discussed the manner in which Soviet space assets are used. The Panel compared the use of Soviet and U.S. space assets and made several recommendations regarding efforts by the Intelligence Community to maintain an understanding of the Soviet military space program. The Panel's report advocated the revitalization of [redacted] with the intent of focusing more attention on the intelligence needs of Tactical Commanders.

2. (U) In July 1985 the Director, DIA requested an update of this report in the light of events since 1981 and asked the Panel to provide new forecasts of likely trends in the Soviet military [redacted] space program. He also requested an assessment of the probable impact that the U.S. SDI Program would have on Soviet military [redacted] space activities.

(b)(3):10 USC 424,(b)(5)

3. ~~(S)~~ When the Panel reconvened under the same Chairman it reviewed current Intelligence Community data on developments in the Soviet space programs.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted] Realizing this shortcoming the Panel concluded that 4 of their 10 original forecasts had occurred, that 6 had not yet come to pass, and that 2 additional significant developments were unforeseen in 1981. The details of these forecasts are discussed in Section II.

4. (U) The Panel regards the following developments as the key features of the Soviet space program since 1981.

a. ~~(S)~~ The number of active satellites on orbit increased by 50%, due mostly to satellite endurance and not necessarily to more launches.

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c)

[redacted]

support ground and naval forces.

5. ~~(S)~~ The Panel anticipates that the Soviets will continue to enhance the coordinated use of their on-orbit (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted] to improve the warfighting capabilities of their general purpose forces. We expect them to use their [redacted] to maintain a continual track of U.S. surface naval forces, making it increasingly difficult for such fleet elements to escape detection and possible attack under wartime conditions.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] including the mapping accuracy needed for mobile ICBM forces and an in-flight navigation update for both cruise and ballistic missiles.

7. ~~(S)~~ [redacted] U.S. ICBM launches. This capability gives them a launch under attack option for their strategic reserve missile forces, thereby significantly impacting U.S. response options in the event of a Soviet preemptive attack. [redacted] However, this [redacted] does not presently provide worldwide coverage and thus contributes very little to a credible SLBM defense.

(b)(1),(b)(3) 10 USC 424,(b)(5),1.4 (c)

8. ~~(S)~~ The Soviet Space Shuttle Program has come along faster than expected, but other military man-in-space programs [redacted] have progressed more slowly than expected. Unlike the impact that the Shuttle has had on U.S. space activities, introduction of the Soviet Shuttle is not expected to be accompanied by a corresponding decrease in the use of expendable launch vehicles. Instead, the Soviets will continue to use expendable launch vehicles for most of their satellite launches; however, some low earth orbit satellites may employ Shuttle launches. Thus, most Soviet Shuttle flights will be devoted initially to scientific missions and military R&D, rather than to deploying operational military satellites. The latter mission, however, is most likely to commence after 1990.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

9. ~~(S)~~ We expect the Soviets to introduce a space-based, [redacted] Such a capability may well be incorporated into their new [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

10. ~~(S)~~ In considering possible Soviet responses to the U.S. SDI Program, the Panel notes that SDI, if successfully deployed, would negate the current

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

13. ~~(S)~~ On balance, the Panel believes that the Soviet military [redacted] space activities will, in the next few years, enter a new era of mature expansion involving [redacted] Simultaneously, the Soviets will embark on new initiatives to establish space supremacy [redacted] techniques by experimenting with first [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

14. ~~(S)~~ [redacted] While not specifically related to the assessment of future Soviet trends in military [redacted] space assets and their use, the comparison between Soviet and U.S. uses of space for [redacted] causes this Panel to make a recommendation that goes beyond the task stated in its Terms of Reference. Specifically, the Panel believes that [redacted]

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):50 USC 403-1(i);1.4 (c)

(b)(1),1.4 (c)

15. The Panel makes the following additional recommendations.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

a. ~~(S)~~

b. ~~(S)~~ Reexamine current assessments of the reasons that Soviet satellite missions are terminated. Determine whether the reasons are operationally driven or result from technology deficiencies that would render their space program less threatening than perceived.

c. ~~(S)~~ Seek a better understanding of the Soviet military manned space program (space shuttle, spaceplane, and space station). The Soviets continue to work hard in these areas: could they know something about man-in-space that we do not and does their activity portend a threat to our future military operations?

(b)(3):50 USC 403-1(i)

SECTION II.

COMPARISON OF 1981 EXPECTATIONS AND ACTUAL DEVELOPMENTS (U)

(b)(3):50 USC 403-1(i)

1. ~~(TS)~~

(b)(1),(b)(3):50 USC 403 (g),..1.4 (c)

(b)(1),1.4 (c)

2. ~~(S)~~ Four of the 10 forecasts have come to pass. Comments on the other forecasts follow.

a. ~~(S)~~ While the space-based force projection capability has not yet come to pass, indications are that the Soviets are continuing to work on programs that will give them

b. ~~(S)~~ The predominant direct user of military space capability (other than for communications, and strategic applications) is still (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

c. ~~(S)~~ While the Soviet has not been active, a part of the Soviet response to SDI will likely be an acceleration of a continuing

d. ~~(S)~~ There is no evidence that the Soviets have targeted U.S. (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) or, for that matter, how they might.

e. ~~(S)~~ There is still no evidence of Soviet space-based nor is there evidence that the Soviets have a in space. However,

3. ~~(S)~~ In 1981 the Panel did not address the possible large increase in the number of Soviet satellites on orbit nor did it discuss the development of a

Soviet Space Shuttle or predict the development of [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

4. (U) Implication of these forecasts and other unforeseen developments are illustrated by the following items:

(b)(1),1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

c. ~~(S)~~ The 24 hour Soviet [redacted] when coupled with a Soviet ABM [redacted] could reduce the number of [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

e. ~~(S)~~ We do not know how the Soviet Shuttle Program will impact U.S. military operations. Clearly, the total payload that the Soviets can orbit per year will be increased. If the Soviets build 4 Space Shuttles, and if they generate 24 launches per year, the additional 1.4 million pounds to low earth orbit would multiply four fold the total Soviet annual payload to orbit.

f. ~~(S)~~ So far the Soviet military man-in-space program has not had a significant impact on U.S. military operations. This is not to suggest that the Soviet military man-in-space program will not eventually produce developments in surveillance, ASW or other aspects of warfare that would impact U.S. military operations. It merely means that the implementation of space capabilities can be achieved equally well using [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) In the Panel's opinion a formidable Soviet space capability which would threaten U.S. military interests does not necessarily man-in-space.

(b)(3):50 USC 403-1(i)

SECTION III.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

FORECASTED TRENDS IN SOVIET MILITARY [redacted] PROGRAMS (U)

1. ~~(S)~~ The U.S. Intelligence Community defines the Soviet objectives for military use of space as follows:

o [redacted]

o Global support to Soviet military operations, including surveillance, communications, navigation, early warning, targeting and meteorology.

o Worldwide influence and national prestige of the Soviet Union.

o [redacted]

2. ~~(S)~~ In furthering these objectives, [redacted] The Soviets have further declared that the U.S. will not be allowed to upset the correlation of forces through the use of space. The DIA analysis of [redacted]

3. ~~(S)~~ The Soviet investment in space over the last two decades to implement this doctrine has been enormous. The U.S. estimates that the cost of the Soviet space program has risen from [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3) 50 USC 403-1 (i),1.4 (c)

9. (U) Missile Launch Detection System

(b)(1),(b)(3):50 USC 403-1 (i),1.4 (c)

(b)(1),1.4 (c)

13. ~~(S)~~ The Soviet Man-in-Space Program

(b)(3) 50 USC 403-1(i)

a. ~~(TS~~ The Soviets have closely copied the U.S. Space Shuttle. The dimensions and shape of their shuttle are almost exactly the same as those of the U.S. Shuttle.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

b. ~~(S)~~ As yet we have no definitive knowledge of the intended use of the Soviet Shuttle. By way of comparison, the U.S. Shuttle program was intended to become the general overall capability to launch spacecraft into orbit (either directly or via an additional orbit transfer vehicle), and as the U.S. Shuttle program matured, it was accompanied by a decrease in the production and use of expendable launch vehicles. We do not believe that the Soviet Shuttle program will result in a similar reduction in the use of expendable launch vehicles.

c. ~~(S)~~

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

d. ~~(S)~~ While there is little evidence to suggest such a program, it is a logical step to assume that the Soviets will

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

e. ~~(S)~~ There is continued demonstration of a Soviet desire to establish a

permanent manned presence in space. Although the Salyut 7 Space Station failed in 1985 it was reoccupied and restored to operational status four months later (an impressive man-in-space repair operation). Moreover, there is evidence that the Soviets will attempt to construct a modular space station as early as this year.

(b)(1),(b)(3) 10 USC 424,(b)(5), 1.4 (c) Therefore, the panel is left to its conjectures.

(b)(1),1.4 (c)

5. (U) In the category of fast Soviet responses, based on existing Soviet technology, the following possibilities must be counted:

(b)(1),1.4 (c)

SECTION V.

CONCLUSIONS (U)

1. ~~(S)~~ Based on the sharp increase in the number of Soviet satellites on orbit and the [redacted] it is the panel's belief that the Soviets will now be entering an era of consolidating their ground-based command and control capabilities by engaging in [redacted] achieve this objective, the Soviets will continue to improve their space-based communications capabilities, through increased use of communication and especially data relay satellites.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

2. ~~(S)~~ In the near term the panel believes that the primary use of the Soviet Shuttle system will be scientific and military R&D.

3. ~~(S)~~ We currently have no evidence of a Soviet program to build [redacted] Hence, the Soviet Shuttle may initially only be used for low earth orbit satellite launches. However, the Soviet Shuttle may later serve as a launch vehicle for [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

4. ~~(S)~~ The impressive and growing heavy lift launch vehicle investment of the Soviets foretells major, as yet little understood, programs in space, possibly in support of manned space and SDI-like objectives.

5. ~~(S)~~ Soviet space hardware technology has improved significantly. This is evidenced by increased on orbit life of its satellites and more sophistication in the missions performed.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

7. ~~(S)~~ The panel believes that Soviet response to the U.S. SDI might have at least the following components (see Section IV for details):

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

SECTION VI.

RECOMMENDATIONS (U)

1. ~~(S)~~ [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

2. ~~(S)~~ [redacted]

3. ~~(S)~~ Increase the priority for support to tactical military operations in establishing requirements for new or planned military space programs.

o Introduce tactical requirements into the planning process for new space based systems.

o Assure that rapid tasking and information dissemination capabilities are included.

o Consider the use of the [redacted] as a focal point for these efforts and for providing funds for the incremental cost of these capabilities.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

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(b)(3):50 USC 403-1(i)

APPENDIX A

TERMS OF REFERENCE

3 July 1985

SPACE ACTIVITY PANEL

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

SUBJECT: Soviet Space-Based Military Activity [redacted] ~~(S)~~

PROBLEM: ~~(S)~~ The U.S. Intelligence Community must understand how the Soviets will use space-based assets to support their strategic and tactical military operations and political objectives. World developments since 1981 and the military buildup in the U.S., as well as the SDI, could impact Soviet planning.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

BACKGROUND: ~~(S)~~ In 1981 the Scientific Advisory Committee (SAC) had an ad hoc panel which conducted an analysis of Soviet space-based [redacted] to understand their use by Soviet authorities. The associated tasking, collection, production, and dissemination procedures in the Soviet system were examined. Some comparisons with like U.S. assets were also made. Since that time, the Soviets have continued their growth in space, and it is likely that [redacted] Thus, a relook at the activities of the original panel will serve to update its useful and often-referred-to record (SAC report 81-4) and will help to evaluate the progress made by the Soviets in the interim, in terms of its impact on the U.S. intelligence and national security communities.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

OBJECTIVES: ~~(S)~~ The panel will investigate Soviet developments in space-based military systems, [redacted] since 1981. The panel's effort will include a forecast of where the Soviet developments may lead in the future. As much as possible, the panel will determine what impact, if any, the Strategic Defense Initiative will have on Soviet developments in space. The panel will update its comparative analysis on U.S. and Soviet space assets.

LEVEL-OF-EFFORT: (U) The panel should require six months to complete its effort and will submit a final report to the Director. The panel will be chaired by [redacted] and will have the following members: [redacted]

(b)(3):10 USC 424

APPROVED BY:

(b)(6)

[redacted] **JAMES A. WILLIAMS**
Lieutenant General, USA
Director, DIA

~~SECRET~~

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APPENDIX B

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPACE ACTIVITY PANEL
THE DIAC, ROOM B7-213, BOLLING AFB, WASHINGTON, D.C.
10 JUNE 1985

(b)(3):10 USC 424.(b)(6)

0900-0930	Executive Session Overview & TOR Review
0930-1030	[redacted]
1030-1040	Break
1040-1120	[redacted]
1120-1155	[redacted]
1155-1225	Lunch, DIAC Cafeteria
1225-1310	[redacted]
1310-1340	[redacted]
1340-1350	Break
1350-1425	Command and Control
1425-1500	Operations & Use
1500-1540	Trends/Future
1540-1630	Executive Session

(b)(1),(b)(3):10 USC 424.(b)(5),1.4 (c)

~~SECRET~~, [redacted]

(b)(3):50 USC 403-1(i)

APPENDIX B (Continued)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPACE ACTIVITY PANEL
THE DIAC, ROOM B7-213, BOLLING AFB, WASHINGTON, D.C.
11 JUNE 1985

(b)(3):10 USC 424,(b)(6)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

0845-0915	Discussion of
0915-0945	Discussion of
0945-1015	Discussion of
1015-1030	Break
1030-1100	Discussion of
1100-1130	Discussion of
1130-1230	Lunch
1230-1300	Discussion of
1300-1330	Discussion of
1330-1400	Discussion of
1400-1430	Discussion of
1430-1530	Executive Session

SECRET (b)(3):50 USC 403-1 (i)

APPENDIX B (Continued)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPACE ACTIVITY PANEL
THE DIAC, ROOM B7-213, BOLLING AFB, WASHINGTON, D.C.
7 AUGUST 1985

(b)(3):10 USC 424,(b)(6)

0900-0930	Soviet Space Doctrine
0930-1015	(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)
1015-1100	
1100-1145	
1145-1230	Lunch -- DIA Cafeteria
1230-1500	Soviet Space Trends (b)(1),(b)(3):50 USC 403-1(i),1.4 (c)
1500-1600	Executive Session

~~SECRET~~

APPENDIX B (Continued)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPACE ACTIVITY PANEL
THE DIAC, ROOM B7-213, BOLLING AFB, WASHINGTON, D.C.
18 OCTOBER 1985

0900-1000	(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)
1000-1100	
1100-1145	Lunch
1145-1600	Executive Session

(b)(3):10 USC 424

UNCLASSIFIED

(b)(3):50 USC 403-1(i)

APPENDIX B (Continued)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPACE ACTIVITY PANEL
THE DIAC, ROOM B7-213, BOLLING AFB, WASHINGTON, D.C.
5 MARCH 1986

(b)(3):10 USC 424

1000-1230	Redefine the Terms of Reference for the Space Activity Panel
1230-1330	Lunch
1300-1630	Continuation of work on the Terms of Reference

UNCLASSIFIED

(b)(3):50 USC 403-1(i)

APPENDIX B (Continued)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPACE ACTIVITY PANEL
THE DIAC, ROOM B6-150, BOLLING AFB, WASHINGTON, D.C.
16 SEPTEMBER 1986

(b)(3):10 USC 424

0900-1300	Executive Session - Revise and Refine Draft Final Report
1300-1330	Lunch, DIA Cafeteria
1330-1600	Executive Session - Complete Final Report

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~~TOP SECRET~~ (b)(3):50 USC 403-1(i) [redacted]

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SCIENTIFIC ADVISORY COMMITTEE

DEFENSE INTELLIGENCE AGENCY

REVIEW OF DOD INTELLIGENCE PROGRAM ON THE STRATEGIC CAPABILITIES OF CHINA (U)

MAY 1967

WARNING

(b)(3):50 USC 403-1(i),

[redacted]

DOE EQUITIES REDACTED BEFORE SCANNING PER DOE. SEE BELOW.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW

1st REVIEW DATE: 7-18-08
AUTHOR NAME: (b)(6),
2nd REVIEW DATE: 9/12/08
AUTHOR NAME: (b)(6),

DETERMINATION (CIRCLE NUMBER(S))
1. CLASSIFICATION RETAINED
2. CLASSIFICATION CHANGED TO:
3. CONTAINS NO DOE CLASSIFIED INFO
4. COORDINATE WITH:
5. CLASSIFICATION CANCELED
6. CLASSIFIED INFO BRACKETED
7. OTHER (SPECIFY): ~~DOE info~~ SRD

~~RESTRICTED DATA~~
~~Atomic Energy Act of 1954~~

Excluded from Automatic
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(b)(3):50 USC 403-1(i) [redacted]

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REPORT 67-3
MAY 1967

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MEMBERSHIP

(b)(3):10 USC 424

THIS REPORT WAS PREPARED BY THE STRATEGIC PANEL

MEMBERSHIP

(b)(3):10 USC 424

DIA TECHNICAL ADVISOR

(b)(3):10 USC 424

(b)(3):50 USC 403-1(i)

REPORT 67-3
MAY 1967

REVIEW OF DOD INTELLIGENCE PROGRAM ON THE STRATEGIC CAPABILITIES OF CHINA (U)

SECTION I

INTRODUCTION

1. (S) The purpose of this report is to respond in part to the request from General Carroll[1] that a "comprehensive review of the status of the DoD intelligence program on China" be undertaken. The scope of this paper is limited to ChiCom programs and associated technological resources in [redacted] MRBMs and ICBMs/Space.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

2. (S) The review was conducted by examining the available data base, the methodology used in producing intelligence assessments, and the current intelligence assessment. These items were examined within the framework of those items of intelligence which are considered necessary to understand and assess the ChiCom strategic capability. DIA staff agencies prepared the summary sections on the

[1]Memorandum S-281/ST from General Carroll to [redacted] 22 September 1966

available data base, methodology and current assessment. These data have been reviewed and are generally concurred in by the DIA Scientific Advisory Committee. It is clear from our review that there are urgent collection needs in the areas of ChiCom MRBM and ICBM/Space programs, and that new data resulting from such collection will require further analysis before reasonable confidence levels may be placed in the estimates on these programs.

SECTION II

CONCLUSIONS AND RECOMMENDATIONS

1. (U) Specific conclusions and recommendations which deal with [redacted] and MRBM and ICBM/Space programs are contained in separate sections of the report. General conclusions are given in the paragraphs below. There is general concurrence with the DIA methodology of treating the available data base and with the DIA assessment.

(b)(3):10 USC 424, (b)(3):50 USC 403-1(i),(b)(5)

2. ~~(S RD)~~ There is a general conclusion that the ChiComs currently [redacted] MRBM/ICBM fabrication abilities, and operational aircraft to rapidly become a significant strategic factor. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

DOE b(3)

(b)(3):42 USC 2162 (a) (RD)

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

3. (S) There is also a general conclusion that we do not know very much about the ChiCom MRBM-ICBM/Space programs. Tables I, II, and III summarize the information needed to assess the Chinese strategic posture versus an assessment of the quality of our present data base. The assessment of the ChiCom nuclear program is in fair focus although additional collection efforts would provide some improvement. On the other hand, the assessments on the ChiCom MRBM and the ICBM/Space programs are in need of major improvements which can be achieved primarily by the addition of large amounts of new collection efforts.

4. (TS) A general recommendation of the Committee is that specific collection programs be devised to meet the needs as depicted in Tables I, II, and III and that these specific programs be implemented as soon as possible. The most pressing need is for precise trajectory and/or [redacted] data during powered flight and re-entry phases of the MRBM and ICBM/Space programs. As a measure of the urgent need for increased collection efforts

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

TOP SECRET (b)(3):50 USC 403-1(i)

the ChiComs will very probably launch their first ICBM in 1967, and, unless collection improvements are made before that time, we may well learn little more about the event other than what the data obtained through [redacted] will yield. There are other specific needs, and they are enumerated in the following sections.

5. ~~(S)~~ Finally, it is recommended that [redacted] studies of the ChiCom weapon carriers be initiated. It is reasonably clear that the ChiComs presently have the [redacted] and the production of ballistic missiles and additional weapons in the future will increase this capability.

(b)(1),(b)(3):50 USC 424,(b)(5),1.4 (c)

~~NO FOREIGN DISSEM~~
TOP SECRET (b)(3):50 USC 403-1(i)
(b)(3):50 USC 403-1(i)

TABLE I

NUCLEAR MATERIALS

INFORMATION REQUIRED AND ASSESSMENT OF DATA BASE

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

TABLE II
NUCLEAR WEAPONS
INFORMATION REQUIRED AND ASSESSMENT OF DATA BASE

~~RESTRICTED DATA~~
~~Atomic Energy Act of 1954~~
~~NO FOREIGN DISSEM~~
~~TOP SECRET~~

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

TABLE III
MRBM AND ICBM/SPACE
INFORMATION REQUIRED AND ASSESSMENT OF DATA BASE

ELEMENT OF INFORMATION REQUIRED	ASSESSMENT OF CURRENT DATA BASE*		COMMENTS
	MRBM	ICBM/SPACE	
Program Existence	[redacted]		
Range or Orbital Capability Payload Weight Yield or Orbital Contents Accuracy			[redacted]
Reliability Reaction Time			[redacted]
R&D Schedules IOC Rate of Deployment			Troop training program information required; transportation of critical materials data needed; operational site signatures and R&D associations required; missile production analysis and association required.
Ultimate Number of Operational Vehicles			Bounded by number of warheads available.
Location of Bases			Photographic coverage and association problem.
System Vulnerabilities			All data required

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

~~TOP SECRET~~

SECTION III

NUCLEAR MATERIALS PROGRAM

1. (U) Information Required

An assessment of the ChiCom nuclear materials program requires knowledge of the following:

(b)(1).1.4 (c) a. [redacted] as a function of time, including uncertainties.

(b)(1).1.4 (c) b. [redacted]

2. ~~(S/NFD-RD)~~ Summary of Data Base

[redacted]

DOE b(3)

(b)(3):42 USC 2162 (a) (RD),.

b. Production facilities. The only identified uranium isotope facility in China is the [redacted] (b)(1).(b)(3):10 USC 424.1.4 (e)

~~RESTRICTED DATA~~
~~Atomic Energy Act of 1954~~

~~NO FOREIGN DISSEM~~

~~TOP SECRET~~ [redacted] (b)(3):50 USC 403-1(i)

[redacted] (b)(3):50 USC 403-1(i)

SECTION IV

NUCLEAR WEAPONS PROGRAM

(b)(1),(b)(3):10 USC 424,(b)(3),1.4 (c)

1. (S) Information Required

An assessment of the ChiCom requires knowledge of the following items:

f. Understanding of the development program to anticipate the future trends and actions.

2. (S) Summary of Data Base

(b)(1),1.4 (c)

SECTION V

MRBM AND ICBM/SPACE PROGRAMS

1. (U) Information Required

The information required to understand the ChiCom MRBM and ICBM/Space strategic capbility can be summarized in the list below. These requirements constitute the review framework for this section.

a. Existence of the program(s).

b. Range or orbital capability of the various configurations.

c. Payload weights(s).

d. Yield of the payload warhead or contents of the orbital payload.

e. Accuracy of the delivery of the payload to assigned target (CEP or orbital precision).

f. Reliability of countdown through detonation of warhead or orbital injection.

g. Reaction time from launch order to lift off.

h. Research and development schedule.

~~TOP SECRET~~ [redacted]

i. Initial operational capability.

j. Rate of operational deployment.

k. Ultimate number of operational missiles.

l. Location of operational bases.

(b)(3):50 USC 403-1(i)

m. System vulnerability.

2. ~~(TS~~ [redacted] Summary of Data Base

The data base available for analysis of the ChiCom missile programs [redacted] The ChiCom data base consists [redacted] although it is supported [redacted] is now in operation in an R&D phase and offers the best hope for immediate improvement of the data base.

(b)(1),(b)(3):10 USC 424,(b)(5):1.4 (c)

(b)(3):50 USC 403-1(i)

a. ~~(TS~~ [redacted] PHOTINT. [redacted] From

~~NO FOREIGN DISSEM~~
~~TOP SECRET~~ (b)(3):50 USC 403-1(i) [redacted]
(b)(3):50 USC 403-1(i) [redacted]

(2) Analysis of ChiCom [redacted] (b)(1),(b)(3):10 USC 424,(b)(5) [redacted] has added very little to our understanding of their missile development and test program.

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

contain hearsay evidence. They are difficult to validate because of the lack of accurate reporting. Like

(b)(1),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

3. ~~(TS)~~ Summary of Methodology

(b)(3):50 USC 403-1(i)

a. ~~(S)~~ One of the reasons for analysis of the ChiCom missile programs is to determine the characteristics of the missile systems and the date they will be available for operational use; therefore, the methodology is broken down into two major approaches to satisfy these requirements. To establish the IOC date, a simplified development program is first laid out, based on data from U.S. and Soviet development practices. The available intelligence data base is then used to determine the current program status and to modify the postualted program as necessary. Figures 1 and 2 are results of this process for the ChiCom

TOP SECRET [redacted] (b)(3):50 USC 403-1(i)

MRBM and ICBM programs. Comparisons with similar U.S. and Soviet development programs have been made, and they verify the accuracy of the IOC estimate.

(b)(3):50 USC 403-1(i)

b. (TS) [redacted] System characteristics of ChiCom missiles

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] In the case of the MRBM, considerable reliance has been placed on the characteristics of Soviet systems to which the ChiComs probably had access and possibly even copies.

(b)(3):50 USC 403-1(i)

c. (TS) [redacted] The ICBM/Space characteristics [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted] Inputs to computer studies are derived from these analyses, and these, in turn, yield estimated missile system characteristics. As other information is received, such as [redacted] (b)(1),1.4 (c) the characteristics are modified to conform to the new data.

d. (U) Estimated characteristics for the ChiCom MRBM and ICBM are given in Figures 3 and 4, along with footnotes explaining the methodology used in their derivation.

NO FOREIGN DISSEM
TOP SECRET [redacted] (b)(3):50 USC 403-1(i)
(b)(3):50 USC 403-1(i) [redacted]

e. ~~(S)~~ Only a brief computer analysis has been performed on the ChiCom space capability, utilizing the ICBM postulated in Figure 4 as a booster. Such a system would place [redacted] This launch direction would make maximum use of the earth's rotation and, in addition, would result [redacted] The first orbit would then pass directly over the launch point so that range head instrumentation could be utilized to verify orbit.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

f. ~~(TS)~~ [redacted] If an ICBM size missile [redacted]

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

g. ~~(S)~~ A space launch attempt utilizing an MRBM as the basic booster could be made any time [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

4. ~~(S)~~ Summary of assessments

a. MRBM. The ChiComs have an MRBM [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] DOE b(3) (b)(3):42 USC 2162 (a) (RD)

b. ICBM/Space.

(1) If the ChiComs do not have any major development difficulties and they give the program a very high priority, they could reach IOC with an ICBM [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) The most probable IOC date is the early [redacted] DOE b(3) (b)(3):42 USC 2162 (a) (RD)

(2) The ChiComs could [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted] by using an MRBM as a booster and adding additional stages.

[redacted] they could probably place [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted] by using a booster from the ICBM program.

5. (TS) [redacted] MRBM-ICBM/Space Conclusions

(b)(3):50 USC 403-1(i)

a. (S) There is general Committee agreement with the DIA assessment of the ChiCom MRBM and ICBM/Space programs. The assessment is consistent with the available data base and the methodology of assessment is reasonable (with the exceptions noted below); however, there is a definite deficiency in the available data base. As a graphic illustration of this deficiency, Table III associates the information required for assessing the ChiCom MRBM and ICBM/Space programs with the current intelligence assessment and with the certainty of the available data base.

(b)(3):50 USC 403-1(i)

b. (TS) [redacted] There are several observations to be made about the current data base and intelligence assessments.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

c. It is recommended that DIA start with the needs identified in Table III, use the conclusion data, and proceed to develop and implement plans for collection so that better evidence will be available for future assessments.

(b)(3):50 USC 403-1(i)

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4. (b)(3):10 USC 424
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(b)(3):50 USC 403-1(i)

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REPORT NO. 68-1

SCIENTIFIC ADVISORY COMMITTEE

DEFENSE INTELLIGENCE AGENCY

Seven pages are denied in full and are not included.

COLLECTION NEEDS AND APPROACHES AGAINST COMMUNIST CHINA

MARCH 1968

WARNING

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THIS REPORT WAS APPROVED BY THE
DIA SCIENTIFIC ADVISORY COMMITTEE

MEMBERSHIP

(b)(2),(b)(3):10 USC 424

(b)(2),(b)(3):10 USC 424

THIS REPORT WAS PREPARED BY:

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DIA TECHNICAL ADVISORS

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e. Overhead Photography

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(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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SECTION I

INTRODUCTION AND SUMMARY

1. In July 1967, the Strategic Panel of the DIA Scientific Advisory Committee completed a comprehensive review of the intelligence available on the strategic capabilities of Communist China. The results of this review, including recommendations for the improvement of our knowledge, were published in DIA/SAC Report 67-3, "Review of DOD Intelligence Program on the Strategic Capabilities of China." To augment the report of the Strategic Panel, the Director, DIA, requested that the Collection Panel undertake a study concerning DoD collection approaches to the CHICOM weapons program. In its deliberations the Panel considered intelligence requirements, existing collection systems and new collection approaches advanced by various elements of the intelligence community. An abstract compilation of these items is presented as Appendices I and II to this report. Although intelligence requirements with respect to Communist China cover a broad spectrum of weapons systems, the Panel in this report wishes to focus attention on the critical area of the CHICOM missile program, which in light of recent events, deserves special emphasis.

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

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SECTION II

CONCLUSIONS

1. A basic difficulty in understanding the CHICOM missile threat is our inability to monitor the CHICOM test program.

(b)(1),(b)(3):50 USC 403 (g)

(b)(1),1.4(g)

(b)(1),(b)(3):50 USC 403 (g)

(b)(1),(b)(3):50 USC 403 (g)

(b)(1)

(b)(1)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

3. We conclude that [redacted] ACOUSTINT, 440L and SUGAR TREE

(b)(1),1.4 (c)

cannot be considered as reliable indicators of missile launches from Communist China. The discrepancy between CHECKROTE and

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

SECTION III

RECOMMENDATIONS

In the following paragraphs, the Panel sets forth its recommendations concerning those systems that can provide the intelligence community with valid data on the CHICOM missile threat.

(b)(1),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(3) Consider improvement of the SCTMTR launch detection capability of CHECKROTE, 440L, or SUGAR TREE by relatively inexpensive system modifications. In particular, we recommend that the Air Force consider adding a high-gain receiver antenna

(b)(1),1.4 (c) [redacted] and possibly a higher powered transmitter [redacted] and that the Army add to the SUGAR TREE system [redacted] extra receivers capable of monitoring [redacted] These changes, which we consider feasible at a cost of very few millions (less than five), should be expedited to be operational by the end of 1968.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c) [redacted]

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1).1.4 (c)

(b)(1),(b)(3):50 USC 403 (g).1.4 (c)

(b)(1).1.4 (c)

d. Reentry Vehicle Collection Systems: The collection requirements against CHICOM reentry vehicles are substantially

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

the same as against the USSR.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

that the lead time for a comprehensive collection capability is several years, and that the CHICOM's may launch an ICBM this year, there is great need to obtain reentry information as soon as testing begins.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(1) Current studies on the design of a complete reentry vehicle collection system be broadened to include consideration of possible operation against Chinese ICBM reentry vehicles as well as Soviet RV's.

(2)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),,1.4 (c)

e.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

Current programs plus satellite systems now under development should continue to satisfy requirements in this area but will never be capable of monitoring test firings because of the very limited sampling time available over a given area.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

APPENDIX I

CURRENT COLLECTION EFFORTS

1. General

This section summarizes the intelligence collection efforts directed toward the (b)(1),(b)(3):50 USC 403 (g) with a brief description of the information yield of each.

(b)(1),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

5. RADINT

RADINT systems currently targeted against China are:

a.

(b)(1),1.4 (d)

b. Project 440L -

(b)(1),1.4 (c)

c. SUGAR TREE -

(b)(1),1.4 (c)

(b)(3), 18 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(2),(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

d. CHECKROTE -

(b)(1),1.4 (c)

e. SENTINEL FAN -

(b)(1),1.4 (c)

6. PHOTINT

a.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

b.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),1.4 (c)

8. HUMINT

a. HUMINT reports have yielded information relating to broad areas of the CHICOM weapons program. These reports

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

emanate from a variety of sources,

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

b.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

APPENDIX II

PROSPECTIVE COLLECTION EFFORTS

1. Emplaced Sensors

The remote location of rangehead and the poor prospects for improving tip-off time tend to require an elaborate network of radar observation stations

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

The use of emplaced sensors could, to a degree, alleviate the need for such a complex arrangement.

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

4. On-Coming Satellite Programs

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

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REPORT 66-6

OF THE

SCIENTIFIC ADVISORY COMMITTEE

TO THE

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

ON

TWELVE PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED.

CAPABILITY OF SOVIET OFFENSIVE

FORCES AGAINST US MISSILES

October 1966

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW

1st REVIEW DATE: 2-23-78 DETERMINATION (CIRCLE NUMBER(S))

AUTH [redacted] 1. CLASSIFICATION RETAINED

NAME [redacted] 2. CLASSIFICATION CHANGED TO: NST

3. CONTAINS NO DOE CLASSIFIED INFO

4. COORDINATE WITH:

2nd AUT [redacted] 5. CLASSIFICATION CANCELED

NAME 6. CLASSIFIED INFO BRACKETED

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DIA Technial Advisors

(b)(3):10 USC 424

*Members of the Special Ad Hoc Panel preparing this report;

(b)(3):10 USC 424

** (b)(3):10 USC 424,(b)(6) is on a temporary overseas assignment for the Department of Defense

CAPABILITY OF SOVIET OFFENSIVE FORCES AGAINST US MISSILES

INTRODUCTION

The DIA Scientific Advisory Committee (SAC) was asked by General Carroll (Enclosure 1) to support the DIA analysis effort directed at estimating for DDR&E (Enclosure 2) the capability of the Soviet offensive forces to affect US missile survival. The damage-limiting capability of the Soviet Union depends upon the numbers of missiles deployed, [redacted] (b)(1),(b)(3):10 USC 424,(b)(5);1.4 (c) Current SU damage-limiting capability and the way this is expected to vary with time as the SU deploys more missiles [redacted] (b)(1),1.4 (a) is a special consideration.

Because an answer was needed in connection with the Fiscal Year 1968 budget recommendations, General Carroll and his staff met with the DIA/SAC and representatives of DDR&E on 31 August to review (1) the draft DIA report being prepared for [redacted] (b)(3):10 USC 424

(2) to discuss the DIA/SAC technical considerations relative (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) and (3) to review current thinking on the operational aspects and consequences of attributed Soviet technical capability versus time. The DIA/SAC at that time agreed generally with the DIA draft report being prepared for transmittal to (b)(3):10 USC 424

This report summarizes the view of the DIA/SAC on the intelligence which enters into determining SU damage-limiting capability. The key elements of information needed are the system (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) These factors enter into the determination of damage-limiting capability of current SU missile systems and into the question of whether or not any of the current systems has

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (a)

From the foregoing, it is clear that for the SU to improve or maintain damage-limiting capability, they must increase the

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (e)

The SS-11 may be effective but there is certainly a question of whether this capability against US sites can be maintained with this system as

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

The key to all of these problems lies in the

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] to answer either of these questions.

(b)(1),1.4 (c)

[redacted] and

whether or not the SV has the other capabilities needed to

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c)

1. Attention to Guidance System Performance:

(b)(1),1.4 (c)

2. Other Elements of MIRV Technology - Nuclear Weapons and Techniques:

(b)(1),1.4 (c)

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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

17 AUG 1966

S-233/ST

MEMORANDUM FOR THE CHAIRMAN, SCIENTIFIC ADVISORY COMMITTEE

SUBJECT: Soviet Advanced Reentry System (U)

1. (~~S~~) DIA has been asked by DDR&E to assist in a review of our understanding of the capabilities of Soviet offensive forces to affect U.S. missile survival. A report by DDR&E is required by 1 September 1966 in order for it to be useful in connection with the FY 68 budget recommendations.

2. (~~S~~) Important questions to be addressed by DIA include [redacted] In addition, the DIA report to DDR&E as an input to the DDR&E report should address:

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

a. Probable Soviet reaction time to acquire a [redacted] including establishment of requirement, technology advancement, testing, initial deployment, etc. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

3. (U) In view of the technical complexity of this problem and its importance, it is requested that the SAC support the DIA analysis effort by reviewing the pertinent evidence, methodology and assessments and providing consultation assistance to DIA. In addition, I would appreciate a memorandum from the SAC incorporating its overall comments on this problem.

4. (U) The timing of this effort is such that the DIA response to DDR&E must be provided prior to 1 September. In view of the short working time DDR&E has requested close interaction with DIA and the DIA/SAC and has offered to discuss the DDR&E tentative findings with the DIA/SAC on August 31. If possible I would like to accommodate this offer.

(b)(6) [redacted]

JOSEPH F. CARROLL
Lieutenant General, USAF
Director

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DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
WASHINGTON, D.C. 20301

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6 AUG 1966

MEMORANDUM FOR THE DIRECTOR, DEFENSE INTELLIGENCE AGENCY

SUBJECT: Request for Intelligence Inputs

I have been requested by the Secretary of Defense to review our understanding of the future capability of the Soviet offensive forces to affect U.S. missile survival and to report back by 1 September in order to have that review be in time to influence the FY 68 budget recommendations. I believe that the questions of [redacted] are among the most critical ones we face today [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c)

I understand that [redacted] of my staff has been in touch with [redacted] and that preliminary arrangements have been made to have a subcommittee of the DIA Scientific Advisory Committee assist in pulling together the intelligence inputs. I appreciate your cooperation in providing this support on such short notice. If it could be arranged I would like my staff to interface with your organization and with the SAC subcommittee on an informal basis during this month in order for us to have as much time as possible to prepare our analysis. I would be very glad to have our people discuss our tentative findings for review and comment before the full DIA SAC on August 31.

(b)(3):10 USC 424,(b)(6)

I would also like to take this opportunity to compliment your organization for the excellent job they performed in providing inputs for [redacted] we have just completed. In depth of analysis, in responsiveness and in careful consideration of all relevant factors, I feel that DIA performed in an exceptionally professional and competent manner.

(b)(1),1.4 (c)

[redacted]

(b)(3):10 USC 424,(b)(6)

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OCTOBER 1966

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COLLECTION SYSTEMS NEEDED TO DEFINE CAPABILITIES OF

USSR AND THE CHINESE PEOPLE'S REPUBLIC OFFENSIVE MISSILE SYSTEMS

(b)(3):10 USC 424

7 June 1967

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(b)(3):50 USC 403-1(i)

I INTELLIGENCE NEEDS AGAINST THE EVOLVING SOVIET UNION (SU) AND CHINESE PEOPLE'S REPUBLIC (CPR) ICBM THREATS

1. The intelligence community has derived much useful information on Soviet Union ICBM payload characteristics from [redacted] (b)(1),1.4 (c) It is very important to equip [redacted] as soon as possible with radars and signal processing techniques which will make it possible to distinguish the [redacted] (b)(1),1.4 (c) programs and to provide evidence of attempts to improve [redacted] Additional acquisition capability will be required to get data on payloads launched by the CPR and against SU launches under some conditions which can be foreseen readily.

2. Certain highly possible directions in the further evolution of the threat would render the present techniques inadequate. In particular, it is prudent to plan for the following situations:

a. Acquisition of [redacted] (b)(1),1.4 (c)

b. Acquisition of CPR [redacted] using only launch time and coarse azimuth information.

c. Determination of ballistic coefficient from radar tracking and without the aid of [redacted] (b)(1),1.4 (c) (b)(1),1.4 (c) [redacted]

d. Determination of low-g terminal maneuvers designed to clean up re-entry windage errors.

(b)(1),1.4 (c)

e. Determination of the [redacted] with sufficient accuracy to [redacted] and possibly to identify the [redacted]

3. These problems are strongly inter-related. This paper proposes methods for acquisition, designation to track, and weight estimation which I believe are best suited to meet the objectives listed above. After detailed discussions [redacted] and their representatives as well as with those persons charged with improvements of [redacted] it seems feasible to implement the techniques recommended [redacted] The same techniques are also strongly urged for incorporation in [redacted] The most critical problem is accurate weight and trajectory estimation and the following discussion considers first how to do this and second how to acquire targets and designate them to the tracker which makes these precise estimates.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

II MEASUREMENT PROBLEMS POSED BY [redacted]

1. Determination of the capabilities of offensive missile systems tested by the USSR and CPR depends upon payload and CEP estimates. Accurate payload determination is required to identify changes [redacted]

(b)(1),1.4 (c)

errors and thus provide one of the few clues to the CEP sought by the USSR for a given system. Current methods of payload estimation are adequate for estimating the weight of the [redacted]

(b)(1),1.4 (c) [redacted] If the further evolution of the Soviet threat results in the development and test of [redacted]

(b)(1),1.4 (c) [redacted] Because this is a very probable direction for further evolution [redacted] we should be prepared for its occurrence. [redacted]

(b)(1),1.4 (c) [redacted] can make weight estimates with the precision required, and highly precise

(b)(1),1.4 (c) [redacted] The purpose of this paper is to show how this type of signature could be used and to urge that the coherent radars, data processing equipment and post flight analysis capabilities needed for getting weight estimations and trajectory measurements by this means be implemented as soon as possible [redacted] and entered into the requirements.

(b)(1),1.4 (c)

[1]There is one exception to this. [redacted] designated to the target can distinguish shape and size and can, together with ballistic coefficient estimates, yield precise weights. However, the probability of getting on to the target [redacted] is small if current sources of acquisition and designation information are lost.

III DESIGNATION PROBLEMS AGAINST MULTI-COMPONENT SYSTEMS

1. For the most part, advanced offensive systems which are expected to appear will have [redacted] The designation problem differs depending upon whether the USSR chooses to test component parts of the system separately or to test the system as a whole. Consider first the case of [redacted] Then, given the gross payload from system identification [redacted] and the [redacted] it would be possible to identify [redacted] This type of test program seems to be a highly probable one and is consistent with the careful step-by-step method of testing that the Soviet Union has used up to the present. Furthermore, this type of testing could be carried out without modification of the [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

2. If, on the other hand, the Soviet Union chooses, in the initial test phases, to launch a [redacted] for weight estimation using the [redacted] because this [redacted] requires continuous tracking data [redacted] In this case, there are three possible approaches:

(b)(1),1.4 (c)

a. Track all objects [redacted] (b)(1),1.4 (c)

b. Prefilter to select likely objects using other size-related radar signatures and sample on successive tests of the same SU system.

c. Designate the target to be tracked for weight estimation on the basis of beacon signals if a beacon is used.

d. Sample, at random, on successive tests.

3. All of the measurements need for acquisition, designation and weight estimation could, in principle, be obtained by [redacted] However, a [redacted] (b)(1),1.4 (c) and this would not be available for many years (probably 1973, or later). It is also not clear that it is required, even in a follow-on capability. It is very important to understand that the development of a [redacted] (b)(1),1.4 (c) of sufficient capability to do these jobs should not be undertaken lightly. The [redacted] places very great demands on [redacted] (b)(1),1.4 (c) because of the range at which measurements must be made, and the high signal-to-noise and data rate required. Furthermore, very stringent requirements are placed on the recording systems. Hence the implementation in multiple track mode in [redacted] (b)(1),1 4 (c) which I regard as essential, is a formidable task.

4. The suggestion to prefilter to increase the probability of getting on the critical targets, which was made by [redacted] in a study prepared for DDR&E, is a particularly good one since excellent techniques are available for this purpose.

5. Acquisition and designation of targets to track by the [redacted] (b)(1),1.4 (c) [redacted] could well be handled in another radar. By operating this radar at VHF, acquisition problems would be eased and very good size information could be obtained on the basis of radar cross section and used to designate an appropriate target to the (b)(1),1.4 (c) tracker implementing [redacted] From a VHF acquisition radar, it would be possible to determine if there were several objects of like size per mission and readily to distinguish (b)(1),1.4 (c) [redacted] In the past, the SU has repeatedly tested systems which have become operational. For this reason, I believe that a capability very nearly as good as that which could be attained with [redacted] (b)(1),1.4 (c) could be obtained [redacted] with:

a. Acquisition capability and prefiltering at VHF or UHF; and

b. A high data rate coherent tracker utilizing the [redacted] [redacted]

(b)(1),1.4 (c) [redacted] with these capabilities could provide essential weight estimation information [redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

They could also [redacted] the CPR. In the case of CPR tests, accurate weight estimation from terminal observations becomes critically important since [redacted] system identification available in the case of Soviet Union tests will probably not be available. I believe that this capability could be available much sooner and at a much lower cost in a pair of dish-type radars than in

(b)(1),1.4 (c) [redacted]

IV [redacted] INFORMATION

1. It is very important that [redacted] be provided with a means for establishing its position accurately in order to permit backtrack operations to the launch sites. The association of launch site with operational systems by this means is critical in establishing launch site signatures which thereafter make it possible to identify the types of systems deployed in the field [redacted] (b)(1),1.4 (c)

V RECOMMENDATIONS

1. Implement the [redacted] similar to the one developed [redacted] as soon as possible, and plan for this [redacted]

2. Make plans for analysis of the coherent [redacted]

(b)(1),1.4 (c) [redacted] data concurrently with implementation. This is a very complex data processing and analysis operation in which feedback from data analysts to the people charged with debugging, operating and maintaining the tracker is essential to the success of the program.

3. Provide acquisition and designation means in a VHF or UHF radar. This should be VHF, if possible, and should also employ the fine-frequency signature in either the designation or tracking radar as a target designation filter.

4. Provide a [redacted] for tracker capable of eliminating [redacted] This will aid materially in tracking cleanly through the region of [redacted] The requirements for this system are derived in Appendix A. (b)(1).1.4 (c)

5. Provide several [redacted] capable of being put on target by either the precision radar tracker or the broad field of radars. These will provide excellent weight information whenever weather [redacted] permits their use. These systems may, under favorable circumstances, make it possible to sample several elements of a [redacted]

6. Stress the development of [redacted] operating on the improved tracker data that will make it possible to distinguish [redacted] (b)(1).1.4 (c)

APPENDIX A

(b)(1), 1.4 (c)

[redacted] PARAMETERS TO REJECT [redacted]

In order to insure that target track is maintained through the region [redacted] returns it is highly desirable to design the [redacted] to automatically reject [redacted] from the [redacted] The following paragraphs derive the requirements on [redacted] parameters to accomplish [redacted]

Assume that [redacted] both appear in the same range cell. Design requirements on the [redacted] to displace the [redacted] by at least [redacted] are derived as follow:

[redacted]

(b)(1),1.4 (c)

(b)(1),1.4 (c)

[redacted]

Note that to the first order the bandwidth of the [redacted] does not enter. However, if there is actually a separation in range between target and range returns, this is [redacted] Range resolution begins to contribute some additional separation [redacted] Range resolution helps in another way in that the [redacted]

(b)(1),1.4 (c)

Hence the primary requirement is on [redacted] but the range resolution also helps and should be pushed as far as practical without delaying system deployment.

5

~~TOP SECRET~~ [redacted]

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MEMORANDUM NO. 1-68

SCIENTIFIC ADVISORY COMMITTEE

DEFENSE INTELLIGENCE AGENCY

THE THREAT TO POLARIS COMMAND AND CONTROL

JUNE 1968

~~THIS DOCUMENT CONTAINS CLASSIFIED INFORMATION WITHIN THE MEANING OF SECTION 798, TITLE 18, UNITED STATES CODE~~

~~GROUP 1~~
~~Excluded From Automatic~~
~~Downgrading and Declassification~~

[redacted]

~~TOP SECRET~~ [redacted]

812606

THIS REPORT WAS APPROVED BY THE
DIA SCIENTIFIC ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

(b)(3):10 USC 424

THIS REPORT WAS PREPARED BY THE

ASW WORKING GROUP - STRATEGIC PANEL

(b)(3):10 USC 424

DIA TECHNICAL ADVISOR

(b)(3):10 USC 424

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I. Introduction

II. Discussion and Conclusions

III. Recommendations

APPENDIX:

I. Conclusions and Recommendations Extracted From DIA/SAC-DIAST Report

(b)(3) 50 USC 403-1(i)

012505

MEMORANDUM 68-1
JUNE 1968

SECTION I

INTRODUCTION

The ASW Panel of the DIA/SAC has contributed to the preparation of the recently completed DIA/SAC - DIAST Report on the "Soviet/CHICOM Threat Potential Against the Polaris FBM System, Part I, Command and Control." That report contains a more extensive and thorough discussion, although conclusions and recommendations from it are appended to this memorandum as background material. In this memorandum, some operational considerations based on the conclusions of the referenced report will be discussed.

SECTION II

DISCUSSION AND CONCLUSIONS

---

1. The Polaris weapon system may be targeted against time-urgent or assured destruction targets. In the first case, the message to fire must be received [redacted] whereas in the second case a delay [redacted] may be acceptable to allow reliable transmission of the "go" message. Primary reliance for communication of this message to the Polaris submarines is placed [redacted] Backup is provided by [redacted] as well as by other transmitters [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

2. When the Polaris weapon system is targeted against time-urgent targets, very severe constraints are imposed on the deployment and the command and control doctrine for the system. The Soviet capability for [redacted] a most serious threat to the Polaris command and control system under these constraints. Therefore, it is the opinion of the DIA/SAC that the U.S. cannot depend with high confidence in the present situation on the Polaris weapon system to strike

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

time-urgent targets. On the other hand, the capability of the Polaris system for assured destruction, i.e., for attack of non-time urgent targets, is high.

3. The Polaris command and control link between the Naval transmitting stations and the Polaris submarines, for transmission of the essential alert and fire information [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

4. It is likely that a physical attack on the [redacted] which are of course quite soft, would disable them. If the [redacted] in sufficient quantity, they could [redacted] Since the [redacted] than the [redacted] they must be on station [redacted] to provide reliable communication. The requirement [redacted] is particularly acute until such time [redacted] is operational. Since the time required for [redacted] base is in excess of the time allotted for transmission of the message for a time-urgent target, [redacted] on

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

 [redacted]

station must be maintained to assure reliable relay of the "go" message in this case. This is inherently expensive and is not current practice.

(b)(1),1.4 (c)

6. Considering briefly other ways of communicating to the Polaris submarines, [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] In any case we believe that the time lost in transferring [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] makes it unlikely that these links can transmit the "go" message in the time required. Besides the drawbacks already

(b)(3):50 USC 403-1(i) [redacted]

 (b)(3):50 USC 403-1(i) [redacted]

mentioned, there is the additional question as to whether we have a satisfactory on board "watch and reporting" system to rapidly detect and react to [redacted] The [redacted].

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

7. In view of the difficulty the Soviets would have in maintaining [redacted] for a long period and the opportunity we would have to use redundant communication links and tactics, it is our opinion that the "go" message could ultimately be received to allow the Polaris weapon system to fulfill its assured destruction role provided appropriate procedures for wartime operating conditions exist. To insure that the message ultimately reaches the Polaris submarines, it is imperative that a communication network be established with the technical and operational characteristics to permit the use of alternate paths in the presence of enemy action. A plan for such a network, MEECN (Minimum Essential Emergency Communications Net), is in its formative stages in the JCS. However the MEECN does not exist today as an operational command and control network nor has a plan been approved yet to meet command and control or

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] A serious deficiency in applying a variety of alternative communication links to transmission of the message from NCA (National Command Authority) to the Polaris weapon system is the lack of commonality or significant compatibility among the present terminals, as for example between the [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

8. The Committee has briefly considered another important aspect of the total communication problem, i.e., the link between the NCA and the Navy [redacted] This would appear to be adequate for stations within CONUS. However, although the panel has not studied the problem, the link from the NCA to [redacted] would appear to be vulnerable when the latter is [redacted] near the Polaris operating areas. Primary reliance is on [redacted] which could be disabled by one or two well placed nuclear bursts and which is also vulnerable to [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

SECTION III

RECOMMENDATIONS

The following recommendations are for U.S. development actions which the DIA/SAC believes are essential to increase the capability of the Polaris weapon system to strike time-urgent targets and to maintain confidence in its ability for assured destruction. DoD and U.S. Navy plans for future systems have not been reviewed in detail; therefore in some cases these recommendations may be considered as support for programs already underway.

(b)(1),(b)(3),10 USC 424,(b)(5),1.4(e)

(b)(3),50 USC 403-1(i)

 (b)(3),50 USC 403-1(i)

APPENDIX I

CONCLUSIONS AND RECOMMENDATIONS

EXTRACTED FROM DIA/SAC-DIAST REPORT

---

1. In arriving at the conclusions below, the following criteria were utilized.

a. There are many different ways in which the Polaris system can be utilized as a weapon in retaliation. For this discussion we will consider two illustrative cases. First, Polaris is used to strike time-urgent targets. For this case, the alerting/firing message must be received by the firing units within [redacted] In the second case, Polaris is employed against non-time-urgent assured destruction type targets. For this case, it is only necessary that the alerting/firing message be reliably received by the firing units and time is less important. A delay [redacted] may be acceptable.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 2640 (h),(b)(5),1.4 (c)

b. Only the threat potential to the Polaris command and control link between the Naval transmitting stations and the intended receivers [redacted] has been considered. Although no less important, the threat potential to the command and control link between the NCA and the transmitter is not considered. As an example, the actual routing of communications from the NCA to [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] and what would be required to completely disable this link is outside the scope of this study and is not addressed.

c. There are several actions which could be undertaken in an attempt to counter these threats. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] Known U.S. efforts in the utilization of these techniques have been considered, but no attempt has been made to play U.S. capabilities against the threat in a war-gaming fashion.

d. Because of the inadequate assured range of U.S. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3) 10 USC 424,(b)(5),1.4 (c)

2. Based on these criteria, it is concluded that:

a. For our [redacted] which are quite soft, there is a high probability that a nuclear attack or sabotage attempt would be successful in destroying or denying use of these sites. The responsibility for communication would then need to be assumed by [redacted] exist or by other transmitting sites [redacted] should be available for [redacted] are of course [redacted] Several of the [redacted] will also probably survive.

(b)(1),(b)(3) 10 USC 424,(b)(5),1.4 (c)

b. With a high probability, nuclear effects will seriously detract from the capability of the Polaris weapon system against time-urgent targets by denying communications. Although it has been generally conceded that, [redacted] the effects are deleterious and of longer duration, it now appears that [redacted] lasting for several minutes may occur [redacted] Much more theoretical and analytical work needs to be done in this area. It appears much less likely that nuclear detonation effects would prevent the Polaris system from achieving its non-time-urgent assured destruction role.

(b)(1),(b)(3) 10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

with a high degree of confidence. Also, information presently available is not of the precision required to design an

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted] In particular, at the present time

(b)(1),1.4 (c) [redacted]

On a less urgent but still highly desirable longer term basis, the following actions are recommended:

(b)(1),1.4 (c)

(b)(3) 50 USC 403-1(i)

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DIA

Director, Defense Intelligence Agency
Deputy Director, Defense Intelligence Agency

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

6

~~TOP SECRET~~ (b)(3):50 USC 403-1(i)

DEFENSE INTELLIGENCE AGENCY
ADVISORY BOARD
WASHINGTON, D.C. 20340-1328

TSCW-056/DT-AB

25 JAN 1990

Minutes of the Meeting of the Advisory Board

1. (U) Place: Room B7-915, the DIAC

2. (U) Time and Date: 0900-1600 each day, 25-26 September 1989

3. (U) Members Present: (b)(3):10 USC 424

4. (U) Members Absent: (b)(3):10 USC 424

Eight pages are denied in full and are not included.

(b)(3):50 USC 403-1(i)

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~~TOP SECRET~~ (b)(3):50 USC 403-1(i)

~~Classified by DoD TS 5105.21-M-3~~
Declassify on ~~OADR~~

5. (U) The DIA Senior Representatives of the 4 subcommittees presented an overview of each subcommittee to the members. The Director, DIA, followed with a welcome and a discussion of the standing committees.

6. ~~(S/NF/4N)~~ (b)(3):10 USC 424 briefed the Board on the Colonel Binet espionage case. Colonel Binet was a Belgian Air Force Colonel, who was recruited by the GRU in August 1986. He was arrested by Belgian authorities in Sep 1988. His target was the U.S. SALT Teams. Colonel Binet compromised a series of NATO documents covering commitment of forces to NATO, mobilization, and sustaining of military capability. The documents contained statistical data for all three forces - Army, Navy and Air Force. It covered data on 13 NATO countries, excluding France, Spain and Turkey.

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),1.4 (c)

8. ~~(S/NF)~~ (b)(3):10 USC 424 presented a briefing on the status of unilateral Soviet withdrawals/reductions. (b)(3):10 USC 424 described the announced conventional force reductions, and then compared them with the actual withdrawals. In the Kiev district, withdrawal of troops, bridging battalions, and tanks is underway. Tactical nuclear system (SCUD-B) withdrawals are questionable. In the Attu region, withdrawal of tanks has begun. Artillery systems have not been withdrawn and only about one-half of the announced aircraft

(b)(3):50 USC 403-1(i)

have been removed. The briefer does not believe that combat potential has been reduced. In the Far East, there has been only a partial withdrawal from Mongolia. Other consolidations has occurred. In the interior of USSR, consolidation of military districts is taking place (e.g., four armies have been disbanded). Overall, there is de-emphasis on heavy formations and emphasis on combined arms forces supplied with more modern equipment. These forces are assessed capable of both offensive and defensive missions.

9. ~~(S/NF)~~ (b)(3):10 USC 424 presented an historical background for open skies proposals. Currently, the Soviet Union is considering such proposals. The basic proposal consists of the observing country flying a fixed flight plan with surveiling aircraft over-flying most country with a host country observer on-board. The opportunity would be offered only to NATO and Warsaw Pact countries. Limits would be set on number and duration of overflights which must be accepted by host countries based on geographical formulas. The crew plus two observers must be able to be carried on board chosen aircraft. The U.S. is seeking a treaty to make this happen and the Soviets have indicated that they will accept the concept.

10. (U) (b)(3):10 USC 424 briefed the Board relative to the impact and meaning of the latest ethics legislation passed by Congress, which became effective in July 1989. The principal issue of the law is the current definition of procurement official. The law now defines a procurement official as anyone who has contributed to procurement documentation including specifications. Therefore, anyone performing experiments, calculations or analysis resulting in a weapon system procurement will be constrained relative to professional activities associated with the weapon system involved.

(b)(1),(b)(3):50 USC 403-1(i),1.4(c)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

12. ~~(S/NF/4N)~~ (b)(3):10 USC 424 briefed the Board on Soviet Tactical Nuclear Weapons development. [redacted] storage sites for tactical nuclear weapons west of the Urals. [redacted] sites for the strategic forces, navy and tactical weapons are located east of the Urals.

(b)(1),1.4 (c)

13. (U) (b)(3):10 USC 424 presented an update of current and future systems.

(b)(1),(b)(3):10 USC 424,1.4 (c)

15. (U) The Board broke into the subcommittees on the second day to receive more detailed briefings on their respective areas.

16. (U) The meeting concluded with an Executive Session with the Director. The sub-committee chairpersons briefed the Director on the outcome of their meetings.

Recorded by:

(b)(3):10 USC 424

Executive Assistant
Advisory Board

(b)(3):10 USC 424,(b)(6)

Chairman, Advisory Board

2 Enclosures
1. Agenda for 25-26 September 89 1 Cy
2. Attendees, 25-26 September 89 (C) 1 Cy

(b)(3):50 USC 403-1(i)

AGENDA
DIA ADVISORY BOARD
THE DIAC, ROOM B7-915, BOLLING AFB, WASHINGTON, D.C.
25-26 SEPTEMBER 1989

25 September 1989

0800-0900	Security Briefing and DIA Badging for New Members	Room B6-146
0900-0910	Intelligence Production	(b)(3):10 USC 424
0910-0920	DIA Modernization	
0920-0930	Intelligence Support to U&S Commands	
0930-0940	Intelligence Support for Arms Control Monitoring	
0940-1000	General Comments and Break	
1000-1030	Director's Welcome	
1030-1115	Discussion of Standing Committees and Advisory Board Operations	
1115-1145	Espionage Case -- Colonel Binet	
1145-1220	The Challenge of Counternarcotics	
1220-1235	Break (Set up for Lunch)	
1235-1320	Working Lunch 1240-1315 Status of Unilateral Soviet Withdrawals/Reductions Open Skies Regime	
1320-1330	Break (Clean up after Lunch)	
1330-1400	Ethics in Government	
1400-1430	Passive Air Defense	
1430-1500	Soviet Tactical Nuclear Weapon Developments	
1500-1530	Soviet ABM Status	
1530-1545	Break	
1545-1620	SAF/SS Update	
1620-1655	(b)(3):10 USC 424 (b)(3):50 USC 403-1(i)	
1655-1830	Free Time	
1830-2030	Social (The McNair Room in the Fort McNair O'Club)	

26 September 1989

0800-0900	Prebrief for Polygraph Examination **(Only those members not previously briefed--see list below)**	Room B6-134
0900-1230	Separate Meetings of Committees	
	Intelligence Production	Room B7-915
	DIA Modernization	Room B6-122
	Intelligence Support to U&S Commands	Room B6-130
	Intelligence Support for Arms Control Monitoring	Room B6-134
1230-1330	Free Time (for Lunch, Discussions and Administrative Matters)	
1330-1530	Executive Session	LTG Soyster, USA Board DIA Senior Reps

Polygraph Prebrief

(b)(3):10 USC 424

7

~~Top Secret~~ (b)(3):50 USC 403-1(i)

REPORT 87-3

41 PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED.

of the

DIA SCIENTIFIC ADVISORY COMMITTEE

to the

Director

DEFENSE INTELLIGENCE AGENCY

U.S. STRATEGIC DEFENSE INITIATIVE (SDI) PANEL:

Potential Soviet Responses to the U.S. SDI Program (U)

Information Cutoff Date: April 1987

~~CLASSIFIED BY: DoD TS-5105.21-M-3~~
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(b)(3):50 USC 403-1(i)

DIA/SAC REPORT 87-3

This report was prepared and approved by the

DIA Scientific Advisory Committee's

U.S. STRATEGIC DEFENSE INITIATIVE PANEL

MEMBERSHIP

(b)(3):10 USC 424

(b)(3):10 USC 424 is no longer a member of the Scientific Advisory Committee

(b)(3):50 USC 403-1(i)

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Executive Secretary

(b)(3):10 USC 424 Acting Executive Secretary

(b)(3):10 USC 424

U.S. STRATEGIC DEFENSE INITIATIVE PANEL

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SECTION II SDI IMPLICATIONS FOR SOVIET STRATEGIC FORCE PLANNING.....5

SECTION III CONCLUSIONS AND RECOMMENDATIONS.....31

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B. Meeting Agendas.....B-1

(b)(3):50 USC 403-1(i)

INTRODUCTION AND EXECUTIVE SUMMARY (U)

~~(S)~~ The SDI Panel of the DIA Scientific Advisory Committee was chartered by the Director of DIA to review SDIO and Intelligence Community studies on potential Soviet responses to the U.S. SDI Program, to identify which of those responses are most likely, and to make recommendations on potential indicators to confirm those responses. The Panel considered a wide range of potential Soviet responses to the U.S. SDI Program [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

[redacted] The Panel limited its consideration to Soviet technical responses to the strategic elements of SDI, and did not probe into arms control or other political considerations.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

[redacted]

(b)(1),1.4(c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

[redacted]

(b)(3):50 USC 403-1(i)

APPENDIX A

TERMS OF REFERENCE

20 February 1986

DIA SCIENTIFIC ADVISORY COMMITTEE
U.S. SDI PANEL

SUBJECT: Soviet Reaction to the U.S. Strategic Defense Initiative Program ~~(C)~~

PROBLEM: ~~(S)~~ The Soviet response to the U.S. Strategic Defense Initiative (SDI) could take a multitude of different forms. The U.S. Intelligence Community needs to understand what those forms could be, what the potential impact each of those forms could have on U.S. capabilities, and what intelligence indicators are associated with each of the different forms.

BACKGROUND: ~~(S)~~ While the U.S. pursues SDI development there are a number of political and technical responses which the Soviets should be expected to follow in an attempt to negate SDI development and deployment. Each Soviet avenue of response could have a different impact on the configuration of the U.S. defensive system and its deployment. It is imperative that the U.S. Intelligence Community define these probable Soviet responses and develop key intelligence indicators which would serve to notify the SDIO of impending Soviet response alterations.

OBJECTIVES: ~~(S)~~ The Panel will review potential Soviet counters to the U.S. Strategic Defense Initiative (SDI) program and will identify appropriate intelligence indicators of such counters. Calling on its broad background in Soviet technology and systems, the panel will review recent documents which delineate possible Soviet counters to the U.S. SDI and evaluate the likelihood of the various postulations. The panel will also identify potential intelligence indicators for these and other possible developments, and where appropriate, recommend key intelligence requirements to support the Strategic Defense Initiative Office (SDIO).

LEVEL-OF-EFFORT: (U) The panel should require 8 months to complete its effort and will submit a final report to the Director. The panel will be chaired by

(b)(3):10 USC 424

APPROVED BY:

(b)(6)

LEONARD H. PERROOTS
Lieutenant General, USAF
Director, DIA

~~SECRET~~

(b)(3):50 USC 403-1(i)

APPENDIX B

LIST OF BRIEFINGS

TOPIC	BRIEFER	AGENCY
1. SDIO Overview		
2. SDIO [redacted] Activities (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)		
3. Baseline SDI Responsive Threat		
4. Survivability Study		
5. Survivability Technology (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)		
6. [redacted]		
7. Threat Program		
8. [redacted] SDI Program		
9. [redacted] SDI Program		
10. [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)		
11. Soviet Political & Military Objectives in Response to SDI		
12. (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted]		
13.		
14. SDI Intelligence Requirements		
15. Intelligence Community Response to SDIO Intelligence Requirements		
16. Defense Suppression Threat		

(b)(1),(b)(3):10 USC 424,(b)(6),1.4 (c)

~~SECRET~~

(b)(3):50 USC 403-1(i)

[redacted] (b)(3):50 USC 403-1(i)

REPORT 83-2

of the

ADVISORY COMMITTEE

to the

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

FINAL REPORT OF THE

INTELLIGENCE SUPPORT TO TACTICAL COMMANDERS PANEL (U)

JULY 1983

(b)(3):50 USC 403-1(i)

CLASSIFIED BY DOD Dir TS-5001.2 (M-1)
DECLASSIFY ON [redacted]

[redacted]

[redacted] (b)(3):50 USC 403-1(i)

DIA/AC REPORT 83-2

THIS REPORT WAS APPROVED BY THE DIA ADVISORY COMMITTEE

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(b)(3):10 USC 424

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(b)(3):10 USC 424,(b)(3):P.L. 86-36

EX OFFICIO

(b)(3):10 USC 424

EXECUTIVE SECRETARY

(b)(3):10 USC 424

THIS REPORT WAS PREPARED BY THE INTELLIGENCE SUPPORT TO TACTICAL COMMANDERS PANEL

(b)(3):10 USC 424,(b)(3):P.L. 86-36

(b)(3):50 USC 403-1(i)

INTELLIGENCE SUPPORT TO TACTICAL COMMANDERS

(U) An Ad Hoc panel of the DIA Advisory Committee was chartered to examine the effectiveness of current and projected intelligence capabilities of the Department of Defense to support our operational forces. The Panel focused on the intelligence needs of the Unified and Specified (U&S) Commands in a pre-hostility and crisis period. The Panel was especially interested in looking for technical developments, the feasibility of which have already been demonstrated, which could lead to early improvements in intelligence support.

~~(S/NF)~~ The Panel visited the majority of the U&S Commands[1]. We found that the intelligence officers and commanders were well informed about the nation's intelligence capabilities and that there was uniform recognition of the contributions provided by national intelligence systems in supporting theater commanders. Appreciation was often expressed for the supportive roles of DIA and NSA. At the same time, intelligence officers were frank and objective in discussing those items they perceived as problems or limitations.

(U) The Panel focused on several major issues in its examination of support to operational/tactical commanders. These topics are summarized in the following report along with the Panel's recommendations.

(b)(3):50 USC 403-1(i)

I. (U) All-Weather, Day/Night Reconnaissance and Surveillance

~~(TS)~~ [redacted] Senior officers at all the commands visited were unanimous in emphasizing the need for all-weather, day/night, near real-time imagery. The requirement for this capability can hardly be overemphasized. Those familiar with the operational problems posed by nighttime and adverse weather conditions, pointed out the need for both satellite and aircraft surveillance systems.

[1]Commands visited and dates:

12 MAY 82 (PACOM); 10-11 JUN 82 (USCINCEUR); 01 DEC 82 (REDCOM/RDJTF); 13 DEC 82 (CINCSAC); 27-28 JAN 83 (CINCSOUTH); 14 FEB 83 (CINCLANT)

(b)(3):50 USC 403-1(i)

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DECLASSIFY ON ~~OADR~~

Satellite systems are needed because of their capability to provide imagery in denied areas. Aircraft systems of high resolution are required to provide highly responsive inputs to rapidly changing battlefield situations. For these reasons, the Panel supports both the OMNI and the TR-1/ASARS (Advanced Synthetic Aperture Radar) programs. Moreover, we urge that the TR-1/ASARS system be deployed in sufficient numbers to provide 24 hour coverage in situations where a crisis may develop.

(b)(1),1.4 (c)

(b)(3) 50 USC 403-1(i)

~~(S)~~ We also recommend the rapid development of low-cost drones which are capable of imaging terrain and targets and then relaying that information immediately to ground forces. A drone may be used at low-level (under cloud cover), in battlefield situations where the survivability of a similarly employed manned aircraft would be in doubt. The technology for a drone-imaging-relay system has been established and development risks are minimal.

II. (U) Communications and Dissemination

(b)(3) 50 USC 403-1(i)

~~(S)~~ One of the most troubling matters cited by U&S Commands, was the distribution of intelligence to and within the commands. The following are examples of this dissemination problem:

(b)(3) 50 USC 403-1(i)

(1) ~~(S)~~

(b)(1),1.4 (c)

(b)(3) 50 USC 403-1(i)

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

(b)(3):50 USC 403-1(i)

(3) ~~(S/~~[redacted] At the time of the Panel's visit to SOUTHCOM, secure communications with a select number of [redacted] offices within Central America had only recently been installed. Thus, the communications capabilities of that command were still insufficient to provide dissemination of current intelligence to adequately support the Central American area.

(b)(3):10 USC 424

(b)(1),1.4 (c)

(4) ~~(S/NF)~~ When USCENTCOM is deployed, it is planned that intelligence support from the CONUS will be provided by high capacity communications and that tactically collected intelligence will be disseminated across great distances by an in-theater communications net. Currently, neither this high capacity backbone communications capability, nor a rapidly deployable theater dissemination net exists and the Panel knows of no firm plans for such a capability. In general, the Panel believes that capabilities available to CENTCOM to collect and disseminate intelligence are inadequate to support its mission.

(b)(3):50 USC 403-1(i)

~~(S/NF)~~ Fortunately, there are means for alleviating these limitations. We believe that substantial improvements can be made quickly without requiring large expenditures. The Panel's comments and recommendations are as follows:

(b)(3):50 USC 403-1(i)

A. ~~(C)~~ Distribution of National Imagery

~~(TS/~~ [redacted]

(b)(1):1.4 (c)

~~(S/NF)~~ The Army is developing the Tactical Imagery Exploitation System (TacIES) to provide national imagery to locations where DDS ground station terminals are not readily available. The system has been successfully tested and should be deployed as rapidly as possible. We support the recent decision to give TacIES to CENTCOM and recommend that it be designated as a part of an overseas deployment system. Further, the Panel believes the system should be given to CINCs and other Command levels not possessing a DDS capability, and needing rapid access to imagery. Because of CINCSOUTH's increased importance, it is suggested that they be the first of these CINCs to receive this capability. However, the Panel notes that TacIES, as currently configured, is available exclusively as a soft copy terminal. We strongly urge that a hard copy capability be provided as well. Development of such an addition to the system is technically straight-forward, and would enhance the system's utility of imagery in the field.

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1 (i)

~~(TS~~ [redacted] The Navy has developed and successfully tested an imagery dissemination system, known as the [redacted] This system is designed to distribute imagery of a lower quality than is available by the DDS. The unit is capable of softcopy manipulation and can produce hard copies for use in tactical targeting. The system is relatively inexpensive (about $300,000 per terminal), compact, and easy to move and install. It can use either telephone quality or higher capacity circuits. The Panel believes FIST could be used effectively to distribute national imagery within the theater from DDS or TacIES terminals to the component users as well as distribute theater collected imagery and we support such use.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

[redacted]

C. (U) Intelligence Fusion by Data Processing Systems

(b)(3):50 USC 403-1(i)

~~(S/~~ [redacted] The Panel believes that modern data processing systems can make a major contribution to the correlation of intelligence, accurate target nomina-

[redacted]

tions and useful situation displays. We believe that through these means, a major improvement in the effectiveness of U.S. combat forces may be at hand. There are promising developments now underway. Limited Operational Capability, Europe (LOCE), an outgrowth of Battlefield Exploitation and Target Acquisition (BETA) is now being tested in Europe. Tactical Control and Analysis Center (TCAC-D), a system for correlating SIGINT information is available in limited numbers from organic sensors within the Army in Europe. The Panel believes the Defense Department should move more rapidly to capitalize on this improved data processing technology.

~~(S)~~ The Panel believes that two factors limit progress on intelligence fusion capabilities. The first factor is that both the Defense requirements and the Defense procurement system tend to work toward the design of the most advanced fusion system before it builds and deploys <u>any</u> capability to our theater forces. Therefore, we do not gain the essential experience that only comes when our operational forces begin to use current capabilities, however austere, in the field. We believe that it is possible to deploy systems now, which will substantially improve our intelligence capabilities and at the same time gain the experience that will enable us to design more advanced capabilities.

~~(C)~~ The second factor is that we may not be taking advantage of the software developments being made in the non-defense sector. There are currently underway developments in data base management in the commercial field that are more sophisticated than or comparable to that of intelligence fusion. These software systems, generally known as Data Base Management Systems, might be useful in intelligence applications. The Panel believes it may be possible to exploit certain of these developments for Defense purposes and recommends that a small project to explore this possibility be undertaken.

(b)(3):50 USC 403-1(i)

D. (U) Intelligence Communications Architecture (INCA)

(U) The purpose of the INCA project is to identify and evaluate intelligence flow deficiencies and to establish a framework in which to assess communications activities in response to the intelligence requirements of the operational commanders. The Panel supports the high priority that DIA has given this project. In fact, the Panel believes that INCA is so important that we urge the effort be expedited. There are two areas in the INCA project which we believe require special consideration.

(U) The first is the establishment of the quantitative capability of the communications network available under normal conditions and, separately, in a crisis condition. From this point a system must be derived to determine message priorities for the transmission of intelligence data during a crisis situation when communications are jammed.

(U) The second area which must receive careful attention is the selection of the primary contractor for the INCA project. The contractor must have extensive experience in communication systems and a demonstrated capability to expand to retain its expertise. The contractor must put individuals on the project who are current and noted professionals in the fields of intelligence and communications.

III. (U) Increasing the Data Base on Third World Countries

~~(C)~~ The Panel heard a number of requests for improved and expanded data base coverage of Third World areas. [redacted]

(b)(1),1.4 (c)

[redacted] Commanders indicated that contingency plans require that they be capable of deploying forces in Third World areas in support of U.S. policy.

[redacted]

~~(C)~~ Carrier aircrews are concerned that the data on threat performance of major internationally sold weapons (i.e. Mirage, Exocet, etc.) is not adequate for wartime purposes. The Panel concludes that the intelligence coverage of these areas is inadequate for good operational support and that greater priority should be given to intelligence collection in Third World areas.

(b)(3):50 USC 403-1 (i)

~~(S)~~ [redacted] The Panel recommends that certain specific steps be taken to improve intelligence support in Third World areas.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

[redacted]

(b)(3):50 USC 403-1 (i)

2. ~~(S)~~ [redacted] Increase HUMINT. Much of the intelligence information needed can only be provided by HUMINT. While access to Third World areas are generally easier than Soviet-Bloc nations, the large diversity of countries, languages and customs make it difficult to train and provide effective HUMINT personnel. Nevertheless, it is essential that DoD substantially improve this resource.

(b)(3):50 USC 403-1 (i)

3. ~~(S)~~ [redacted] Increase Data Base. While it is not recognized as a very glamorous endeaver, the organizing and maintaining of an intelligence data base for Third World countries is essential to force readiness. Much of the information needed may be obtained from unclassified sources; however, the effort that is normally required to develop the information for effective support of the

(b)(3):50 USC 403-1(i) [redacted]

commands is substantial. The Panel believes this has to be done and recommends that DIA undertake measures to augment its support in this area.

~~(S)~~ The Panel noticed that in areas where [redacted]

(b)(1),1.4 (c) [redacted] missions are not normally flown, the intelligence data base would not fully support contingency planning. [redacted]

(b)(1),1.4 (c) [redacted] However, the Panel believes that there are other geographic areas of concern where the focus of additional collection assets would provide valuable warning of potential instabilities, even in non-crisis situations. The Panel recommends a specific review be conducted to identify the capabilities required to provide CENTCOM with additional coverage.

IV. (U) Survivability

~~(S)~~ The Panel noted that theater intelligence infrastructures are vulnerable to conventional and unconventional attacks in peace, crisis and wartime.

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c) The list of vulnerable facilities is long and includes: [redacted] intelligence headquarter facilities; airbases handling reconnaissance/surveillance platforms and associated communications; and other support facilities. Even hardened wartime facilities are vulnerable, because of the weak links in communications. [redacted]

(b)(1),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i) [redacted]

(b)(1),1.4 (c) [redacted]

~~(S)~~ The Panel recommends the vulnerability issue be analyzed from a systems point of view. Each critical node must have the same level of protection as the others within the system. Funding for the necessary protective features should have high priority. Hardening is not the only answer. Redundancy is recommended and should receive primary emphasis. Over the long term, technology should make available more mobile collection and processing/fusion capabilities. Together, a mix of hardening, mobility and redundancy should provide the survivability needed by intelligence.

V. (U) Fleet Defense

~~(S)~~ Ocean-oriented commands are principally concerned with early-warning of bomber attacks, particularly from the BACKFIRE. [redacted]

(b)(1),1.4 (c) [redacted]

Although there are several potential initiatives aimed at deficiencies in this area, we are not aware of a comprehensive plan. The Panel agrees that this concern is valid and recommends the formation of a special panel of the Advisory Committee (AC) to review this question.

~~(C)~~ In particular, we believe it would be useful to see if it is possible to focus the efforts of the present collection systems to substantially improve fleet air defense warning capabilities. The experience of individual panel members supports the premise that considerable improvements could be made without large expenditures.

~~(S)~~ The Panel was interested in whether fleet vulnerability was being increased through emissions control (EMCON) measures. Two members of the Panel

(b)(3):50 USC 403-1(i) [redacted]

who visited the USS Kennedy found that there is a broad and heightened awareness of effective EMCON conditions during alert situations, especially during periods of satellite signal and radar surveillance.

(b)(1),1 4 (c)

(b)(1),(b)(3):50 USC 403,(b)(3):P.L. 86-36,1.4 (c)

~~(S)~~

published by DIA. We support providing both the parameters and the hardware that contributes to the resolution of these ambiguities. We recommend that DIA seriously critique the current data base to see if the threat assessment for a region is overly broad for an aircraft carrier's specific geographic concern.

~~(S)~~ In discussions with aircrews and airwing intelligence officers, it was expressed that forthcoming efforts to incorporate both metric and English measurements into weapons capabilities guidelines is strongly supported.

VI. (U) Intelligence Architectural Planning

~~(C)~~ During our discussions with the Commanders, we perceived a need for an overall effort to assist the Commands in establishing plans for internal intelligence architectures.. Also, there were recurring problems associated with the lack of timely and accurate information on various projects and programs sponsored by separate elements of the Intelligence Community. Intelligence officers indicated problems with intelligence projects being sponsored by parent

(b)(3):50 USC 403-1(i)

services and component commands that were entirely unknown at the U&S Command level. Also, several U&S Commanders expressed concern and a desire to influence GDIP line items that effect their subordinate commands. Furthermore, it was suggested that a separate U&S Command initiative and quick reaction funding line item be added in the Defense budget to permit local efforts to remedy problems often lost in the longer term budget process.

~~(C)~~ From the Panel's perspective these are legitimate problems that can be remedied. We support the senior intelligence officers' desires to be kept informed about current and planned tactical intelligence systems and evolving tactical intelligence doctrine. It is recommended that DIA provide a clearing house function to inform the commands of potential intelligence programs and solicit their views on how such programs can be of greatest help to them. We believe that DIA can provide assistance to U&S Commands to guide them in formulating their internal intelligence architectures. The creation of a special funding arrangement for U&S Commands would add significantly toward addressing local, near-term concerns of the U&S Commands. This initiative has the Panel's support.

[redacted]

INTELLIGENCE SUPPORT TO TACTICAL COMMANDERS

(b)(1),1.4(c)

LEVEL-OF-EFFORT: (U) The panel will consist of five members and will require about six meeting sessions to complete its investigation. The panel chairman will brief the status of the investigation at each meeting of the full committee and will prepare a written final report for submission to the Director, DIA upon completion of the effort. A technical project officer will be appointed from DIA/DI to assist through the duration of the investigation.

PANEL CHAIRMAN: (U) (b)(3):10 USC 424

Classified by DIA (DT)
~~Declassify on~~ OADR

TOP SECRET (b)(3):50 USC 403-1(i)

Three pages are denied in full and are not included.

DIA SCIENTIFIC ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

Secretary: (b)(3):10 USC 424

GUEST PARTICIPANTS

(b)(3):10 USC 424

DIA TECHNICAL ADVISOR

(b)(3):10 USC 424

NOTE: Report 66-5 was approved by the DIA/SAC.

(b)(3):50 USC 403-1(i)

TOP SECRET (b)(3):50 USC 403-1(i)

POSSIBLE OVER-THE-HORIZON RADAR

A. INTRODUCTION

1. In response to General Joseph F. Carroll's memorandum of 2 August 1966 concerning the subject of a "Possible Over-the-Horizon Radar (U)" (copy attached), an Ad Hoc Panel was established under the chairmanship of (b)(3):10 USC 424 for the express purpose of considering possible Soviet OHD developments. The Panel consisting of (b)(3):10 USC 424 (b)(3):10 USC 424 17 August 1966 and 29 August 1966 to hear and review the evidence concerning possible Soviet over-the-horizon radar developments. The intelligence evidence was presented to the Panel by DIA, CIA, NPIC (b)(1),1.4 (c)

2. Findings of the Panel regarding the evidence were presented verbally to DIA/SAC and to General Carroll on 30 August 1966. The purpose of this memorandum is to

set forth the findings and recommendations of the DIA/SAC.

3. The intelligence data base concerning possible Soviet over-the-horizon radar developments consists basically of the following:

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c)

4. This report includes Conclusions #1 and #2 concerning the antenna equipment, Conclusion #3 concerning (b)(1),1.4 (c) [redacted] and Conclusion #4 relative to a possible Soviet OHD program. These conclusions are based on a review of the data base described above. In addition, the Panel discusses an alternative OHD antenna, makes specific recommendations and outlines a DIA/SAC follow-on action.

B. CONCLUSION #1

(b)(1),(b)(3):10 USC 424,1.4 (c)

Discussion

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

It would not have been surprising to see the original communications antenna site simply preempted for an OHD radar and the older antennas left intact. However, since new communications antennas including [redacted] have been added to the site subsequent to the construction of [redacted] it appears that the function of the facility continues to be that of communications or broadcasting.

(b)(1),(b)(3):10 USC 424,1.4 (c)

2. The feed towers associated with the antennas at

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c)

3.

(b)(1),1.4 (c)

5. [redacted] In fact, the other evidence of environment and apparent lack of scan make other functions such as communications more probable. However, any [redacted] including these, might be used as part of [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

C. CONCLUSION #2

The unusually configured antennas, similar to but [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

Discussion

1. The [redacted] in each case appear to be located in a [redacted] In the vicinity of each [redacted] there is a [redacted] Also, recently constructed [redacted] have been located in close proximity to [redacted] At [redacted] where the

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

have not been seen, (b)(1),(b)(3):10 USC 424,1.4 (c) actually overlap The building in the center of the is apparently being used in conjunction with as is evidenced by feed lines which run is a well known and there is no known case of this type used by either the U.S. or the Soviets. A facilities is further substantiated by the absence of cooling ponds or towers which were evident at

2. The Panel considered the possibility that the are receiver elements for a bistatic OHD radar. This does not seem likely since they are limited to selected azimuths and a relatively slow beam shifting capability, in the same way as the antennas at because of the similarity in design of the A fast scan or multiple (b)(1),(b)(3):10 USC 424,1.4 (c)

beam capability is deemed necessary for an OHD receiver; therefore, the beam shifting capability, a relatively slow process, is more readily adaptable to a system in which operation on selected azimuths for minutes or hours is desired.

(b)(1),(b)(3):10 USC 424.1.4 (c)

3. It appears that [redacted] are receiving facilities, poorly suited for the receiver of a bistatic OHD radar because of the difficulty of scanning. [redacted] are more suited for a communications receiver function. The unique layout of this type antenna and of [redacted] suggests a special application. [redacted]

(b)(1),(b)(3):10 USC 424.1.4 (c)

D. CONCLUSION #3

(b)(1).1.4 (c)

[redacted]

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

E. CONCLUSION #4

Substantial evidence indicates that the Soviets do have an active OHD radar program including experiments in actual detection and tracking activity.

Discussion

1. dating back to the mid-1940's indicate considerable knowledge and experimentation dealing with the (b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4(c)

4. The Soviets have an impressive capability in HF antennas as evidenced by the [redacted] antennas and the other [redacted] antennas seen in the Soviet Union. Although these antennas were probably not built for the OHD function they are quite suitable for purposes of OHD experiments, and demonstrate Soviet experience in building [redacted] antennas.

5. The evidence of a Soviet experimental program in techniques associated with over-the-horizon detection and their capability in developing and building large HF antennas leaves little doubt that the Soviets do have both an OHD program and the capability to develop an operational system. The fact that the antennas at [redacted] and [redacted] facilities are probably not OHD radars does not negate the Soviets' capability in this area.

(b)(1),(b)(3):10 USC 424,1.4(c)

(b)(3):50 USC 403-1(i)

F. DISCUSSION OF ALTERNATIVE OHD ANTENNA

1. An OHD function cannot be attributed to an antenna by appearance alone. The entire Soviet OHD experimental program, (b)(1),1.4 (c) [redacted] could have been conducted utilizing ordinary communications type antennas such as rhombics and serpentines (curtain arrays). This type of antenna is perfectly adequate for an experimental program. However, the combination of [redacted] with an OHD signal would argue a unique OHD role. This unique role cannot be ascribed to the [redacted] type antennas. (b)(1),(b)(3):10 USC 424,1.4 (c)

2. A relatively new type of antenna with a [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] was brought to the attention of the Panel. This type of antenna appears not only suitable for an experimental over-the-horizon radar but, additionally, it is deployed in a manner that is geographically suitable for OHD application. To date this antenna appears to be the best candidate for an OHD system.

(b)(3):50 USC 403-1(i) [redacted]

3. There are a total [redacted] of these antenna facilities in various stages of construction around the periphery of the Soviet Union. One facility located at [redacted] Construction on the others started in the early 1960's and is continuing. The antennas are commonly known as [redacted] named after one of the locations, and are described as consisting of [redacted] (tower height is the same in a given location but varies from site to site). The length of the antenna from end tower to end tower is in excess of [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

4. Until very recently only satellite photography was available on these antennas and no meaningful analysis was possible. In the past month [redacted] This would indicate a

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

[redacted] rather than a series of [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c)
[redacted] If it operates in the
[redacted] the antennas are [redacted]
[redacted]

5. Although it is not readily apparent how these antennas operate, the following can be said of them:

a. The function of this antenna, whatever it may be, is unique in that typically it is not associated with a large number of other antennas and, particularly, is not embedded in a communications antenna environment.

b. The antenna has a transmitting function. This is indicated by [redacted]

c. The antenna design has the inherent capabilities of [redacted]

d. There is no evidence as to how the antenna is fed or arrayed but it is possible to describe a fairly straightforward system for [redacted] elements that would allow [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

A (b)(1),(b)(3):10 USC 424,1.4 (c) of this type could be electronically or electromechanically scanned.

(b)(1),1.4 (c)

G. RECOMMENDATIONS

1. The Panel believes that the antennas are the best candidates for OHD operational radars and recommends that an analytical effort be focused on these antennas in the future. (b)(1),(b)(3):10 USC 424,1.4 (c)

2. Photographic coverage of the antenna facilities is good at the present time; however, The Panel recommends that DIA levy requirements to obtain (b)(1),1.4 (c) of some of each of the antenna sites in question.

3. As a result of the discussions, the Panel determined that several intelligence gaps exist concerning the Soviet OHD program. The Panel considers that the two main gaps

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DIA/SAC REPORT 66-5
SEPTEMBER 1966

(b)(3):10 USC 424,(b)(6)

[redacted]

(b)(3):50 USC 403-1(i)

[redacted]

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

2 AUG 1966

TS-216/ST

MEMORANDUM FOR THE CHAIRMAN, DIA SCIENTIFIC ADVISORY COMMITTEE

SUBJECT: Possible Over-the-Horizon Radar (U)

1. ~~(TS)~~ In accordance with our discussion on the above subject, it is requested that the Scientific Advisory Committee, with such specialist assistance as is necessary, review the evidence concerning possible Soviet over-the-horizon radar developments and provide comments and views on the following:

a. Equipment developments which can be identified as being underway, especially those that may be significant technological advances.

b. Possible and likely Soviet intentions with respect to utilization of the equipment, i.e., aircraft tracking, communications, ballistic missile early warning, ABM, intelligence, bomb damage assessment, etc.

c. Critical gaps in the intelligence and recommended intelligence analysis and collection.

2. (U) For maximum benefit, I would like to have a report by 2 September 1966.

(b)(6)

JOSEPH F. CARROLL
Lieutenant General, USAF
Director

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(b)(3) 50 USC 403-1(i)

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Seven pages are denied in full and are not included.

MEMORANDUM 81-3

OF THE ADVISORY COMMITTEE

TO THE

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

FINAL REPORT

OF THE

TACTICAL WEAPONS R&D PANEL

JUNE 1981

CLASSIFIED BY DOD INSTR TS-5001.2 (M-1)
~~REVIEW ON 1 JUNE 11~~

(b)(3):50 USC 403-1(i) [redacted]

[redacted]

[redacted]

~~TOP SECRET~~ [redacted]

DIA ADVISORY COMMITTEE MEMBERSHIP

(b)(3):10 USC 424

LIAISON TO THE COMMITTEE

(b)(3):10 USC 424

Executive Secretary

THIS REPORT WAS PREPARED BY THE TACTICAL WEAPONS R&D PANEL

(b)(3):10 USC 424,(b)(6)

(b)(3):50 USC 403-1(i)

TACTICAL WEAPONS R&D PANEL (U)

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(b)(3):50 USC 403-1(i)

EXECUTIVE SUMMARY (U)

1. Objective of the Panel: (U)

~~(S/NOFORN)~~ The Tactical Weapons R&D Panel examined the Soviet weapon system development and acquisition process in an attempt to define opportunities for the earlier identification of new or improved Soviet tactical capabilities. The Panel selected tactical SAM's as an example.

2. Scope of Panel Examination: (U)

(b)(3):50 USC 403-1(i)

~~(S)~~ [redacted] In six meetings during the period February 1980 to January 1981, the Panel received briefings from representatives of the following agencies: DIA, CIA, (b)(1) NISC, FTD, FSTC, NRO and MIA. In addition, members of the Panel explored special topics contributing to understanding Soviet development facilities and procedures and U.S. collection capabilities.

3. Major Conclusions: (U)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):50 USC 403-1(i)

3.1 ~~(TS)~~ [redacted]

(b)(3):50 USC 403-1(i)

3.2 ~~(S)~~ [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c)

3.10 ~~(S/NOFORN)~~ The organization and tasking within the Intelligence Community are such that the analyst is often unaware of U.S. development activities in his area, and coordination between different specialities is lacking (b)(1),1.4 (c) strategic vs tactical). The resulting evaluations do not consider the entire picture as it could be assembled from productive interaction with U.S. technologists (which in addition to gaining knowledge of the technologies and designs used in U.S. systems, information could also be garnered on the development and manufacturing processes) and from analysis of classified, U.S., and open literature sources.

3.11 ~~(S/NOFORN)~~ Significant benefits (for example insight into new technologies or the utilization of new frequency bands) in U.S. countermeasure design and tactics could result from the longer lead times provided by earlier observation and evaluation of tactical SAM and related radar development cycles.

4. Recommendations: (U)

~~(C)~~ The proper utilization and coordination of scarce resources are fundamental to the earlier identification and exploitation of Soviet tactical weapons systems developments. The study of the status of intelligence in the Soviet tactical SAM area suggests approaches and specific steps that might improve substantially the success of collection efforts. Some of these recommendations

(b)(3):50 USC 403-1(i)

may be considered as a basis for a general strategy to those few tactical areas that have been identified as highest priority. Additional recommendations are more specifically related to the SAM problem.

4.1 General Strategies: (U)

~~(C)~~ Establish task forces through which DIA can work with other elements of the Intelligence Community to exploit the early indicators in the critical tactical areas. These groups would design and monitor strategies to focus intelligence elements on chosen areas. The SAM experience suggests that the most realistic chance for improved intelligence may arise from a more precisely focused management. These groups might break away from the conventional systems emphasis and focus instead on the crucial Soviet technologies that may be common across both strategic and tactical weapons systems (radar, guidance & control, etc.) and would seek to:

a. ~~(C)~~ Couple more tightly the intelligence analysts to U.S. tactical developments and involve U.S. experts in both the production of intelligence and the evaluation of finished intelligence products.

b. ~~(C)~~ [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):50 USC 403-1(i)

c. ~~(S)~~ [redacted] Develop a structured approach to the review of the data available within the Community from imagery, [redacted] and develop subsequent tasking plans that are pertinent to the specific critical technologies.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

d. ~~(C)~~ Schedule an annual symposium with Intelligence Community and U.S. weapon system developers as participants for each important area (starting with tactical missiles as a test case) to review the status of collection and analysis.

[redacted] (b)(3):50 USC 403-1(i)

4.2 SAM Strategies: (U)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i)

1. General Background: (U)

~~(S/NOFORN)~~ The Tactical Weapons R&D Panel examined the Soviet tactical weapons development and acquisition process in an attempt to identify opportunities for earlier or more accurate/efficient identification of new or improved capabilities. The Panel concentrated on tactical weapon systems because of the heavy effort traditionally associated with strategic systems and also because of difficulties associated with gathering intelligence on Soviet tactical weapons and systems. In addition, the Panel looked at the roles of various collection systems and the support they provide to the analytical process.

~~(S/NOFORN)~~ The Panel proposes that the Intelligence Community focus attention on the necessities of the developmental engineering and production processes for a particular capability (for example, look-down radars, tactical SAM's), identify which telltale items in the process are "observable," and determine the probable locations of these observables; and then focus the collection accordingly. We stress that the consideration of the probable development and acquisition process should not be based on U.S. procedures because these are driven by many factors including funding, bureaucracy, politics, etc., but should be based on requirements of physics and sound engineering practices, and what we know of Soviet procedures and bureaucracy.

~~(TS~~ (b)(3):50 USC 403-1(i) To illustrate the point, some years ago the Advisory Committee speculated that the Soviets were likely to follow the proven U.S. approach to an

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

2. Panel Procedure and Findings: (U)

~~(S/NOFORN)~~ To validate its thesis, the Panel selected the area of tactical SAM's for two reasons: first, a long lead time is desirable for the U.S. to develop countermeasures and appropriate tactics;

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

The Panel further narrowed its field of view by concentrating on SAM Radars. A description of the development and production sequence of SAM's is given in Appendix A.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),1.4 (c)

3. Organization of Soviet R&D: (U)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i)

(2) (TS (b)(3):50 USC 403-1(i))

(b)(1),(b)(3):50 USC 403-1 (i),1.4 (c)

5. Availability of HUMINT: (U)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),1.4 (c)

~~(TS~~ (b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

~~(S/NOFORN)~~ In summary, the current collection program including projected capabilities appears to be as

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):50 USC 403-1(i)

well-matched to the task as one could currently expect, and we know of no areas which would make a major contribution which are being neglected. We do suggest that a concentrated, coordinated all-source collection activity over a period of time may be necessary to provide the information required to identify key locations and modes of development activity. This probably would be much more efficient than the routine sampling which typifies the current collection approach.

7. Organization of Collection and Analysis: (U)

~~(S/NOFORN)~~ We found a number of areas of concern relating to the Community collection and analysis effort against Soviet tactical weapons systems. Earlier groups have observed some of these, but we list them because we believe that they should be matters of concern and are readily fixable. Perhaps more importantly, we are suggesting that the Community look hard at using the concentrated, coordinated approach as the standard rather than the exception.

o Tactical systems analysts are generally decoupled from U.S. tactical developments. Some of this decoupling, of course, is sensible to avoid mirror imaging, but our observation is that the coupling is far too weak.

o There is also a decoupling between strategic and tactical analysis groups even though these systems may utilize similar technologies.

(b)(1),1.4 (c)

o The Community tends to be organized by systems and not by technology or capabilities; for example, a Soviet radar development agency may develop search radars as well as tracking radars for tactical and strategic SAM's, but the knowledge of each tends to be compartmented. The Panel believes that substantial benefits would result from Community wide technology groups that would focus the collection and analysis efforts relative to critical tactical weapons systems technologies, e.g., radars, guidance and control, etc.

(b)(3):50 USC 403-1(i)

~~(S/NOFORN)~~ There is no intentional lack of cooperation, and with the exception of the first bullet (which probably results from tight budgets), it is probably more an indication of the low priority assigned to the Soviet tactical weapons development process. The Panel seeks not to criticize but to suggest the possibility of a more efficient way to utilize our scarce resources. Put simply, the identification of key individuals and facilities (in addition to watching the missile test ranges), concentration of our most knowledgeable people on the writings and activities of these individuals, and the focused exploitation of the observables at the key facilities may provide our best and most efficiently obtained insight into critical tactical weapons systems developments.

~~(S/NOFORN)~~ Observation of the Soviet development program is important not only for earlier indications of new capabilities but also because one can learn more from earlier than from later observations. Very often the developer is feeling his way during the early stages of a program, whereas later his progress is more predictable and therefore more readily hidden. An analogy is in the construction of a building. Observation during the early part of the construction reveals much more of the likely activities planned for the building than later on when most of the innards are undercover.

~~(TS~~ (b)(3):50 USC 403-1(i)

(b)(1)

(b)(1),1.4.(c)

~~(S/NOFORN)~~ The cumulative effect of the heavier Soviet investment over the years in research and development will make it more difficult to understand what new trends and capabilities they are pursuing. Because we will not have our own technology advances and lead to indicate likely directions of Soviet activities, the old Fubini axiom - in intelligence you only find what your are looking for - highlights the seriousness of a Soviet rather than a U.S. technological lead.

(b)(3):50 USC 403-1(i)

This makes it all the more urgent that the good technologists be coupled into the U.S. Intelligence Community search and analysis effort and that a meaningful and thorough review and analysis of Soviet technical writings be conducted. And finally, our collection resources need to be focused on those areas where advanced developments are most likely to occur. One might add a corollary to the Fubini axiom to the effect that "you may be able to find something new if you know where to look for it."

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

~~(c)~~ In the absence of established matrix organizations, providing broad coverage of such technical specialties as radar, homing seekers, autopilots, etc. and identifying the commonalities between strategic and tactical systems, the coordination of data from the above sources is difficult. An approach to correcting this situation would be to designate within DIA (and the rest of the Community) staff personnel for each "critical" technology specialty. Each of these technical specialists could then draw on the existing organizational (b)(1),1.4 (c) and the technical production agencies for data and analysis and could compile the coordinated reports whose absence has been noted by the Panel. This individual should be given the necessary budget to initiate new or expanded supporting tasks for the existing organizations. Part of his (or her) responsibility would be to couple U.S. experts (both from Government development labs and from industry) into the analysis process and to arrange periodic conferences or symposia within the Community to ensure that applicable U.S. and European developments are considered in the analysis and evaluation of Soviet systems.

(b)(3):50 USC 403-1(i)

8. Summary, Conclusions and Recommendations: (U)

~~(S/NOFORN)~~ In summary, the analytical effort in the Soviet tactical SAM area is undermanned and underfunded. Partly for this reason, there is a lack of knowledge of comparable U.S. system developments and associated technology that has hindered the exploitation of available sources for data on trends and progress towards new systems. There is a noticeable lack of coordination in the utilization of collection assets and between the analysts on strategic and tactical systems. Finally, the lack of coordination between knowledgeable analysts and [redacted] interviewers has further hindered the exploitation of this potentially fruitful source.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

~~(C)~~ The proper utilization and coordination of scarce resources are fundamental to the earlier identification and exploitation of Soviet tactical weapons systems developments. The case study of Soviet tactical SAM's suggests a number of specific steps that might be taken to improve substantially the success of our collection efforts. Some of these recommendations may be considered as a basis for a general strategy to those few tactical systems that are identified as the highest priority, while others are more specifically related to the SAM problem.

8.1 General Strategies (U)

~~(C)~~ The Panel recommends that DIA work with other elements of the Intelligence Community to establish task force groups that would attempt to exploit the early indicators in the critical tactical weapons system areas. These groups would conduct periodic, intense, high-priority, Community coordinated collection and analysis efforts directed at high value tactical targets by emphasizing the crucial Soviet technologies some of which may be common across both strategic and tactical systems (radar, guidance & control, etc.) and would seek to:

a. ~~(C)~~ Develop a tighter coupling between intelligence analysts and U.S. experts and associated U.S. tactical weapon systems developments. Establish a

(b)(3):50 USC 403-1(i)

further coupling at two levels in the production of intelligence: first in the analysis or raw data [redacted] and second in analysis and review of finished intelligence products; (b)(1),(b)(3):50 USC 403 (g),1.4 (c)

b. ~~(C)~~ Structure an approach to the exploitation of Soviet open and all-source technical writings (utilizing and maintaining existing automated data bases) to identify key personalities, organizations and technologists as they pertain to critical tactical weapons systems areas; and

c. ~~(S)~~ [redacted] Develop a more coordinated approach to the review of the data available within the Community from imagery, [redacted] (b)(1),1.4 (c) (b)(1),(b)(3):50 USC 403 (g),1.4 (c) [redacted] and develop subsequent tasking plans that are pertinent to the specific critical technologies.

d. ~~(C)~~ Schedule annual symposia in each critical area to review the status of collection and analysis in order to focus the different specialties. Each symposium should include properly cleared experts (Government and industry) engaged in research and development of similar U.S. systems as well as representatives from the concerned intelligence agencies. Conduct of such a symposium in the tactical missile radar area, in 1981 is suggested as a test case to assess the benefits of this procedure.

8.2 SAM Strategies (U)

(b)(1),(b)(2),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

[redacted]

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

~~(C)~~ The Panel believes that through initiation of the above approach and through solicitation of key technologists from inside and outside of the Community, a more orderly approach to the earlier identification of critical Soviet tactical weapons systems can be developed. Our approach seeks to overcome a necessarily lower priority that these systems experience by focusing the proper

(b)(3):50 USC 403-1(i)

resources in the proper sequence to optimize the detection and exploitation of available early evidence of their development.

(b)(3):50 USC 403-1(i) [redacted]

APPENDIX A

DEVELOPMENT CYCLE OF U.S. SAM SYSTEMS

(U) Chronological data have been gathered on three major U.S. systems, to establish typical steps in the development and production cycle of missile and radar guidance equipment.

1. (U) Nike: Ajax and Hercules Systems (Fig. A-1) Data were obtained from the book A History of Engineering and Science in the Bell System, M. D. Fagen, ed., Bell Laboratories, 1979. The earliest radar work followed two parallel paths: monopulse tracking radars were developed at BTL, Whippany during the 1946-48 period, and sent to WSMR, and these were used to support the missile guidance tests in 1947-48, prior to arrival of the BTL radars. Following successful missile tests at WSMR, immediate production go-ahead was obtained on what became the Nike Ajax system, deployed in 1954. Simultaneously, development of improved radars and missiles for longer range proceeded, leading to production of Nike Hercules in 1957.

2. (U) HAWK (Fig. A-2) Data were obtained from Raytheon personnel and records. The proposal was made by Raytheon to the Army to exploit Sparrow semiactive seeker technology in a land-based system against low-altitude aircraft. During 1953 a modified SCR584 was prepared at Raytheon in Bedford, demonstrating CW tracking capability and leading to an R&D contract in mid-1954. The first WSMR test against a drone took place in mid-1956, followed by a contract for production of Basic HAWK for deployment in 1960. As with the Nike program, an Improved HAWK development was carried out simultaneously with Basic HAWK production, leading to deployment of the improved system in 1965.

3. (U) PATRIOT System (Fig. A-3) This system had its roots in the Field Army Ballistic Missile Defense System studies of the early 1960's, and AADS-70 studies of 1962-65. The development program has been so elongated, by considerations of

(b)(3):50 USC 403-1(i)

MISSILE GUIDANCE RADAR DEVELOPMENT SCHEDULE

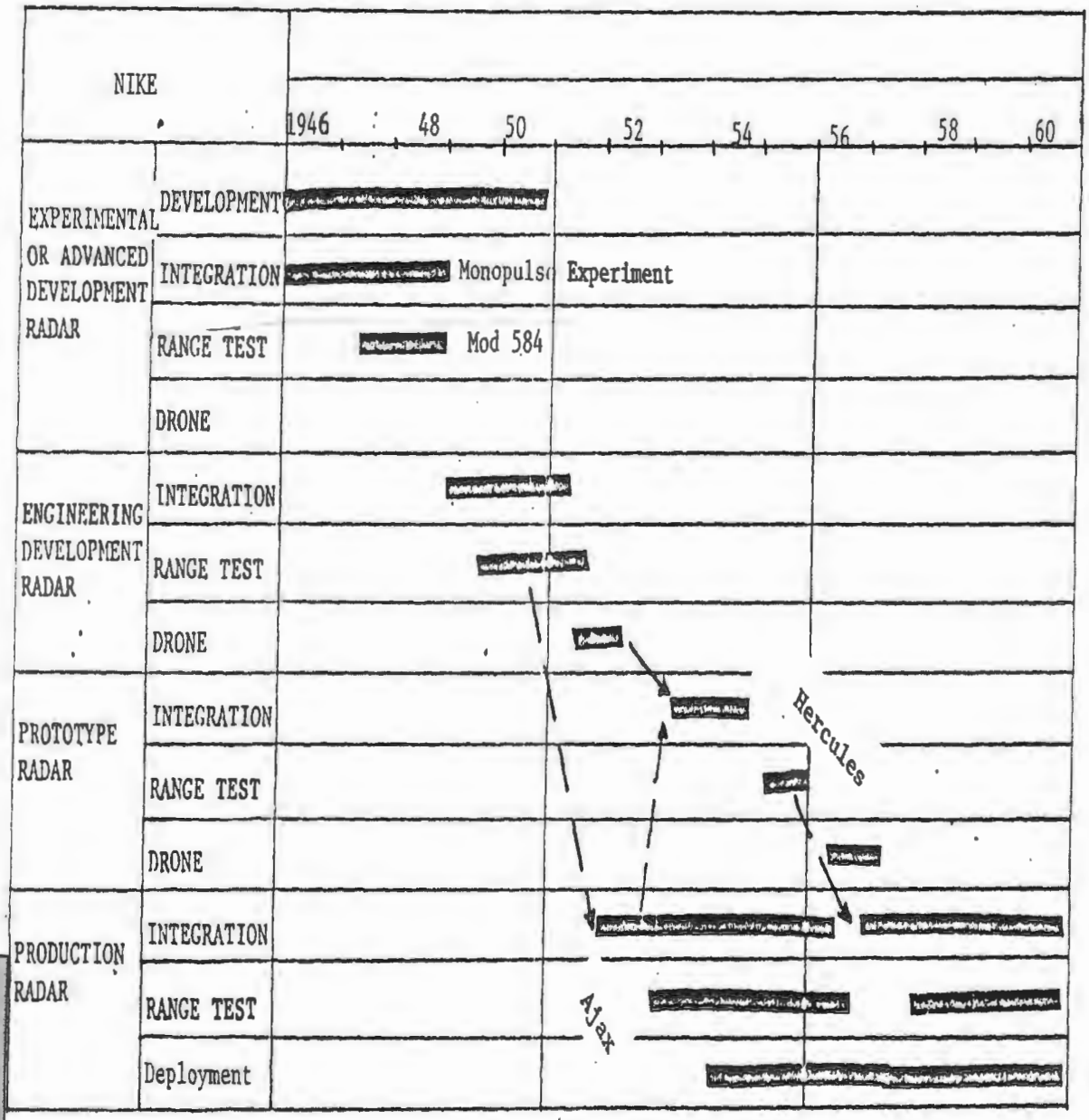

Figure A-1

MISSILE GUIDANCE RADAR DEVELOPMENT SCHEDULE

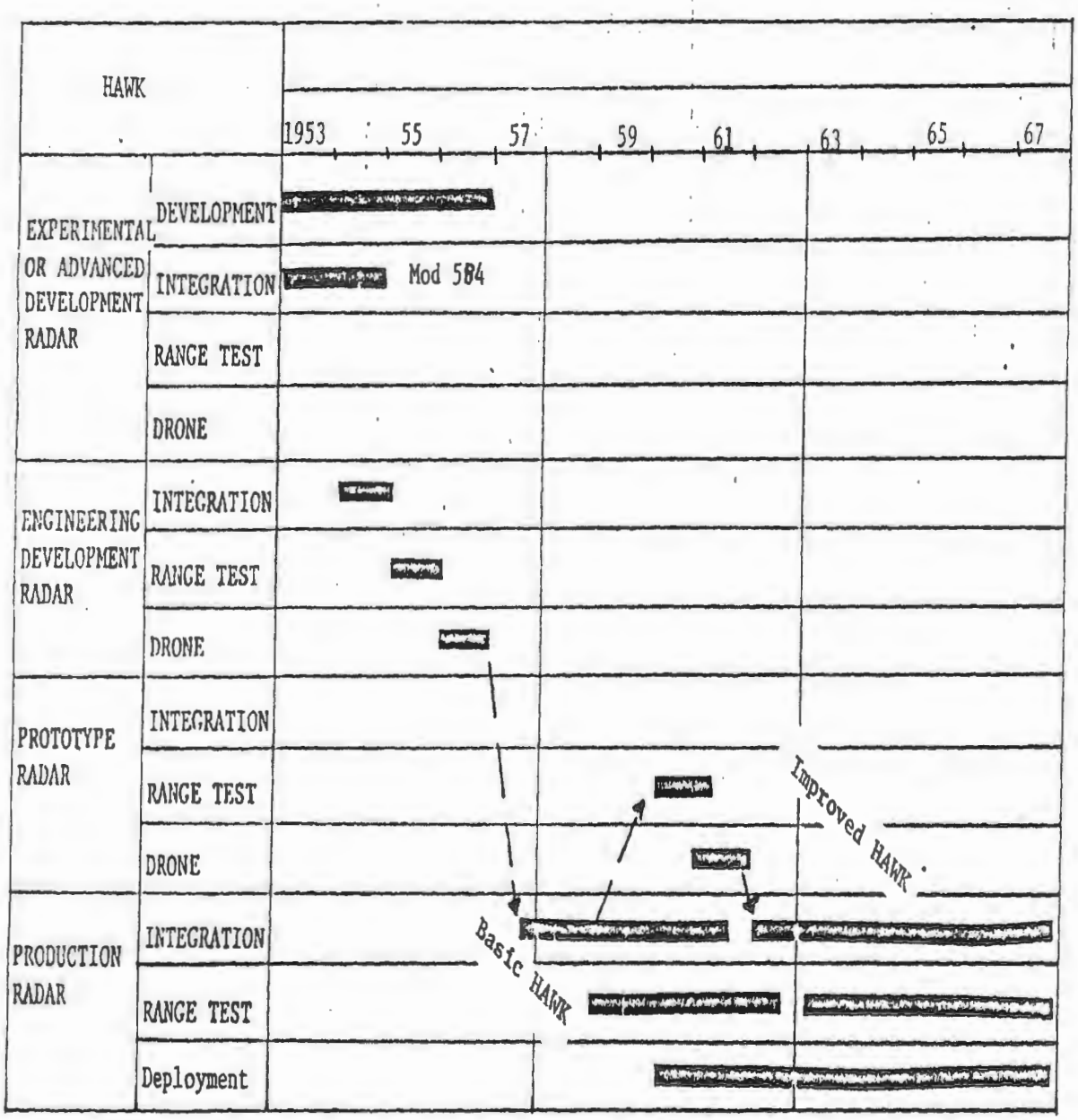

Figure A-2

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(b)(3) 50 USC 403-1(i)

MISSILE GUIDANCE RADAR DEVELOPMENT SCHEDULE

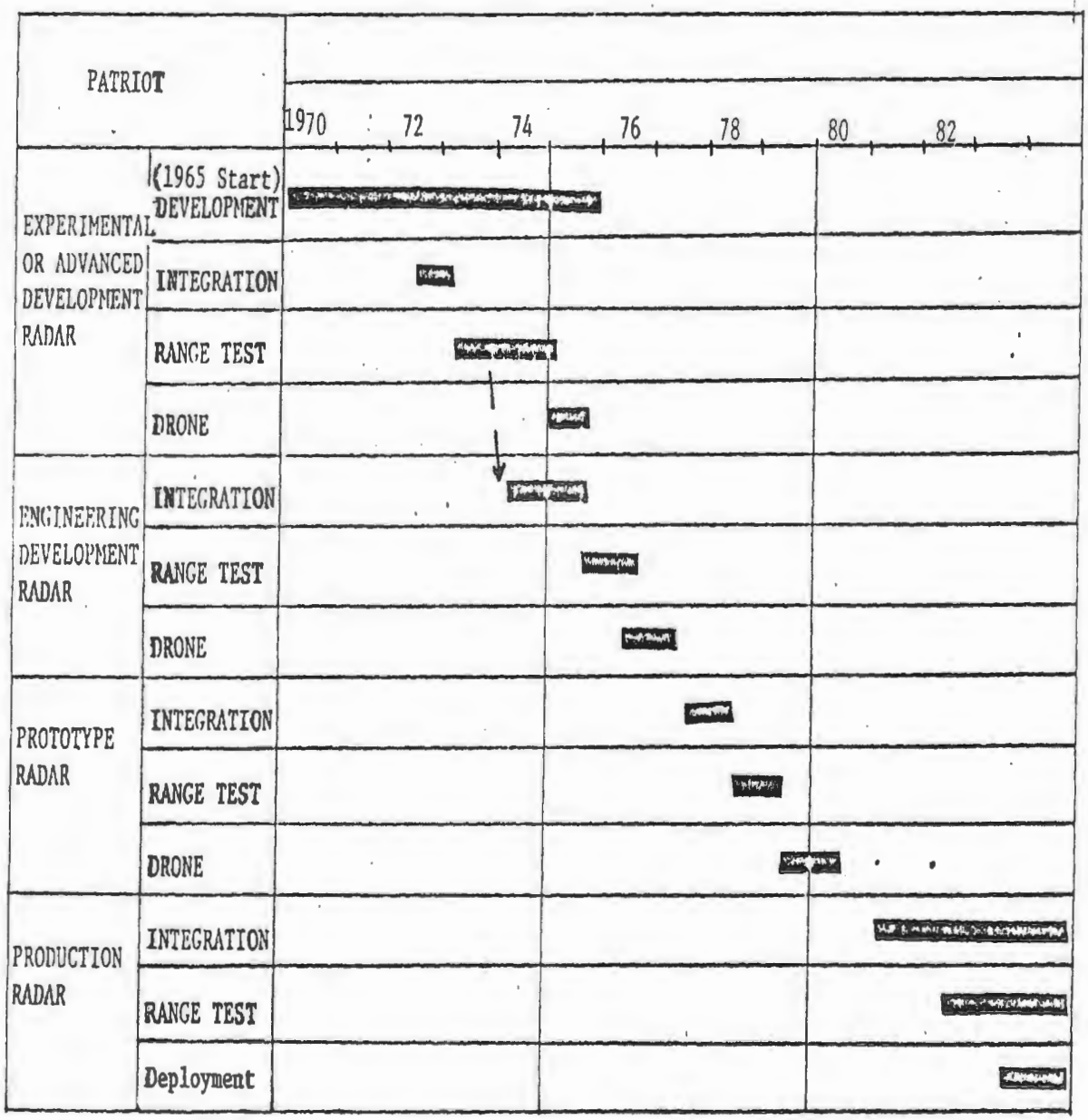

Figure A-3

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(b)(3) 50 USC 403-1(i)

special threats and long-term logistical planning, that the cycle will not fit the form of Fig. A-3. Hence, the first five years of development are omitted (1965-69), and the total cycle to deployment will occupy 19-20 years.

4. (U) Generic U.S. Programs (Fig. A-4) The two basic types of SAM development programs are shown in Fig. A-4. One, reflecting Nike and HAWK, proceeds through a short development and experimental cycle to range tracking and drone tests in the third year, test of a full-scale system at the end of the fifth year, and deployment of production units at the end of the eighth year. An improvement program follows with 5-year lag from the basic system. Under the newer systems acquisition process, production is delayed until the prototype radar is evaluated in the eighth year, and deployment is at the end of the eleventh year (barring stretched or iterated development cycles which can bring this to 19-20 years).

5. (U) Opportunities for Monitoring. In the US cycle, high-power system tests with outdoor radiation were conducted at six points:

		Years after start
5.1	Experimental radar test at development lab.	1
5.2	Experimental radar guidance test at range	2
5.3	Eng. development radar test at dev. lab.	3
5.4	Eng. development radar guidance test at range	4
5.5	First production radar test at factory	6
5.6	First production radar guidance test at range	7

The experimental radar may be a modified version of a previously deployed radar. Release of design to production normally follows test 5.4. Especially for

(b)(3):50 USC 403-1(i)

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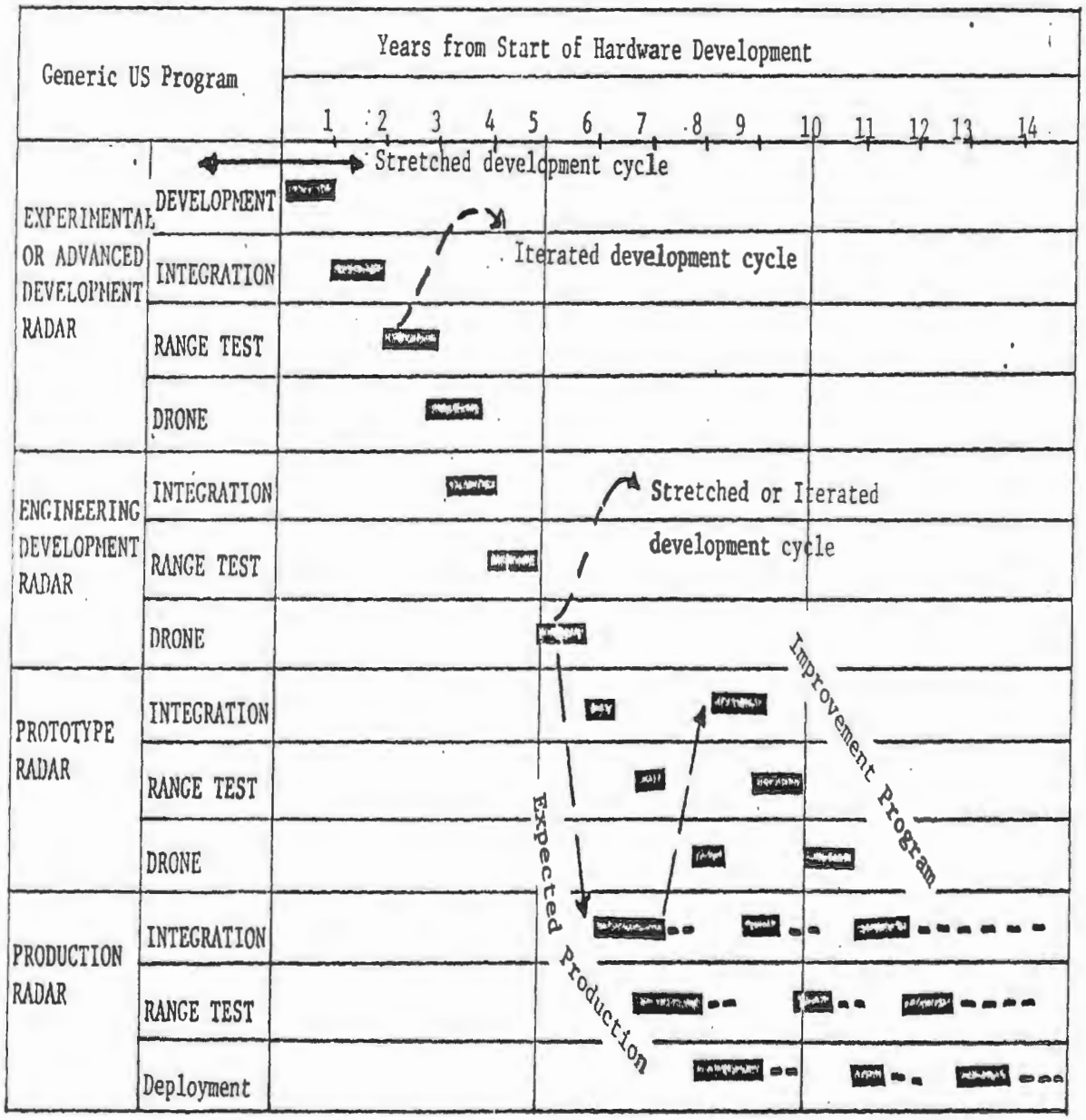
[redacted]

[redacted]

MISSILE GUIDANCE RADAR DEVELOPMENT SCHEDULE



[redacted]

Figure A-4

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[redacted]

low-altitude radars, outdoor testing in clutter is essential to confirm design calculations. Refinement of design during tests 5.1 and and 5.3 is normally an iterative process, carried out through close physical and organizational association of design and test personnel. Release to production without this test and refinement would inevitably lead to expensive alterations after production release.

(U) The Bell Telephone Laboratories conducted extensive Nike tracking tests at Whippany as well as WSMR. Raytheon performed tracking tests with HAWK and PATRIOT radars at its Beford laboratories, and maintains to this day a special HAWK test site at Pelham, N.H. (about 35 miles away). Because operations at WSMR are expensive (both in terms of range facilities and travel of laboratory personnel), a maximum of testing is done at the laboratory.

6. (U) Evolution from Existing Radar. In the U.S. programs which went rapidly into production (4-5 years from start of development), the early radar work used an older, existing radar as a base (SCR-584, and at BTL, the SCR-545). Similarly, the improvement programs used the basic radar as the starting point for modification. In the PATRIOT program, in addition to the procedural difficulties of the modernized weapon systems acquisition process, the lengthy development program reflected the need to develop from scratch a revolutionary new radar type (and its control software). This also necessitated extensive testing both at the laboratory and at the missile range. There is no current data on possible modification or improvement cycles on this class or radar.

(b)(3) 50 USC 403-1(i)

APPENDIX B

DEVELOPMENT CYCLE OF SOVIET SAM SYSTEMS

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i)

MISSILE GUIDANCE RADAR DEVELOPMENT SCHEDULE

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

Extrapolation to Soviet Systems	
EXPERIMENTAL OR ADVANCED DEVELOPMENT RADAR	DEVELOPMENT
	INTEGRATION
	RANGE TEST
	DRONE
ENGINEERING DEVELOPMENT RADAR	INTEGRATION
	RANGE TEST
	DRONE
PROTOTYPE RADAR	INTEGRATION
	RANGE TEST
	DRONE
PRODUCTION RADAR	INTEGRATION
	RANGE TEST
	DEPLOYMENT

○ Reported data

△ Monitoring opportunities

Figure B-1

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(b)(3):50 USC 403-1(i)
(b)(3):50 USC 403-1(i)
TOP SECRET
(b)(3):50 USC 403-1(i)

~~TOP SECRET~~ [redacted]

DEFENSE INTELLIGENCE AGENCY
ADVISORY COMMITTEE
WASHINGTON, D.C. 20301

Lieutenant General Eugene F. Tighe, Jr.
Director
Defense Intelligence Agency
Washington, D.C. 20301

31 AUG 1981

Dear Gene:

(U) I am pleased to forward our final report from the Tactical Weapons R&D Panel. As I have mentioned in our previous discussions, the Panel provided some most interesting and yet frustrating moments. I would like to highlight for you what I believe to be the key points of our investigation.

~~(S/NOFORN)~~ We embarked upon this effort with the thought that considerable attention is and has been placed on collecting the indicators that presage Soviet strategic developments and that considerably less emphasis is placed on spotting the indicators of future tactical systems. To make the effort manageable, we concentrated on the tactical SAM area thinking it to be quite critical and also believing that the methodology used to exploit these systems should be fairly well developed. We further narrowed the investigation to evaluate SAM radars because no matter how differently the Soviets chose to develop them, certain principles of basic physics and sound engineering must guide that development in the early stages of development, i.e., prior to their appearance at tests ranges. These principles and associated necessary practices should therefore provide several opportunities for exploitation.

(TS/ [redacted]

(b)(1),1.4 (c) [redacted]

Available open literature sources were not being fully utilized. Analysts often had little knowledge of U.S. system designs, technologies and manufacturing processes from which to develop informed bases for examining the technical intelligence available on Soviet systems. Overhead imagery produced little substantive intelligence possibly because we don't know where to look. [redacted]

(b)(1),1.4 (c) [redacted] The fact of the matter proved to be that although several SAM facilities/design bureaus appear to be known, independent estimates often do not agree, and follow-up exploitation is weak. In summary, little focus in locating the early observables existed, and the Community suffered from the lack of an organized exploitation approach.

~~(C)~~ We have offered in the report several suggestions for your consideration, some of which are peculiar to the SAM problem and some of which may be useful in developing methods for the general exploitation of tactical weapons systems developments. I believe the key elements of these strategies involves concentrating resources on the critical technologies involved whether this is done

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through matrix organizations or through periodic initiations of special task forces or both. These groups could develop likely productive avenues that may be useful for exploiting particular systems tailored to the peculiarities of that system and could provide information that we believe would be useful for U.S. countermeasures designers and tacticians.

~~(C)~~ We would be naive to believe that the above can be accomplished within existing resource limitations, but we hope that an incremental approach can be developed that attempts to utilize the tools identified in the report to improve our knowledge of Soviet tactical systems. We look forward to your reactions on this endeavor.

Very truly yours,

(b)(3):10 USC 424,(b)(6)

Chairman, Advisory Committee

1 Enclosure
Final Report of the TWR&D Panel
(~~TS~~ (b)(3):50 USC 403-1(i)), 1 copy

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REPORT NO. 68-3

SCIENTIFIC ADVISORY COMMITTEE

DEFENSE INTELLIGENCE AGENCY

U.S. CAPABILITY TO DETECT AND VERIFY SOVIET STRATEGIC WEAPONS PROGRAMS UNDER CONDITIONS OF ARMS LIMITATION(S)

SEPTEMBER 1968

WARNING

(b)(3):50 USC 403-1(i)

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SPECIAL PANEL ON ARMS LIMITATION

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IV.	Options Open to the Soviet Union to Significantly Change the Strategic Balance Without Violating the Postulated Agreement	36
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(b)(3):50 USC 403-1(i)

I.

INTRODUCTION

The DIA/SAC was requested by letter dated 9 August 1968 (TAB A) to:

a. Review and assess the present and projected U.S. capability to detect and identify violations to the postulated terms of an arms limitation agreement and indicate those cases where on-site inspection, in addition to external inspection means, would be necessary.

b. Identify improvements in intelligence capabilities needed to increase our ability to detect, identify and evaluate violation of the terms of the postulated agreement.

In addition, it was considered useful to list Soviet development and deployment options which could significantly change the strategic balance.

The DIA/SAC, in dealing with this problem, considered its primary responsibility was to bring out facts and present technical evaluations. Others will reach conclusions regarding the usefulness and dangers of an arms limitation agreement.

In the absence of an approved arms limitation agreement, a postulated terms of an arms agreement was provided to the DIA/SAC to permit a realistic consideration of the problem.

In answering the first task we have assumed that we are dealing not only with the U.S. capability of detection and identification, but also with the problem of guiding the choice of time and place of an extremely limited number of on-site inspections. It is clear that it will be possible to identify the need for and rough location of inspections in many cases when it will not be possible to identify and evaluate by external means alone.

In examining the different parts of the postulated agreement, we felt that it was necessary to consider only major violations. In trying to define the word major, we concluded that our problem was to define the ability of our intelligence to detect, identify, and evaluate the deployment of additional or improved Soviet weapons in the order of hundreds of offensive or defensive launchers or 10 or more submarine or ship systems.

It is most unlikely that the Soviets and U.S. will ever agree to exchange a detailed description and location of the weapon systems covered by a treaty. Thus, we believe it is important that we be able to detect new development and changes, for instance in the number of launchers, <u>in the time interval between start and establishment of an operational capability</u>.

Without this capability the U.S. would be unable to detect the type of change and its impact on strategic capability or in fact prove that a change in the agreed levels was underway. Once a missile site, for example, is completed, it can be camouflaged or in any case an argument can be made that it does not represent a new facility.

II

POSTULATED TERMS OF AN ARMS LIMITATION AGREEMENT

A review and assessment of the U.S. capabilities to detect and identify violations to an arms limitation agreement requires an understanding, in advance, of the basic concepts on which an agreement might be based as well as the general content of such an agreement.

For the purpose of this study, it is assumed that:

a. The value of an arms limitation agreement is non-reciprocal in U.S. relations with the USSR. The U.S. is assumed to abide by an agreement, but it must be assumed that the Soviets may not.

b. An agreement would be based on the principle that our assured destruction capability would not be eroded and would be kept at a level which is both: (1) adequate, and (2) not worse than would exist if an agreement were not signed.

c. Arms limitation would place emphasis on strategic offensive and defensive forces.

d. Numbers and other appropriate bounds would be established on force levels.

e. Conditions favorable to limited inspection would be established.

Also, for the purpose of this study, an arms limitation

(b)(3):50 USC 403-1(i)

agreement is postulated as follows:

a. This postulated Arms Limitation Agreement should be viewed as an entity. It pertains only to the weapons specifically listed with the understanding that many options would be available outside the postulated Agreement, unless they were already covered by existing agreements or were to be covered by subsequent additional agreements.

b. Verification of the limitations listed below would be accomplished under one of the following two conditions:

1. By external means only.

2. By external means supplemented by a limited number of on site inspections - for the purpose of this study assumed to be less than 10 specific inspections over a period of one year.

c. It is agreed that:

1. Initiation of construction of fixed land-based ICBM launchers, defined as having a range in excess of 4000 KM, is prohibited after an agreed date - assumed for consideration to be 1 January 1969. A maximum number of 1200 ICBM deployed launchers for either party is permitted, and no new start of ICBM launchers over this established baseline is permitted. Technological improvements to missiles and launchers are permitted, but enlargement of silos, changing of basic external configuration, and

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

relocating of launchers are not.

2. Initiation of construction, after 1 January 1969, of fixed land-based launchers for MR/IRBM (ranges greater than 1000 KM, but less than 4000 KM) is prohibited. Modification of missiles or launchers already installed and retrofitting existing launchers with new missiles is permitted if an intercontinental range capability, defined as 4000 KM, is not achieved. However, building of additional silos, enlargement of existing silos, changing of basic external configuration of silos and of launchers, and the relocation of launchers is prohibited.

3. Deployment of mobile land-based or inland waterway based strategic offensive missile systems (ranges of greater than 1000 KM) is prohibited. Any such existing systems would be destroyed.

4. Initiation of construction of additional ballistic or cruise missile submarines is prohibited. Increasing the number of launchers on existing submarines is prohibited. However, retrofitting existing submarines with new or larger missiles of the same type is permitted. Equipping surface ships with launchers for offensive ballistic missiles is prohibited. Replacement of submarines and submarine-launched missiles is permitted, but the number of submarines or launchers

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

would not exceed the number deployed and under construction as of 1 January 1969.

5. Deployment of more than a set equal number (500) of fixed land-based ABM launchers is prohibited. Land and sea-based mobile ABM systems are prohibited, and any existing mobile systems would be destroyed.

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

III

PRESENT AND PROJECTED U.S. CAPABILITIES TO DETECT AND IDENTIFY VIOLATIONS TO THE POSTULATED AGREEMENT

Under conditions of deception and concealment and in violation of the postulated terms of agreement, the Soviet Union could undertake a number of actions aimed at shifting the balance of strategic power in its favor. This section discusses the capabilities of U.S. intelligence to DETECT, IDENTIFY and EVALUATE violations of the postulated agreement. For purposes of this discussion, these terms are defined as follows:

a. To DETECT represents our ability to determine a change from the established base line weapon forces, or development supporting such weapons, of such nature that further effort to understand the significance of the activity is required.

b. To IDENTIFY represents our ability to classify an existing or new weapon or system and to establish a signature so that like weapons or systems can be categorized and counted.

c. To EVALUATE represents our ability to determine performance characteristics of a modified or new system to a degree that its qualitative contribution as a weapon to the overall strategic capability can be assessed.

In the following discussion and analysis, the U.S. capabilities with respect to Soviet violations of the postulated

(b)(3):50 USC 403-1(i)

agreement are considered under five main headings, corresponding to the postulated terms of an arms limitation agreement. These headings are as follows:

a. Initiation of Construction of Excess Numbers of Fixed Land-Based ICBM Launchers.

b. Initiation of Construction of Additional Fixed Land-Based IRBM/MRBM Launchers or Upgrading to ICBM Capability.

c. Retention or Deployment of Mobile Strategic Offensive Missile Systems.

d. Initiating Construction of Additional, or Enlarging Existing, Missile Launching Submarines; Equipping Surface Ships with Offensive Strategic Missile Launchers.

e. ABM Systems.

Wherever feasible, this report presents the estimated U.S. capability in quantitative terms. Generally, these terms represent technical assessments and judgments. For purposes of standardization the following definition of terms has been utilized:

Very Good	80 - 100% Probability
Good	50 - 80% Probability
Low	10 - 50% Probability
Very Low	0 - 10% Probability

(b)(3):50 USC 403-1(i)

A. Initiation of Construction of Excess Numbers of Fixed Land-Based ICBM Launchers

By fixed ICBM launchers we mean silos or launch pads together with associated equipment which unequivocaly identify these sites as having a capability to launch ICBMs. We will consider three cases:

Case 1 - Deployment Within Constraints of Present Geography, Construction Techniques and Testing.

This case considers the problem [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) It assumes that construction would continue in this area, that familiar construction techniques are used and that the Soviet Union will continue to [redacted] (b)(1),(b)(3):10 USC 424:1.4 (c)

The identification of present ICBM launch site construction, [redacted] (b)(1),1.4 (c) Problems which will arise in evaluation if the Soviets develop new ICBM types and we are not able to establish [redacted]

(b)(1),(b)(3):10 USC 424,1 4(c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424.1.4 (c)

[redacted] are discussed subsequently.

To prove a violation it is essential that new launchers be detected and identified during construction and followed to completion. If this requirement is not met then the Soviet Union could assert after the completion of additional construction, upon being challenged, that the given launcher is part of their base-line force, or the launcher could be camouflaged. [redacted]

(b)(1),1.4 (c)

[redacted] Assuming that detection and evaluation are accomplished during the construction phase, it seems unlikely that on-site inspections would be required.

(b)(1),(b)(3):10 USC 424.1.4 (c)

[redacted]

Case 2 - Deployment in Areas in the Far North.

Agreement to enter into an arms limitation treaty might

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

make it desirable for the Soviet Union to [redacted]

[redacted]

(b)(1),(b)(3) 10 USC 424;1.4 (c)

The mission of missiles deployed [redacted] would be clear. The principal problem is to detect construction starts in this area. [redacted]

(b)(1),1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c) [redacted] For example, after selecting, by a constraint and required location criteria, [redacted] where additional [redacted] (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] might be constructed, eighteen months [redacted] (b)(1),1.4 (c) [redacted] analysis were necessary to conclude, with reasonable confidence, that [redacted] had not been deployed at

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

[redacted]

Although this section deals with fixed ICBM launchers, having a previously identified signature, to be deployed in the North, we want to point out here that if a decision were made to deploy more launchers in this area, a more probable action would be the deployment in the Northern region of mobile ICBMs in environmental cannisters. For consideration of that possible Soviet action, see the final paragraph of Section III. C., following.

Case 3 - Deployments Involving Changed Launcher Signatures. The Soviet Union could [redacted]

(b)(1),(b)(3).10 USC 424;1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] conceal ICBM launch facilities or could make the detection of known signatures very difficult by building launchers within industrial areas. Under such conditions, our capability to detect deployment would be significantly reduced. The key question which needs to be answered is whether a significant number of starts, i.e., in excess of 100, could be made [redacted]

(b)(1),(b)(3) 10 USC 424,1.4 (c)

(b)(1),1.4 (c) [redacted] a few new launcher starts of this type within their construction cycle if the total number started were large, i.e., ten a month or more, and if they were all alike. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

B. Initiation of Construction of Additional Fixed Land-Based IRBM/MRBM Launchers or Upgrading to ICBM Capability

By fixed IRBM/MRBM launchers we mean silos or launch pads together with associated equipment such as gantries, antennas, etc., which unequivocaly identify these sites as having a capability to launch IRBM/MRBMs. We will consider two cases:

Case 1 - Deployment of Additional Launchers.

This case considers the problems associated with construction of additional missile launchers. All of the comments contained in the previous section on ICBM launchers apply to this case.

Case 2 - Modifications or Upgrading Present IR/MRBM Launch Sites to Achieve ICBM Capability.

There are two cases. First, if major external modifications or significant additional construction is required, the situation

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

is similar to that for detection of new sites, [redacted] Second, it is conceivable that launchers could be retrofitted with missiles of ICBM range with no significant external modifications to the silo. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3) 10 USC 424,1.4 (c)

C. Retention or Deployment of Mobile Strategic Offensive Missile Systems

Mobile-transportable ICBMs are those classes which either:

a. Are designed to be transported, erected, and launched from mobile vehicles or

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

b. Are transported in sections to pre-surveyed locations and are assembled, erected, and launched there.

(b)(1),(b)(3):10 USC 424,1.4 (c)

The ability of the U.S. to detect operational deployment of such systems and to determine the numbers which are deployed

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

The above discussion assumes deployment of the Soviet mobile system in the currently utilized deployment areas. However, as mentioned at the end of discussion of the deployment of fixed, land-based ICBMs in the far North (Section III. A., Case 2), a more probable action would be the deployment in the Northern regions of mobile ICBMs in environmental cannisters in shelters. There is little or no need to harden sites in the North, since mobile systems could easily be hidden by forests and beneath the very persistent cloud and fog. By hiding such a system, protection comparable to hardening, but at considerably less effort, could be achieved. Such systems would not only be harder to detect and identify but much more difficult to locate for inspection. [redacted]

(b)(1),(b)(3):10 USC 424;1.4 (c)

(b)(1),1.4 (c)

D. Initiating Construction of Additional or Enlarging Existing Missile Launching Submarines; Equipping Surface Ships With Offensive Strategic Missile Launchers

We consider two cases: first, the construction and deployment

of missile carrying submarines or a modification to increase the number of launchers on existing submarines and, second, the installation of strategic offensive missile systems onboard surface ships.

Case 1 - Initiating Construction of Additional Submarines or Modification to Increase the Number of Launchers.

In this case, our ability to detect developments and deployment is

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),1.4 (c)

However, based on existing capabilities and past experience, the total increase in force size of SLBM systems could probably be determined

(b)(1),1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

Case 2 - Equipping Surface Ships with Offensive Ballistic Missile Launchers.

Offensive ballistic missiles of the MR/IR or ICBM range, regardless of basing, are now and would be expected to continue to be developed and tested at one of the land-based test and development centers. [redacted] Installation on a

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

ship, and later deployment of the ship, [redacted]

(b)(1),1.4 (c) [redacted]

Also, the movements of ships from ports and on the seas would be subject to [redacted]

(b)(1),1.4 (c) [redacted] Of importance in this category is the special incentive to the Soviets to construct or modify the ships so that their recognition characteristics would be minimal. Lacking hardness and being observable, their survival depends on concealment or deception. (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

[redacted] Also, we could then relate the activity at sea to test on land.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

E. ABM Systems

The postulated agreement would limit land-based ABM launchers to a set number and would prohibit the deployment of new launchers and the retention of any existing, mobile, land-based or sea-based systems. The problem of detecting a violation requires first of all a determination of whether any launcher seen in deployment is an ABM, and in order to provide adequate time for reaction requires the detection and identification of ABM systems during development and testing.

(b)(1),(b)(3):10 USC 424,1.4 (c)

Moreover, identification and evaluation of such weapons is often made in relation to their capability against the evolving U.S. strategic offensive systems. For example, a weapon which by its deployment pattern might be an ABM is often discounted as such if by analysis and evaluation it appears to have no real capability against existing and improving

offensive systems. Such an analysis although of great significance in force level and operational planning is not the question under consideration in this study. Also, the question involves the competitive action and reaction between offense and defense and the changing advantages of one over the other largely as a result of R&D. Such analyses could support an argument that at a particular time a system is an ABM because it has some reasonable capability as such, but at a later time it is not an ABM because improvements in offensive weapons have reduced its ABM capability to near zero.

The criteria used in this report for considering if a weapon system is an ABM weapon system or not are the following:

a. Evidence from testing of identified components and systems that a system was developed and tested to perform an ABM role (either ABM only or both ABM and SAM).

b. Evidence and performance analysis of identified components and subsystems together with weapon system deployment patterns that prove the system is intended to perform as an ABM.

c. Evidence and performance analysis of identified components and subsystems of a weapon system in question which, together with other components of a known ABM system could be utilized as an ABM

(b)(3):50 USC 403-1(i)

sytem and a deployment pattern not inconsistent with an ABM role. (e.g., (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

Detection in deployment and at development and test centers of very large radars for acquisition and target tracking leaves little doubt that associated launchers and missiles, [redacted] A fundamental difficulty arises therefore in clearly relating to or excluding from the ABM role: (1) smaller radars that could be used for interceptor missile guidance and control and perhaps for local defense, and (2) launchers and missiles and related smaller radars both located some distance away from large radars. Such equipments could have an ABM capability which could vary from excellent to poor depending on the system performance and of even greater significance, the capabilities of the offensive threat.

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c)

Verification of the postulated agreement involves four separate cases as follows:

Case 1 - Deployment of Land-Based ABM Launchers in Excess of a Set Number.

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c) [redacted] There is high confidence in the present assessment of the number of fixed launchers for this system. There is, however, a lower but good confidence in our ability to determine the refire capability of the launchers and a low confidence in our ability to determine the number of missiles available to be launched.

Provided that any further deployment of (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

On the basis of presently available evidence, some parts of the [redacted] supported by existing [redacted] well have ABM capability. While other [redacted] sites cannot at present benefit from large ABM radars - such radars could later be deployed and even provide ABM capability to these sites.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

If the USSR were to seek to conceal [redacted] deployment, an additional number of launchers could be located within the general proximity of the interceptors guidance and control radars - or additional radars and launchers could be deployed in a considerably less conspicuous manner. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c)

Case 2 - Retention or Deployment of a Mobile Land-Based ABM System.

The large acquisition and tracking radars provided for fixed land-based ABM systems would also serve a mobile land-based system. The requirements then for a mobile land-based ABM system would be pre-surveyed launch points, a mobile launcher with missile and associated ground support equipment, appropriate data links to at least the large radars and either data links to nearby interceptor guidance and control radars or provision of that capability as part of the mobile system, a place for storage and hiding of the mobile launchers and for monitoring the units in a readiness condition prior to moving to the launch point(s) or appropriate provision for maintenance in a ready position at all times when at or on the launch point. The overall computation and command and control centers for a land-based fixed ABM system could also serve a mobile system.

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

(b)(1),1.4 (c) [redacted] - launchers and missiles would not need to be exposed until a choice was made to do so. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] Since even the launchers and missiles could well be the same as now seen in [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

It must therefore be concluded that if an attempt were made by the Soviet Union to develop and deploy a mobile ABM system - under conditions of concealment and deception [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

Case 3 - Retention or Deployment of a Mobile Sea-Based ABM System.

The comments made previously on requirements for radars,

computation capabilities, missiles and nuclear warheads apply generally to sea-based ABM systems. Component and system testing for a sea-based system would be accomplished at land test and development centers. High performance acquisition and tracking radars would not need to be mounted on ships, since data from such radars located on land could be provided by data links to the ships. If such radars were mounted on ships [redacted] and

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

their capabilities [redacted] (b)(1),1.4 (c)

In any event, at least end-engagement radars, missiles and launchers, and some computing capability would constitute the on-board system. Installation of launchers and radars on board ship [redacted] and

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),1.4 (c) [redacted] might also contribute to detection during the installation phase. If a sea-based ABM were deployed, and especially if at-sea testing or training were conducted (which would be likely in the event of deployment), [redacted] (b)(1),1.4 (c)

[redacted] Identification of a ship system should permit correlation with development testing of the missiles and radars and a good assessment

(b)(3):50 USC 403-1(i)

of capabilities of the system could be made. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5) 1 4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

Case 4 - Up-grading of SAM Launchers to ABM Launchers.

As stated earlier, no clear distinction can be drawn between SAM interceptors and ABM interceptors without detailed knowledge of the [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

None of this required information can be obtained with

(b)(3):50 USC 403-1(i)

certainty from presently available or projected sensor information. It is quite possible that an advanced SAM system with upgrading that could not be detected could provide substantial ABM capability if appropriately linked to computer and radar components of an ABM system. For example, our inability to determine, with high confidence, [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

If the [redacted] were accepted only as a SAM, the opportunity would exist to quite rapidly connect it to the ABM system, thus resulting in a many fold increase in ABM launchers. If such action were taken there would be no appreciable lead time available to the U.S. to counter such an action.

A summary tabulation of the conclusions reached in the preceding discussion is presented in Figure 1.

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

SUMMARY

PRESENT U.S. CAPABILITY AGAINST SOVIET VIOLATION OF THE POSTULATED AGREEMENT**

Violation	External Means Only			On-Site Inspection
	Detect	Identify	Evaluate	
Inititation of Construction of Fixed Land-Based ICBM or MR/IRBM Launchers	(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)			
Present Geography, Construction Techniques, & Testing				
Deployment in Far North				
Deployments Involving Changed Launcher Signatures				
Upgrading Fixed MR/IRBM Launchers and/or Missiles to ICBM Capability				
Retention or Deployment of a Mobile Strategic Offensive Missile System				
In Conventional Missile Deployment Areas				
In the Far North				
Inititating Construction of Additional, or Enlarging Existing, Missile Launching Submarines				
Equipping Surface Ships with Offensive Ballistic Missile Launchers				
Deployment of Excess Numbers of Land-Based ABM Launchers				
Retention or Deployment of a Mobile ABM System				
Land-Based				
Sea-Based				
Upgrading SAM Launchers to ABM Launchers (Total Exceeding 500)				

**Detection and identification of initial or early violation, and without additional Soviet effort at countermeasures against U.S. collection effort.

* Not usable because adequate detection probability is a prerequisite to a meaningful inspection option.

KEY: Very high 80-100% probability; Good 50-80% probability; Low 10-50% probability; Very low 0-10% probability

NOTES:

Future capabilities and recommended improvement are treated qualitatively in the text (Sections III and V).

Effects of Soviet efforts at concealment and deception are treated qualitatively in the text.

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

IV

OPTIONS OPEN TO THE SOVIET UNION TO SIGNIFICANTLY CHANGE THE STRATEGIC BALANCE WITHOUT VIOLATING THE POSTULATED AGREEMENT

Without violating the postulated terms of an arms limitation agreement, the Soviet Union could take certain actions to significantly shift the balance of strategic power in its favor. These actions fall into two categories: (1) those relating to weapons not covered by the agreement and (2) those relating to weapons covered by the agreement but circumventing the restrictions of the postulated agreement.

The purpose of the section is to list some of these options. It is clear that all the items listed in the section should be examined for our capability to detect, identify and evaluate.

[redacted] In the same way, if the Soviet negotiators are requesting the inclusion of an item which we have excluded such as, [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) information regarding the U.S. ability of detecting a unilateral violation on the part of the Soviets would also be essential. We propose, in a paper to be issued at a later date, to examine our capabilities to detect, identify, and evaluate these items,

(b)(3):50 USC 403-1(i)

and to identify those which might be considered by the U.S. for inclusion in an agreement. In this section, we will briefly examine only the problem of [redacted] — (b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

The listing of options not prohibited by the agreement is, by its very nature, open ended and is primarily dependent upon the inventiveness and capabilities of the Soviet Union planners. Potential actions to significantly shift the balance of strategic power that relate to weapons not covered by the postulated arms limitation agreement are listed below:

a. Development and deployment of improved strategic aircraft, or deployment of increased numbers of strategic aircraft.

b. Development and deployment of cruise or ballistic missiles or of ballistic missile defense missiles delivered from aircraft.

c. Development and deployment of land-based long-range cruise missile systems.

d. Development and deployment of ship-based cruise missile systems (can be effective if long-range or even down to ranges less than 1000 km).

e. Development and deployment of improved attack submarines or other ASW weapons or procedures to counter the U.S. Fleet Ballistic Missile System, reduction in the noise of attack submarines, improved trailing procedures, improved land-based

(b)(3):50 USC 403-1(i)

detectors, improved sonars, etc.

f. Development and deployment of improved air defenses with the use, for example, of an effective AWAC combined with nuclear tipped SAMs.

g. Development and deployment of BW/CW weapons for delivery by various means.

h. Development and deployment of space-based weapon systems. (Although perhaps violating the space treaty, this would not be a violation of the postulated arms limitation agreement).

With respect to the weapons covered by the postulated arms limitation agreement, at least the following actions are open to the Soviets to enhance their strategic power by circumventing the restrictions imposed by the specific postulated terms of an agreement.

a. Improvements in strategic offensive missile systems by:

1. Developing and deploying

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

As stated above, a separate paper is proposed to evaluate the U.S. capability to detect, identify and evaluate the items listed in this section. However, in view of current interest and potential significance, an evaluation of the U.S. capabilities

(b)(1),(b)(3):10 USC 424,(b)(5),1 4 (c)

is discussed below.

The development of

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

Either approach could involve guidance improvements over and above that inherent in the basic missile system. (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

IMPROVEMENTS NEEDED TO ENHANCE U.S. INTELLIGENCE CAPABILITIES TO DETECT, IDENTIFY AND EVALUATE - ON A TIMELY BASIS, VIOLATIONS TO THE POSTULATED AGREEMENT

The intelligence capabilities that would be utilized in attempting to detect, identify and evaluate violations to or conformance with arms limitation agreements would be an interlocking part of the overall DoD intelligence system. These capabilities are no less stringently required without the agreement than with it. The capability is composed of [redacted] A balance is essential among the three areas listed, as well as with the planning and R&D, to provide on a timely basis the equipments required. Considering that the existing capabilities [redacted] following improvements should be given priority attention specifically in relation to intelligence support of an arms limitation agreement.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

1. Continue to upgrade the processing and analytical methods and increase qualitative and quantitative professional manpower commensurate with improvements in [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

2. [redacted]

(b)(1),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(1),1.4 (c)

5. Initiate developments aimed at providing an effective means of monitoring deployment activity of mobile or fixed missiles in environmental shelters in the Soviet areas

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1(i)

6. Consider that under conditions of deception and concealment [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1 4 (c)

[redacted] This requires designs that can circumvent such actions, redundancy to overcome the actions, or at the least, the ability to determine if required data is being denied.

(b)(1),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

(b)(3):50 USC 403-1(i)

VI

CONCLUSIONS

It is important to note that there are many options not covered by the postulated agreement and several actions are permitted within the terms of the postulated agreement that could, if not properly countered, have a significant impact on the strategic balance and on the U.S. assured destruction capability.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

The skillful application of concealment and deception would considerably degrade the U.S. capability either to verify compliance with the postulated agreement by external means

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

The areas of greatest concern, because of their potential impact on the strategic balance and the lack of confidence in

our ability to detect either a violation to the postulated treaty or to provide sufficient lead time for U.S. reaction are:

a. Deployment of mobile ICBM launchers, either in the deployment area presently utilized or in the far North.

b. Deployment of mobile ABM launchers either in the USSR areas to be defended or in the far North.

c. The upgrading of a SAM appropriately deployed and in significant numbers [redacted] to an ABM, or the misclassification of such a weapon by assessing it as a SAM, when in reality it is either an ABM or has a significant ABM capability in addition to having a SAM capabilty.

d. Upgrading of MR/IRBM launchers to ICBM.

e. Although not excluded by the postulated agreement, [redacted] to existing or future strategic missile systems.

f. An aggregate of several actions comprised of a. thru e. and perhaps others, which would be more difficult to detect at lower levels of activity.

The use of the term launcher, for offensive missiles and defensive missiles allows great latitude in the number of [redacted]

missiles and warheads - (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

Detection, identification and evaluation of compliance with an arms limitation agreement would be an added responsibility on the existing U.S. intelligence system. These capabilities, (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

TOP SECRET

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

[redacted]

TS-126/ST

9 August 1968

[redacted] Chairman
Scientific Advisory Committee
Defense Intelligence Agency
Washington, D.C. 20301

Dear [redacted]

One of the most important factors involved in any consideration of an arms limitation agreement is how well we will be able to monitor observance by the USSR of the terms of an agreement. This in turn necessitates a realistic appraisal of our U.S. intelligence capability to detect, identify and evaluate Soviet strategic weapons programs under conditions of arms limitations.

In recent discussions with the Deputy Secretary of Defense, it was agreed that a highly competent technical review of the U.S. present intelligence capability and future needs should be undertaken by a panel of scientific and technical experts such as those represented in the DIA Scientific Advisory Committee. Therefore, I request that the DIA/SAC review the recently prepared [redacted] and other pertinent studies on this subject, with a view toward conducting an additional technical analysis and evaluation of the problem.

(b)(1),(b)(3):10 USC 424,1 4 (e)

The following items are suggested for consideration with emphasis on the present and projected U.S. intelligence capabilities and improvements needed if the Soviets attempt new developments, modifications and deployment in the strategic area especially under conditions of concealment and deception.

a. Development and deployment of mobile strategic offensive and defensive systems.

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REGRADING: DOD DIR. 5200.10

b. Upgrading of SAM systems to an ABM system.

c. Retrofit of ICBM's into hard and soft MR/IRBM sites.

d. Development and deployment of new or additional missile submarines.

(b)(1),(b)(3):10 USC 424.1.4 (c) e. Development and deployment of advanced payloads (i.e., [redacted] for new or existing missile systems.

f. Significant increases in accuracy for strategic offensive systems.

g. Development and deployment of significantly improved cruise missile systems.

h. Development and deployment of space weapon systems.

i. Other approaches the Committee feels the Soviets might take.

In regard to all these items, U.S. capabilities, present and programmed, for detection and verification should be evaluated, particularly in relation to intelligence lead time that might be expected as regards IOC, the nature and extent of the deployment, and the change in performance that would result from modifications involved. In addition, the DIA/SAC should recommend any actions that should be taken pertaining to additional data and information needs for intelligence purposes, and improvements that may be necessary to our identification and verification capabilities.

I request the DIA/SAC to prepare a report on this subject by 9 September, if feasible. I have assigned the primary responsibility for support to your Committee in this study to my Assistant Director for Scientific and Technical Intelligence, (b)(3):10 USC 424 [redacted] will constitute the DIA interface for the technical evaluation, will provide coordination with all DIA internal action in areas related to this study, and arrange for any DIA support required.

Sincerely,

(b)(6) [redacted]

JOSEPH F. CARROLL
Lieutenant General, USAF
Director

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PAGE 2 OF 2 PAGES

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15 DOE

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REPORT 85-1

of the

DIA SCIENTIFIC ADVISORY COMMITTEE

to the

Director

DEFENSE INTELLIGENCE AGENCY

Fifteen pages are denied in full and are not included.

ARMS CONTROL MONITORING PANEL

April 1985

~~A RESTRICTED DATA~~

~~'This material contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to administrative and criminal sanctions.'~~

DOE EQUITIES REDACTED BEFORE SCANNING PER DOE. SEE BELOW.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW

1st REVIEW-DATE: 7-15-08
AUTHORITY: ☐ DC ☒ DD
NAME: [illegible]
2nd REVIEW-DATE: 10/10/08
AUTHORITY: DD
NAME: S. [illegible]

DETERMINATION (CIRCLE NUMBER(S))
1. CLASSIFICATION RETAINED
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(b)(3):50 USC 403-1(i)

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DIA/SAC REPORT 85-1

This report was prepared and approved by the

DIA Scientific Advisory Committee's

ARMS CONTROL MONITORING PANEL

MEMBERSHIP

[redacted]

THE DIA SCIENTIFIC ADVISORY COMMITTEE

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(b)(3):10 USC 424

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(b)(3):10 USC 424

Assistant Deputy Director for Scientific and Technical Intelligence

Executive Secretary

(b)(3):10 USC 424

ARMS CONTROL MONITORING PANEL

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EXECUTIVE SUMMARY (U)

1. (U) Almost two dozen treaties or agreements between the U.S. and the USSR relating to arms control exist or are being seriously considered. They cover a wide range of issues of strategic importance to the U.S. For example:

a. (U) The ABM treaty prohibits the improvement of surface-to-air missile systems to the point where they would be useful against ICBMs.

b. (U) The treaty on the Limitations of Underground Nuclear Weapons Tests (Threshold Test Ban Treaty or TTBT) establishes a threshold (150 KT) which both parties agree not to exceed in the testing of nuclear weapons.

c. (U) The Conventions on Bacteriological and Toxin Weapons prohibit the development of biological agents (b)(5)

2. (U) These examples illustrate the wide range of issues that are involved in negotiations and typify a major difficulty in monitoring and verification--imprecise definitions that can lead to ambiguous interpretations. In the ABM treaty the distinction between surface-to-air capability against aircraft and against missiles is not precisely set forth; (b)(5)

3. (U) While we hope that negotiations would seek precision in the language of treaties, the very nature of the negotiations process in the international arena inevitably leads to imprecision. We cannot expect that the details of language used to develop contracts that would withstand scrutiny in a U.S. claims court, would also be feasible to incorporate in every case in an arms control agreement between nations.

4. (U) The assessment of our intelligence capability for monitoring agreements must consider the uncertainties of interpretation that are likely

to result. (b)(5)

6. ~~(S)~~

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),(b)(5),1.4 (c)

[redacted]

7. ~~(S)~~ In the other intelligence disciplines, the U.S. has made major improvements in intelligence collection systems that are useful to arms control monitoring. For example:

(b)(1),(b)(3):50 USC 403 (g),

[redacted]

(b)(3):50 USC 403-1(i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

8. ~~(S)~~ *While the U.S. intelligence capability is improving, the problem of* monitoring is becoming much more difficult as a consequence of two important factors: (1) changing technology, and (2) [redacted] The following examples may illustrate the impact of changing technology.

a. ~~(S)~~ The Soviets (and now the U.S.) employ cannisters to house and transport rocket systems making it more difficult to determine the physical size or identity of a system.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

c. ~~(S)~~ The manufacture and processing of chemical weapon material is essentially the same as that employed for chemicals for peaceful purposes (insecticides and fertilizers).

d. ~~(S)~~ The development of ballistic missile technology has made practical the design and deployment of mobile strategic missiles that may be moved frequently and located in areas (forests, for example) [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

9. ~~(S)~~ We expect that the nature of technical development is such that this process will continue. [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

13. (U) We noted several program areas where we believe more emphasis is warranted to further enhance monitoring.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

PREFACE (U)

~~(S)~~ The paper is organized to address the role of intelligence in the arms control monitoring process which in turn supports the national verification process. First, some of the types of limitations in existing (including unratified) and proposed treaties are outlined in Section I. Next, the US monitoring capabilities and limitations are summarized briefly in Section II for those treaty provisions of special strategic significance. Third, in Section III the panel examines the underlying reasons for the monitoring shortcomings, such as physical limits on technical intelligence, advances in Soviet technology, and Soviet denial measures. In Section IV we consider the programmed improvements to U.S. intelligence collection and the projected improvements in analysis. Finally, the panel's views are summarized in Section V with conclusions and recommendations.

INTRODUCTION (U)

~~(S)~~ A panel of the DIA Scientific Advisory Committee was established and tasked to provide an independent view of the capability of current, programmed, and potential intelligence collection systems to monitor arms control limitations. We considered the nature of treaty provisions that should be addressed by intelligence collection and analysis, and the character of collection systems that would be effective, and, in our judgment, feasible.

~~(S)~~ This paper also discusses the relationship between intelligence for treaty monitoring and intelligence for its generally accepted role -- the assessment of Soviet military capabilities. Although similar, there are critical distinctions arising from the details of treaty provisions, precision of monitoring, and the possible need for public discussions of the events or circumstances based on the intelligence evidence.

(U) The scope of existing and proposed arms control agreements is comprehensive and includes a broad range of issues. The panel did not attempt to consider all the issues but devoted itself primarily to those of special strategic importance, where U.S. intelligence agencies have significant responsibility in monitoring the observance of the existing and proposed agreements.

(U) The panel did not consider in any depth the contributions that cooperative measures (on-site inspections, for example) could make to the monitoring of agreements. (b)(5)

SECTION I

TREATIES AND TREATY LIMITATIONS (U)

1. (U) The following treaties, either agreed to or under some degree of negotiation/consideration are considered to be of strategic significance to the United States. Some, however, address weapons that are not universally referred to as strategic.

Treaties/Agreements Currently Applicable

Interim Agreement on Offensive Arms, not ratified by the Senate but approved by a joint resolution of Congress. (Expired in 1977; both sides pledged not to take contrary actions.)

ABM Treaty negotiated as part of SALT I. (Ratified by the Senate in 1972; next 5-year review is in 1987.)

Strategic Arms Limitation Talks, SALT II. (Signed in 1979 but not ratified by the Senate.)

Threshold Test Ban Treaty (Signed in 1974 but not ratified by the Senate however, the United States pledged in 1976 to abide by basic tenets.)

Limited Test Ban Treaty (Ratified by the Senate in 1963.)

PNE Treaty on Underground Nuclear Explosions for Peaceful Purposes (Signed in 1976 but not ratified by the Senate however the United States pledged in 1976 to abide by tenets.)

Outer Space Treaty (Ratified by the Senate in 1967.)

Biological Weapons Convention (Ratified by the Senate in 1975.)

Non-Proliferation Treaty (NPT) (Ratified by the Senate in 1968, over 120 countries are signatories.)

Treaties Under Negotiation/Consideration

Strategic Arms Reduction Talks (START).

Intermediate-range Nuclear Forces (INF).

Biological and Chemical Weapons (BW/CW).

Anti-Satellite Weapons (ASAT).

Comprehensive Test Ban Treaty (CTBT).

2. (U) The above agreements and proposals contain three generic types of limitations: a. Quantitative, b. Qualitative, and c. Restrictions on permitted locations or activities.

3. (U) Quantitative limits are placed on the numbers of systems, components or support facilities. SALT II limits the numbers of Strategic Nuclear Delivery Vehicles (2400 SNDVs, eventually 2250), MIRV ICBM launchers (820), MIRV ICBM and SLBM launchers (1200), and MIRVed missiles and long range ALCM equipped heavy bombers (1320). The ABM Treaty and SALT I place a limit of 100 on the number of ABM interceptor missiles and launchers, and provides that there could be no increase in either the number of fixed ICBM launchers or the number of SLBM launch tubes that were operational or under construction as of specified dates. There is provision to increase SLBM launchers by decreasing the number of launchers for older ICBMs. The Soviets have taken advantage of this option by dismantling and destroying older weapons, such as the SS-7 and SS-8 systems. Limits on numbers of ballistic missile reentry vehicles have been proposed for START.

4. (U) Qualitative limits often apply to the characteristics of weapon systems, supporting equipment or facilities. One example is the limit created by the SALT II definition of a new type ICBM: this limit uses the type of propellant, the number of stages, the throw weight, the launch weight, the missile length, and the maximum diameter as criteria for defining "new type" ICBMs. SALT II contains several other qualitative limits, such as those requiring that weights of MIRVs not be reduced; that single RV ICBMs maintain a ratio of RV weight to throw weight of at least 50%; that the number of MIRVs

on each type of missile not be increased; and, that missiles heavier, in either launch weight or throw weight, than the SS-19 (for the class of "light" ICBMs) or the SS-18 (for the class of "heavy" ICBMs) not be developed, tested or deployed. Other examples include the limits on ICBM silo (launcher) size in both SALT I and SALT II, and the ABM Treaty limit on the power-aperture product of ABM radars. The U.S. proposal for an INF Treaty uses the maximum range capability of ballistic missiles to determine which Treaty limitations would apply. Cruise missile range also determines the applicability of specific INF limitations. The Threshold Test Ban and Peaceful Nuclear Explosions Treaties restrict the yield of underground nuclear tests to no greater than 150 kT.

5. (U) Restrictions on permitted locations of weapons and facilities or restrictions on the tests of weapons, or restrictions on specific activities are imposed by certain treaties. The ABM Treaty restricts the locations of a class of large phased array radars to the periphery of the country, facing outward. Sites for interceptor missiles are specifically limited, originally to two locations in each country (subsequently changed to one) with one change of location permitted. The current locations are Grand Forks, N.D. in the U.S. and Moscow in the USSR. SALT II restricts the locations of test centers launching ICBMs and SLBMs, and provides that ICBMs in excess of normal deployment requirements may not be stored at operational ICBM launch sites.

(U) Activities that are banned or proposed to be banned include research, development, production, storage, transfer, and use of chemical and biological weapons; interference with National Technical Means of verifying compliance; and, certain types of weapons testing. The last category includes, in SALT I, (ABM Treaty) the ban on testing of SAMs in an ABM role, and the ban on testing of multiple ICBMs concurrently, without prior notification. The Limited Test

Ban Treaty prohibits above ground nuclear explosions and underground explosions that spread nuclear fallout beyond national boundaries.

SECTION II

MONITORING CAPABILITIES (U)

A. (U) Treaty Interpretation Difficulties

1. ~~(S)~~ Some of the compliance questions which the United States faces have their genesis in the wording of certain treaty provisions. Even though U.S. negotiators sought to avoid ambiguity, some provisions were accepted that are subject to conflicting interpretation or are inherently difficult to monitor.

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

(b)(3):50 USC 403-1(i)

2. ~~(TS)~~ [redacted] In negotiating the ABM Treaty, U.S. negotiators expected that strategic ABM systems would be distinguishable from "SAM systems" designed for "interception of targets against which air defenses are deployed." [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1)

X(1) (b)(1),(b)(3):50 USC 403 (g),1.4 (c)

b(1)

3. ~~(TS)~~ Similarly, it is difficult to determine whether a large phased array radar (LPAR) is to support an ABM system or space operations. The ABM treaty permits LPARs for tracking space objects, for collecting intelligence, and for early warning in a ballistic missile defense (BMD) system provided that the system is on the periphery of the country facing outward. Again, ambiguities exist. The term "periphery" could be loosely interpreted, in the context of required coverage, logistics support, etc., to mean "feasible locations generally on the periphery". The treaty bans LPARs with a battle management function for an ABM system, except those permissible under the ABM Treaty for the Moscow area. (b)(1),(b)(3):50 USC 403 (g),(b)(5),1.4 (c) Almost all of these radars (as it is in the U.S.) will probably have multiple mission supporting functions.

X(1) (b)(1),(b)(3):50 USC 403 (g),(b)(5),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),(b)(5),1.4 (c)

B. (U) Strategic Offensive Limitations

(b)(3):50 USC 403-1(i)

5. (TS)

(b)(1),(b)(3):50 USC 403 (g),(b)(5),1.4 (c)

6. (S) The Soviets are currently testing two mobile ICBMs[2]. (b)(1),1.4 (c)

(b)(1),1.4 (c)

[2]The SALT II Protocol prohibited mobile ICBMs but it expired on 31 December 1981. SALT II itself expires on 31 December 1985 but both sides may agree to continue observing it.

(b)(1),1.4 (c)

(b)(1),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),(b)(5),.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b)

C. (U) Nuclear Treaties

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

D. (U) Special Nuclear Materials Availability

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

E. (U) ABM Treaty

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

F. (U) Chemical Weapons Treaties

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

G. (U) Anti-satellite Weapons (ASAT)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

SECTION III

FACTORS DEGRADING MONITORING (U)

A. (U) Physical Limitations

1. (U) The monitoring of some proposed treaty provisions is constrained by fundamental physical limitations.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

B. (U) Technical Trends

6. ~~(S)~~ Cruise missiles have reduced the lower limit on the size of strategic weapon delivery systems. These missiles fit easily inside other weapon systems (e.g., aircraft, submarines, ships) or enclosed storage facilities where it is usually impossible to count missiles.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

8. ~~(S)~~ The use of mobile launchers, for both ballistic and cruise missiles, has become the best means for reducing vulnerability to attack. Even if elaborate cooperative measures could be negotiated, mobility severely complicates the task of counting deployed missiles or launchers.

9. ~~(S)~~ The ABM Treaty ~~bans~~ the development of mobile ABM systems. Technology now permits development of mobile SAM systems with performance sufficient for some ABM capability, especially for point defense or self defense. Key components such as missile launchers, some phased array radars, and their associated components, can now be mobile. As technology advances, it will become more likely that SAM systems might contribute significantly to ballistic missile defense.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

SECTION IV

PROGRAMMED IMPROVEMENTS IN U.S. INTELLIGENCE (U)

A. (U) Collection

1. (U) Several significant improvements recently have been introduced or are planned for U.S. intelligence collection systems. The key parameters and capabilities of these systems are discussed below.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

[redacted]

11. ~~(S)~~ Nuclear Intelligence: The current net of overhead sensors is being upgraded to provide more sensitive coverage worldwide. Some of the remote areas will have better coverage with lower yield thresholds of detection. (b)(1),(b)(3):50 USC 403 (g),1.4 (c) [redacted] may not be implemented in the near future because of funding restraints.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c) [redacted]

(b)(3):50 USC 403-1(i) [redacted]

SECTION V

CONCLUSIONS AND RECOMMENDATIONS (U)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(3):50 USC 403-1(i) ~~(S)~~ Nevertheless, certain observations about these collection disciplines may be appropriate. (b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(3):50 USC 403-1(i),1.4 (c)

4. (S) The panel did not believe that the subject of cooperative measures lay within its charter, and therefore we did not address its effective implementations. It is our view, however, that provisions for cooperative measures should be a part of any meaningful agreement. (b)(1),(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

d. ~~(S)~~ The U.S. should not rely on intelligence alone for monitoring but should develop realistic cooperative measures (on-site inspections, counting rules, etc.) to enhance the monitoring process. (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

APPENDIX A

TERMS OF REFERENCE (U)

TERMS OF REFERENCE

16 FEB 1984

DIA ADVISORY COMMITTEE
ARMS CONTROL VERIFICATION PANEL

SUBJECT: Arms Control Verification (U)

PROBLEM: ~~(S)~~ The extent of the effort that the Intelligence Community must undertake to provide useful, timely, and reliable inputs to the verification process is not fully understood.

BACKGROUND: ~~(S)~~ The nation is involved in treaty arrangements and negotiations that require intelligence support to fulfill verification requirements. Because there have been violations in the past, the Intelligence Community is relied upon to give indications of such pending acts. Given this responsibility, the Intelligence Community must have effective and efficient ways of verifying compliance. The DIA effort is coordinated by VP, who is the designated spokesman on these matters.

OBJECTIVES:

- ~~(S)~~ Identify the terms and features of possible defense treaties and agreements between the USSR and the US that require verification by US intelligence.
- ~~(S)~~ Identify the target areas we are collecting against for use in verification.
- ~~(S)~~ Assess the capability of existing collectors and analyses to provide the needed verification.
- ~~(S)~~ Review proposed changes in intelligence collection and analysis and assess their potential for improving US verification capability.
- ~~(S)~~ Recommend areas for improving intelligence verification capabilities.

LEVEL-OF-EFFORT: (U) The panel will consist of about six members with [redacted] as chairman. Four to six meeting sessions should be required to complete the panel's work. The panel will be assisted by a DIA representative, knowledgeable in the technical aspects of the field and who is selected by DIA/VP. A final written report will be submitted to the Director after coordination with VP.

APPROVED BY:

[redacted]

JAMES A. WILLIAMS
Lieutenant General, USA
Director, DIA

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[redacted]

APPENDIX B

MEETING AGENDAS (U)

AGENDA
DIA ADVISORY COMMITTEE
ARMS CONTROL VERIFICATION PANEL
PLAZA WEST-ROSSLYN, VA
8 MARCH 1984

(b)(3):50 USC 403-1(i)

0900-0905	Introduction
0905-1000	Overview of Existing and Proposed Treaties/Agreements: SALT I & II, TTBT, CW/BW, START, and INF
1000-1015	Break
1015-1200	U.S. Capabilities to Monitor Treaties:
	Introduction, SALT II, START, INF, CW/BW (50 Minutes)
	TTBT (30 Minutes)
	SALT I (ABM) (25 Minutes)
1200-1300	Lunch
1300-1645	Negotiation and Compliance Experiences:
	Overview (30 Minutes)
	OSD Perspective (90 Minutes)
	Break (15 Minutes)
	JCS Perspective (90 Minutes)
1645-1730	Executive Session

UNCLASSIFIED

AGENDA
DIA ADVISORY COMMITTEE
ARMS CONTROL VERIFICATION PANEL
PLAZA WEST-ROSSLYN, VA
27 APRIL 1984

0830-0900	Executive Session
0900-1015	
1015-1030	Break
1030-1130	ACDA, Backstopping Committee
1130-1200	(b)(3):50 USC 403-1(i)
1200-1300	Lunch
1300-1400	Arms Control Monitoring
1400-1500	Discussion: On-Site Inspection and Associated Measures to NTM
1500-1515	Break
1515-1615	Executive Session

(b)(3):10 USC 424, (b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),(b)(6)

UNCLASSIFIED

AGENDA
DIA ADVISORY COMMITTEE
ARMS CONTROL VERIFICATION PANEL
ROSSLYN, VIRGINIA
18 JUNE 1984

0800-0845	Executive Session
0845-1015	Funded SIGINT Initiatives
1015-1030	Break
1030-1200	Space Systems Initiatives
1200-1300	Lunch
1300-1400	
1400-1530	On-site Inspections
	Introduction
	START/INF
	CW
	Nuclear Testing
1530-1630	Executive Session

(b)(3):10 USC 424, (b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),(b)(6)

UNCLASSIFIED

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
ARMS CONTROL VERIFICATION PANEL
DIAC, BOLLING AFB, D.C.
13 SEPTEMBER 1984

0900-1000	Executive Session
1000-1030	ICS Managed Initiative
1030-1045	Break
1045-1115	
1115-1200	Discussion of Panel Status and Preliminary Formulation of Final Report
1200-1300	Lunch (DIAC Cafeteria)
1300-1400	ASAT Briefing
1400-	Continued Discussion of Panel Status and Preliminary Formulation of Final Report

(b)(3):10 USC 424, (b)(3):50 USC 403-1 (i),(b)(6)

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AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
ARMS CONTROL VERIFICATION PANEL MEETING
DIAC, BOLLING AFB, D.C.
27 NOVEMBER 1984

0830-0930	Executive Session: Summary
0930-1130	Executive Session: Inputs to the Final Report
1130-1230	Lunch -- DIAC Cafeteria
1230-	Executive Session: Prepare Final Report

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REPORT 81-1

OF THE ADVISORY COMMITTEE

Six pages are denied in full and are not included.

SIGNIFICANT TRENDS IN SOVIET MILITARY TECHNOLOGY (U)

FEBRUARY 1981

~~Classified by DOD DR 5200.1-R (M-1)~~
~~Review on 1 Feb 11~~

DEFENSE TECHNICAL INTELLIGENCE REPORT

FEBRUARY 1981

INTRODUCTION

(U) This study which I tasked to the Technology Panel of the DIA Advisory Committee merits close attention. It is published as a DIA document in the interest of assuring dissemination at the highest level, in a format proper to its importance, and with the full approval of:

(b)(6)

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Lieutenant General, USAF
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DIA ADVISORY COMMITTEE MEMBERSHIP

(b)(3):10 USC 424

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(b)(3):10 USC 424

Executive Secretariat

THIS MEMORANDUM WAS PREPARED BY THE TECHNOLOGY PANEL

(b)(3):10 USC 424

TECHNOLOGY PANEL REPORT (U)

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EXECUTIVE SUMMARY (U)

(U) The large and growing Soviet investments in weapons research, development and production, particularly over the past twenty years, has exceeded U.S. investments during the same period. Regardless of considerations of internal efficiency and resource allocations, this investment has resulted in a steady output of new and improved weapons systems over this period, and this seems likely to continue. The Soviet R&D program in military and military-related technology appears to cover all areas which have potential military application. The Panel found no important omissions.

~~(S/NOFORN)~~ The Soviet weapon systems developments of recent years have tended not only to improve greatly weapon systems categories already in the inventory, e.g., ICBM's, SLBM's, strategic and tactical SAM's, etc., but also reflect a pronounced drive to develop, produce and deploy systems, either in categories entirely new to the Soviet inventory, e.g., the KIEV class helicopter/VSTOL carrier, or so vastly changed in characteristics as to represent essentially new military capabilities, e.g., BAL-COM I heavy strike cruiser. New systems have either brought into being or greatly enhanced the Soviet military potential for:

- o Aerial fire support for ground forces.
- o Mobile in-depth air defenses for ground forces.
- o Long-range airlift and sealift.
- o Amphibious assault forces.
- o Ship-based aviation.
- o Naval forces for long-range deployments and operations.

The filling out of the Soviet weapons arsenal to achieve the potential for

the broadest range of global military operations appears to be proceeding as a major objective of Soviet policy.

(U) It is important to distinguish between weapon system effectiveness and the technological level of the embedded devices, components and subsystems. In most of the latter technology areas, the U.S. and its allies have had a substantial lead over the Soviets since World War II. Yet it is possible to produce effective weapon systems with various generations of device, component and subsystem technologies. This is evident from the fact that, for example, pulse-Doppler radars have been produced in the U.S. since 1960 using electronic technologies ranging from discrete component circuit boards to integrated circuits and signal processing techniques from analog to digital. Much depends on the national industrial infrastructure which must be utilized and the economic imperatives imposed by that infrastructure. On the other hand, there are certain device, component and subsystem technologies which may be called "pivotal" in weapons systems in that they make possible system capabilities which have proven to be extremely difficult if not impossible to achieve otherwise. Thus, the Doppler filtering and signal processing required for pulse-Doppler radar demand certain levels of component performance. If components with these performance levels were not available, it has heretofore been nearly impossible to build an airborne fire-control radar with relatively long-range, look-down capabilities.

(b)(3):50 USC 403-1(i)

~~(TS~~ The recent outputs of Soviet R&D incorporated into weapons systems currently in development and deployment reflect attainment of the design, development and production technology necessary for operational application of a number of important components and subsystems which may be regarded

as pivotal in nature. It is interesting to note that these have generally not been peculiar to one weapon system or even to one class of weapon systems. These include: (1) Pulse-Doppler radar -- in the Modified FOXBAT, the SA-X-10 and SA-11 fire-control radars and in some acquisition radars associated with these SAM systems and their naval versions; (2) Phased-array/electronically scanned antennas -- in the Modified FOXBAT and SA-X-10 fire-control and acquisition radars, and in the ABM-X-3 FLAT TWIN radar and the new large ballistic missile early warning/attack assessment/battle management radars on the periphery of the Soviet Union; (3) [redacted] and (4) Application of digital computers and integrated circuit technology -- over a range of weapon systems from naval mines to avionics.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

(b)(1),(b)(3):50 USC 403-1(i),1.4(c)

(b)(1),1.4 (c)

~~(S/NOFORN)~~ Aside from advances in device, component and subsystem technology which are significant and possibly pivotal in and of themselves, equally if not more important are those cases in which new weapon system syntheses are made possible by synergistic application of a number of component and subsystem technologies. The modern version of the cruise missile represents a synthesis of this type, and it must be expected that in the not-too-distant future, the Soviets will be capable of fielding counterparts of current U.S. cruise missiles. A significant level of defense against the current generation of U.S. cruise missiles may also be forthcoming in the next decade as a result of the synergistic application of ongoing R&D leading to incremental improvements in a number of component and subsystem technologies. Another area which may benefit greatly from the synergy of advances in electronic

technology and computers is ECM, on which the Soviets put great emphasis and have considerable current operational capability.

(U) It is important to recall that the Free World lead in device, component and subsystem technology (derived in great measure from strong but fragmented interactions between military and civilian applications) does not necessarily result in a lead in military systems and forces. The decisions to build and deploy an anti-satellite system, a supersonic heavy bomber, a new tank, or a mobile intermediate range ballistic missile are essentially budgetary, political and military in nature, and these decisions often depend on the level of available technology only in a secondary way. Thus, the problem of forecasting Soviet weapon developments is at least as much one of predicting decisionmaking surprises as of anticipating technological surprises. The Soviet decisionmaking apparatus in recent years has been unhesitating, eclectic and almost all-encompassing in opting for development and production of new weapons by comparison with the U.S. and its allies which have been more cautious and selective. We see no reason to expect a change in this situation. Accordingly, it is to be expected that new weapons, e.g., laser beam weapons, may in the future often appear first in the Soviet inventory albeit in a form we may regard as "primitive" and in a role as just one of several weapon systems supporting the same functions, e.g., air defense.

(b)(3):50 USC 403-1(i)

(TS [redacted] Other recent trends in Soviet weapons systems are noteworthy. New Soviet systems, vehicles and platforms are becoming much larger and heavier than their predecessors as exemplified by their Navy cruisers grossing more than 10,000 tons displacement (and more than twice this for BAL-COM I); their FENCER (SU-24) and FLOGGER (MIG-23) tactical aircraft which are more

than twice as heavy as the aircraft such as the FISHBED (MIG 21), which were previously the mainstay of the tactical fighter force; and even their tanks, with the T-72 at 40-45 tons relative to the 37 tons of their T-62 predecessors. Additionally, technological sophistication and complexity are markedly on the

(b)(1),1.4 (c)

These trends clearly indicate substantial increases in the unit costs of Soviet weapons, and there is some data on Soviet perceptions of these trends. As yet there appears to have been no noticeable effect of this unit cost growth on quantities procured, and none is predicted by the Intelligence Community, but clearly the growing burden on the Soviet economy must be significant.

~~(S/NOFORN)~~ Another significant feature of Soviet R&D has been a bold willingness to take large risks in at least certain programs. Thus, in their supersonic transport program, presumably for reasons of national prestige, the Russians pushed ahead for earliest operational utilization in spite of known technical difficulties, and in the ALFA submarine, presumably for military reasons, they apparently combined engineering risks in hull design, materials and propulsion machinery to attain a new level of submarine performance. Risks arising from technical complexity and the introduction of multiple new component technologies were also involved in the SA-X-10 (which seems to have encountered some unexplained development or deployment problems) and the SA-11. This risk-taking propensity for objectives deemed of suffi-

cient military, political, prestige or other national value will undoubtedly continue, at least for the near future, and a laser beam weapon of some sort may be thought to be attractive enough by one or more of these value measures to warrant a relatively high-risk or high-cost deployment program.

(U) The current size, scope and diversity of the current Soviet R&D program and the rapid rate of change in Soviet capabilities in many areas of science and technology make the intelligence collection, exploitation and analysis problems for the U.S. extremely difficult. These problems will grow even more severe in the future when, as a result of the relative sizes of the efforts, we must expect the Soviets to be working intensively in many areas not seriously pursued in the West. The Panel believes these problems require continuing management attention to assure properly responsive allocation and distribution of resources, but has no general solutions to offer.

(U) The intelligence assessment and forecasting process for Soviet technology and weapon systems would greatly benefit if the usual weapon by weapon detailed assessments and general materials, device, component and subsystem technology assessments were augmented by three types of integrated analyses. These are:

- Trends in device, component and subsystem applications across the entire range of Soviet weapons systems, including, where appropriate, civil applications.
- The role of particular weapons (current and future) as part of the integrated Soviet force structure in relation to its capability to meet declared and perceived objectives.
- Technology transfer to the Soviet Union from the West in areas which

could potentially contribute to military systems or to the supporting industrial base.

~~(c)~~ Although the Panel endeavored to examine a broad range of Soviet technology and reviewed virtually the entire spectrum of weapon systems, in order to keep the effort within manageable size and in consideration of the limited time available, the scope of the effort was necessarily restricted. The roles of technology in the economic and political warfare areas (e.g., "third world transfers") were omitted and even in the strictly scientific and technical context, the broad subject of C^3I and [redacted] areas were not included. [redacted]

(b)(1),1.4 (c)

I. INTRODUCTION (U)

A. (U) BACKGROUND

~~(C)~~ The Ad Hoc Panel on Technology to the DIA Advisory Committee reviewed the current technical and operational estimates and assessments of Soviet weapon systems deployed and in development along with available information on the supporting Soviet technology base.

~~(C)~~ The objective of the Technology Panel was to highlight and explore technology areas most likely to give the greatest leverage in military advantage to the Soviets if pursued to successful application (see Appendix A for terms of reference). To accomplish this, briefings and reports were obtained on Soviet weapon system capabilities and related R&D programs from DIA, MIA, FTD, NSIC and FSTC, particularly oriented to the Panel objectives but with the additional aim of giving a broad overview of Soviet technologically based military capabilities identifying areas of deficiency, adequacy and superiority. Also, since projections into the future are necessarily based on extrapolating existing trends, the Panel devoted considerable attention to examining recent trends in Soviet R&D and the factors influencing those trends.

~~(C)~~ The Panel is greatly indebted to the DIA and the technical and scientific agencies of the Military Services cited above for their unstinting assistance in providing briefings, reports and other information relevant to its task. Omitted because of limitations of time and the need to keep the membership of the Panel and the scope of the effort to manageable size were such areas [redacted]

(b)(1).1.4 (c) [redacted] Also

omitted was a substantive study of command, control, communications and intelligence, although some of the component device and subsystem technologies reviewed by the Panel had applications in these fields.

B. (U) PROBLEMS OF DEFINITION AND MEANING

(U) A fundamental difficulty in discussing the state of Soviet science, technology, industry and the economy is semantic. The term "technology" is one which gives particular difficulty because as commonly used it spans such a wide range of meaning. Thus, the Panel defined various shades of meaning by letters from A to D:

- Technology A -- The theoretical aspects are well understood and documented from both the scientific and engineering standpoints;
- Technology B -- Laboratory "brass-board," "bread-board" and experimental device level research, development and demonstrations have been sucessfully conducted;
- Technology C -- Engineering design and development of completely configured items have been carried out, and prototypes which are capable of performing virtually all operational functions have been constructed in small numbers and tested; and
- Technology D -- Design and engineering of production model items have been completed, all technical and operational aspects of production fabrication, assembly, finishing and quality control have been established and implemented in the industrial complex leading to volume or series production of items in sufficient quantity (at acceptable quality) to meet requirements or reasonable plans.

~~(S/NOFORN)~~ There is virtually no scientific or technical field of modern

military interest in which the Russians do not possess technology (A) in copious quantities, and for the most part there is also considerable evidence for the existence of an impressive level of technology (B). However, it is at the level of technology (C) and technology (D) that shortcomings in Soviet capabilities have been most evident in the past, and this has had the most direct and obvious effect on the rate and direction of evolution of deployed Soviet systems. A singularly good example of this fact is the lag of more than 20 years in deployment of a look-down, shoot-down interceptor fire control and missile system. The bulk of the U.S. bomber force (as well as many tactical theater aircraft) were committed to low level defense penetration tactics in the late 1950's. This was done with considerable public fanfare. Exercises and proficiency flying in this mode (then referred to as "Oil Burner" routes) were publicly acknowledged and could be readily observed. Clearly, interception of low-flying aircraft had become the major problem for Soviet interceptors. Yet although operational airborne pulse-Doppler radars appeared in the West early on (in 1961 in the BOMARC B interceptor missile and in 1966 in the F-4J manned interceptor), no Soviet interceptor systems responsive to this threat began to be observed until the late 1970's.

~~(S/NOFORN)~~ It is probably realized but rarely acknowledged in intelligence assessments that all adjectives applied to equipment or programs such as "simple," "cheap," "rugged," "conservative," "cautious," "innovative," etc., must refer to some frame of reference. There is no "natural" time scale for introduction of a new development such as a laser or a new material into particular applications. Such assessments have a tendency to become "net assessments" without being identified as such. Thus, when the FOXBAT is

described as a "simple," "rugged" system, it is important to say whether this is relative to earlier Soviet aircraft such as the MIG-15, 19 and 21 or to the SU-9 (FISHPOT), which had the previous major role as an air-defense interceptor, or to the U.S. F-106 which was the last deployed interceptor in the U.S. or to late model U.S. tactical aircraft of the 1970's. In other words, when relative quality "x" is ascribed to something Russian, it is necessary to ask: "x" compared with what?

C. (U) FORECASTING

(U) If technological trends in the Soviet Union are to be discerned and used as a basis for forecasting, it must be in terms of rates of change, not static pictures obtained by averaging over the past 15, 20 or 30 years. Unfortunately, analysts are loath to give up heavy reliance on a good part of their existing data bases, hard earned through blood, sweat and tears over many years. This historical data base is potentially of value in rate and trends analysis if it is properly used, but there is no doubt that to discern and extrapolate trends, greater weight must be given to more recent data, which are usually less plentiful and less firm and reliable. Too much weight given to the stable past and too little to changes and current trends which may be precursors of a wave of the future will as surely contribute to intelligence "failures" in the technology areas as they did in forecasting the military effectiveness of Egyptian troops in the 1973 Middle East War or in assessing the viability of the Shah's Iranian government in 1979.

(U) In its appraisals of Soviet technology and its future potentials, the Panel did attempt to give heavier weight to recent information and less weight to historic observation since World War II and previous. Future

trends were in some cases projected on the basis of data which many would regard as insufficient for high-confidence estimates. Such an approach seems unavoidable in any attempt to consider the range of possible future outcomes of an aggressive broad-ranging and well-financed R&D program such as we perceive in the Soviet Union at present. Moreover, Soviet technology (D) has recently reached significant new qualitative capability in some areas having significant application to a number of important weapon system categories, and we deemed it highly important to indicate these possibilities.

II. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS (U)

~~(S/NOFORN)~~ The Panel concluded that the heavy infusion of resources into the Soviet R&D and procurement programs in military and military-related areas since World War II and the high priority which these efforts have been accorded, especially with steadily growing investment over the past 10-20 years, have resulted in a steady output of improved Soviet weapon systems for virtually all military components. Although the relative priority and urgency for achievement of specific military capabilities obviously have had an important influence in determining the allocation of R&D resources, there appears to be no area of application of technology to military purposes which has been forgone by the Soviets for reasons of military doctrine or limited military-political objectives, as has sometimes been hypothesized by some Western analysts of Soviet political-military-technological interactions. In virtually all cases, this has meant program development beyond the theoretical scientific and engineering knowledge of technology (A).

(U) It is generally accepted that the Soviets view weapon systems and military forces as means to ends and not ends in themselves, but they also apparently realize that their national, political and strategic objectives and opportunities will evolve over time, and that weapon system developments and deployments may take so long as to preclude total reliance on prediction in detail of specific timing of requirements for the long-range future. Thus, forces and weapons systems seem to be regarded as military resources aimed at meeting the conceivable range of future contingencies and making the fullest use of technological opportunities.

~~(S/NOFORN)~~ Examples of areas in which important new Soviet military capabilities, some not previously emphasized, have been emerging over the past ten years are:

- o Aerial fire support for ground forces and tactical interdiction capabilities -- both aircraft (FITTER C, FLOGGER, FENCER), helicopter gunships (HIND), and new air-to-ground guided weapons (AS-7, AS-9, AS-10).
- o In-depth mobile air defense for ground forces -- mobile SAM's including SA-6, SA-7b, SA-8, SA-11 added to continued deployment of the already existing mobile anti-aircraft gun defenses and earlier SA-2, SA-4, and SA-9 missile defenses.
- o Long-range airlift and sealift -- transport aircraft (Introduction of CANDID and continued production of COCK until 1974) and roll-on, roll-off ships in the merchant fleet.
- o Amphibious assault forces -- IVAN ROGOFF and ROPUCHA class ships.
- o Ship-based aviation -- the KIEV class V/STOL carrier and a larger carrier reported to be under construction for conventional take-off and landing aircraft.
- o Naval forces for long-range deployments -- larger, heavier cruisers of displacement greater than 10,000 tons, such as BAL-COM and 445 and large under way replenishment ships of the BEREZINA class.

~~(S/NOFORN)~~ One of the main characteristics of the Soviet R&D program supporting military technology is, in fact, the comprehensiveness of coverage of practically all areas of potential military application. A second important characteristic is the stability and persistence of major elements of the

program. Objectives once adopted are neither cursorily pursued nor lightly abandoned. This characteristic is exemplified by the history of Soviet efforts in Wing-In-Ground-Effect machines which have been pursued at a substantial scale of effort for almost 20 years without any observed useful output to date. All of this does not argue for the efficiency of the Soviet program but, given the apparent willingness to cover all areas of potential payoff, a continuing output of successful weapon systems of steadily increasing performance must be expected. The results of the past twenty years of Soviet R&D on military systems have certainly confirmed that this is the case.

~~(S/NOFORN)~~ The typical development time for major Soviet weapons systems appears to be between seven to ten years from inception of engineering development to deployment, although a few systems which may have encountered major unanticipated technical difficulties, e.g., the ALFA submarine have taken longer. This is not substantially different from the U.S. norms for systems which are not set back by decisionmaking and funding delays, or by cancellations and restart. The stability and rigidities of the Soviet R&D management and resource allocation systems apparently preclude delays of the latter kind for most systems in development, although obviously some development time is often taken up with solution of unanticipated technical problems and in some instances, e.g., the SA-X-10, delays possibly attributable to technical problems seem to have arisen subsequent to initiation of production and deployment. The differences in the operational test and evaluation processes between the U.S. and the Soviet Union and lack of information of Soviet program details prevent a direct comparison of Soviet and U.S. experiences in encountering serious problems on weapon systems in various stages of development, production and deployment.

~~(S/NOFORN)~~ A characterization of the Soviet R&D process which often appears in intelligence assessments is that they use "proven technologies." In light of the history of the last twenty years, this is steadily becoming a less meaningful description of their approach in development of weapon systems nor does it appear useful in guiding forecasts of the new weapon systems which may be anticipated in the future. The main criterion for determining what is "proven technology" would appear to be that it is technology known to be used in Soviet weapon systems. As soon as they use a new technology (e.g., variable sweep wings, pulse-Doppler radar, phased-array antenna, three-axis inertial guidance, titanium submarine hulls), it must either be regarded as an exception to the "rule" (and therefore an unpredictable) or as an addition to the list of "proven technologies." It seems that this logic is mainly a circular and tautological way of dealing with the fact that over most of recent history in the areas of most dramatic progress, the device, component and subsystem technologies (D) utilized in Soviet weapon systems have usually lagged behind more advanced technologies available in the West. In fact, at the present time, for such subsystems as pulse-doppler radar, three-axis inertial guidance and digital computers, the technology is far more "proven" (through experience in evolutionary development over several generations of equipment) in the West than in the Soviet Union. Thus, relatively speaking, the Soviets have gained additional technological flexibility and are now making more use of relatively "unproven" technology than the U.S. in these areas.

~~(S/NOFORN)~~ The question of "missing technologies" in the Soviet Union, particularly those of military value, must also be addressed largely in terms

of their attainment of technical and industrial capabilities to develop and produce effective and reliable equipment within their overall priorities and resource allocations. Thus, for almost twenty years after the U.S. introduced the low-altitude mode of penetration for strategic bombers, there was no evidence in the Soviet air defense forces of either airborne or ground-based pulse-Doppler radars, which were the most effective counter to such penetration tactics. This was a "missing technology." It now appears highly likely that this was mainly a result of deficiencies in the Soviet device, component and subsystem technologies (D) required to develop and produce operational pulse-Doppler radars. Today, pulse-Doppler radars are no longer missing from Soviet weapon systems in development and deployment. Similarly, integrated microcircuit and digital computer technologies were missing from Soviet weapon systems for at least ten years after they appeared in the U.S., but are no longer missing. We can only conclude that such obviously useful advanced technologies are being introduced in the Soviet Union as soon as the technical and industrial bases are capable of providing them.

~~(S/NOFORN)~~ At the present time, there are few areas of military and military-related technology which appear to be missing from Soviet development programs although the progress, emphasis, or priority in some areas appears to be lower than we would expect, which may reflect the levels of attainment in some technologies or asymmetries in the military requirements as seen by the Soviets. Activity in fixed and towed sonar arrays for ASW seems to be lacking, although the technology may be available from seismic work. Possibly, the lower noise levels of U.S. submarines may make these relatively less attractive for the Soviets at their present levels of supporting technology,

and the Soviets are pursuing other sensor technologies more diligently. Liquid hydrogen-oxygen rocket engines do not seem to have been developed to the point of practical application although these became a mainstay of the U.S. Apollo program and are also one of the major elements of the Space Shuttle program. High-bypass turbofan engines for long-range aircraft have not reached operational use; this is probably attributable to a lag in development of cooled turbine blade technology which makes possible the high turbine inlet temperatures required. The Soviets are known to have been working intensively in this area, and this gap in their technology base will probably soon be filled. (There is ample evidence of Soviet technologies (B) and (C) in this area.) Electro-optical seekers for tactical weapons are just entering the Soviet inventory, and the full range of applications will probably take some time to implement. The emphasis on chemical lasers relative to other types seems less (based on the available intelligence information) than our appraisals of their relative merits for significant applications would warrant, but this may be mainly a matter of choice or simply a lack of sufficient visibility of their programs. On the whole, the picture of the Soviet R&D program which the Panel has perceived is one of broad coverage of almost all areas of demonstrated or potential military value with very few blank spots.

~~(S/NOFORN)~~ Soviet R&D authorities, although they must show due respect to certain doctrinaire generalization and rationalization to conform to the "party line", seem really to be highly pragmatic in their approach to weapon system development and acquisition, in spite of the well known economic deficiencies which many have argued are inherent in the Soviet industrial and social system. Weapon system designers and planners make full use of the

resources of their society and their economy on which they have priority claims and they make use of U.S. and other Western technology (at all levels, A to D) whenever they can buy, beg, borrow or steal it. Increasingly, with the growing diffusion of advanced U.S. technology particularly to a multitude of nations, allies and others, they are seeking to gain U.S. technology from these nations and with growing success, especially at the device, component and subsystem level. These technology acquisitions are becoming exceedingly difficult for the U.S. to monitor and control.

~~(S/NOFORN)~~ Soviet systems engineering and integration technology, to meet defined military performance objectives, has for many years been more advanced than the advanced device component technology (D) available to them for implementation of these systems (e.g., solid state devices and computers). Thus, they have developed and deployed some reasonably effective weapon systems employing the older technology (D) available to them which in many cases has been highly refined to meet modern requirements, e.g., miniature vacuum tubes as exemplified in the SA-6 missile or analog computers as utilized in the ZSU-23-4 and the FOXBAT. Nevertheless, there is no doubt (as history now reveals) that they have not been satisfied with these older device and component technologies and have aggressively and actively sought to acquire more advanced and modern replacements recognizing that these offer the potential for even better weapon systems. Thus, the increasing success they have been having in acquiring advanced technologies (C and D) has resulted in increased flexibility and must be expected to lead to steady and rapid improvements in weapon system performance and effectiveness.

~~(S/NOFORN)~~ In some instances, such as ballistic missile guidance, they

have already made the pivotal advances which, although not at the forefront of worldwide progress in the component and device areas, have enabled them to make large step increases in the military effectiveness of their latest generation of weapons as compared to their immediate predecessor. This is because of the well-known general phenomenon of the "S-shaped" or "logistic" curve of progress. The analogous phenomenon in economics is described by the "law of diminishing returns." In any new science or technology, initial progress is usually great and then steady, at first exponential and then linear in relation to the magnitude of the effort applied. In the later stages as the science or technology matures, progress per unit of effort decreases and eventually in spite of very large expenditures, useful progress virtually ceases. Science and technology must then advance by pursuing completely new lines of attack involving major changes in principles, materials or design concepts (an excellent example is the replacement of the reciprocating engine by the jet).

~~(S/NOFORN)~~ A technological community which is "catching up" with a level of advance already attained and demonstrated in other technological communities can usually reach that level more efficiently simply by knowing that the particular approaches exist and are successful elsewhere even if they must learn for themselves how to practice and implement that technology. The more wide-spread the technology among a variety of other national technical communities, the more likely it is that direct and indirect transfer of the technology (C and D) may be accomplished through means ranging from covert or overt aquisition of design, manufacturing and quality control "know how" to

purchase of instruments, production machinery and even turnkey plants. At the present time there seems to be no doubt that significant amounts of such technology transfer to the Soviet Union have occurred and are continuing to occur in the integrated circuit and computer hardware and software areas.

~~(S/NOFORN)~~ This emphasis on technology transfer to the Soviets should not be taken to mean that they do not pioneer in some areas of technology (C and D). Examples are the use of titanium in submarines (the ALFA), the use of an integral rocket-ramjet in the SA-6 missile, and the development of operational space vehicle manned crew rotation and unmanned resupply systems in the Soyuz/Salyut/Progress program.

~~(S/NOFORN)~~ The Panel did not find any distinctive features of Soviet military R&D and acquisition style, philosophy or procedures which provided a useful contribution to forecasting trends and future developments in weapons systems. Although such features exist, they vary considerably among the five Soviet military services and even among mission areas and system categories within each service, and they apparently also change with time. For example, ICBM acquisitions are characterized by a higher degree of concurrency than aircraft acquisitions, and the degree of risk-taking in introducing new technology has been quite different between tanks and the ALFA submarine (with simultaneous introduction of a new hull shape, titanium as an entirely new structural material and probably a new type of power plant as well) or the TU-144 supersonic transport. Both the latter systems encountered numerous technical difficulties in development and operation but apparently were deemed to have high enough national importance, for different reasons, to warrant

risk-taking. It appears likely that work in certain new advanced areas such as laser weapons may also be considered to warrant a similar degree of risk-taking.

~~(S/NOFORN)~~ An important characteristic of the Soviet R&D system is its well recognized long range commitment of resources and its unwavering continuity of effort and resolve applied to technical objectives across practically the entire range of science and technology. As in any large community, intensity of effort is not uniform, quality is not uniform, and output is certainly not uniform, but few if any areas are left uncovered. If it is recognized that all R&D is to some extent a gamble, particularly in the early stages, the relentless, continuous pursuit of a large number of objectives even those which do not seem to offer promising near term payoffs is not an unreasonable strategy as long as resource limitations do not intervene. The long term Soviet program in Wing-In-Ground-Effect vehicles is one example of an advanced development program which has been steadily maintained at a vigorous level for almost two decades without an observable useful output to date.

(U) The Soviet political system for control of the national economy appears to be as important a factor in weapon system acquisition as in other sectors of their industry, although somewhat differently applied. The five-year planning process with its rigid allocation of resources, coupled with bureaucratic rigidity in its administration, tends to produce the stability referred to above but also to restrict the ability to respond to unanticipated problems and opportunities. The latter factor and the prevailing incentives and motivations in the civilian sectors of the economy severely limit the

degree to which Soviet military R&D can benefit from the kinds of interaction with the civilian economy which have characterized U.S. progress in micro-circuits and computers. Nevertheless, there is evidence that in these newer areas, there is, if not an interactive relationship, at least a synchronism between civilian and military progress. The appearance of integrated micro-circuits in military equipment is being paralleled by its appearance in consumer electronics, e.g., pocket calculators, and the appearance of digital computers in a variety of Soviet military equipments in the past ten years is being paralleled by growing quality and quantity of output of general purpose digital computers from both Soviet and other Warsaw Pact sources. It is possible that the advances in military and civilian component technologies in these instances flow from the same underlying technology transfer from the U.S. and other nations in which they are highly developed. The relationships and interactions which may exist here will probably be increasingly important in the future and should receive the serious attention of the Intelligence Community.

(U) It is important to separate the overall performance and effectiveness of weapons systems from the devices, component and subsystem technologies incorporated into these systems. It is possible to develop and produce effective specific weapons systems with various generations of device, component and subsystem technologies. For example, the U.S. developed and produced airborne pulse-Doppler radar systems (AN/ASG-18, AWG-9 and AWG-10) in the early 1960's using electronic circuit and computer technologies several generations older than those currently in vogue. The older technologies may

lead to weapon systems which are heavier, less compact, or more expensive (in a given country's industrial base) and which have lower speed of response and target handling capacity. However, if the necessary financial and military manpower resources are allocated in acquisition and deployment, it will often still be possible to field an effective military force with these weapon systems. The size, weight, numbers and manpower requirements of weapon system platforms and supporting vehicles may be significantly larger than for a similar system based on more advanced technology, but if this is recognized and taken properly into account, there is no necessary decrement in military capability.

(U) Sometimes the major need for new device and component technology may be to meet the requirements of the industrial infrastructure and its attendant wage-price disciplines, e.g., there is at present no miniature vacuum tube industry of any consequence in the U.S. and hand-assembled circuit boards with soldered connections of the kind prevalent in the early 1950's would in general be prohibitively expensive to produce here today. It is usually not necessary to be on the very frontier of device and component technology in order to excel in producing user equipments which are competitive in both performance and price, as exemplified by the commanding lead attained by Japan in consumer electronics over the past twenty years, a period during which they lagged several years behind the U.S. in solid state circuit technology (D).

(U) There are certain device, component and subsystem technologies which may be called "pivotal" in weapon systems in that they make possible system capabilities which have proven to be extremely difficult, if not impossible, to

achieve otherwise. Thus, the Doppler filtering and signal processing required for pulse-Doppler radar demand certain levels of component performance. If not available, it has heretofore been nearly impossible to build an airborne radar with relatively long-range, look-down capabilities.

(U) When a nation is engaged in "catching up" with another which has previously developed some pivotal technologies (D), the most important step is usually the achievement of the first significant level of capability; further improvements are usually easier to come by and often given successively smaller increments of performance relative to the required effort to achieve them.

~~(S/NOFORN)~~ Whatever the level of device, component, and subsystem technology embodied, most Soviet weapon systems deployed in recent years have demonstrated a high level of competence in overall system design and integration and exceptional attention to accounting for operational factors in the design of the system, e.g., set-up and tear-down times for mobile SAM's as far as permitted by the technology employed. Yet there are anomalies which are not readily explained, such as the seeming imbalance between the five missile launchers in versions of the SA-6 system and the single fire-control radar implementation which limits guidance to one missile at a time plus the fact that the missile seeker apparently requires lock-on before launch and cannot track a retreating target. Thus, while Soviet weapon systems are generally effective for their design missions, there is ample opportunity and need for improvements as well, and new technology can be profitably employed in many cases.

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

~~(S/NOFORN)~~ In addition, diversified patterns of application seem to be developing for weapon system digital computers in general and also for integrated circuit technology over a range of systems from naval mines to avionics. However, it is difficult to identify specific capability improvements which can be regarded as pivotal across this broad range of applications.

(b)(1),1.4 (c)

~~(S/NOFORN)~~ Aside from the areas in which significant accomplishments in pivotal technologies may be expected, there is every reason to anticipate continuing incremental improvements across the entire spectrum of Soviet military technology. They are making substantial and continuing investments of resources in their advanced R&D programs covering the entire technology spectrum, and outputs to date reflect a fair to good rate of return on these investments. In spite of what has been said previously about the tailing off of incremental improvements in systems effectiveness as mature levels of technology (D) are reached in embedded devices, components and subsystems, there are novel weapon system capabilities which are made possible by synergistic application of advances in a number of component and subsystem technologies. The modern version of the cruise missile represents a synthesis of this type, and it must be expected that in the not-too-distant future, the Soviets will be capable of fielding the counterparts of current U.S. cruise missiles. A significant level of defense against the current generation of U.S. cruise missiles may also be forthcoming in the next decade as a result of the synergistic application of ongoing R&D leading to incremental improvements

in a number of component and subsystem technologies. Another area where important advances of this kind may result from the Soviet R&D program is in countermeasures in both the radio-frequency (rf) and optical parts of the spectrum. The Soviets are already strong in the rf countermeasures area based on older electronic technologies, and the potential for significant improvement with advanced electronic technologies is great.

~~(S/NOFORN)~~ Although the steadily increasing size of the Soviet technology base program relative to the West will lead more and more to areas in which they may lead Free World device, component and subsystem technologies (e.g., the gyrotron high power millimeter wave generator), the overall lead of the U.S. and its allies in most of these technology base areas is not likely to be easily overcome since its strength derives from both military and commercial incentives and activities. Therefore, the continuing Soviet "mirror imaging with time delay" of U.S. and allied development, which has characterized the Soviet device, component and subsystem technologies, especially in the electronics and computer fields, is to be expected in many fields at least for the next decade. The time delays may be decreasing in many areas in view of the highly organized systematic efforts by the Soviets (including Institutes created especially for this purpose) to acquire and utilize Free World advanced technology (D). The "not invented here" attitude, while it may exist for individual Soviet technologists, is contrary to the party line.

(U) On the other hand, Soviet innovation and initiatives at the Weapon System level (regardless of the vintage of embedded device, component and

subsystem technology) should be expected to continue with many developments which have no counterparts in existing U.S. systems. With growing size and diversity of the Soviet military R&D effort, exceeding considerably that of the U.S., we must expect to see more Soviet "firsts" even in the device component and subsystems.

(U) It is important to realize that the Free World lead in device, component and subsystem technology (D) does not necessarily result in a lead in military weapons systems and forces. The decisions to build and deploy an anti-satellite system, a supersonic heavy bomber, a new tank or a mobile intermediate range ballistic missile are essentially budgetary, political, and military decisions, and these decisions often depend on the level of available technology only in a secondary way. The Soviet decisionmaking apparatus in recent years has been unhesitating, eclectic and almost all-encompassing in opting for development and production of new weapons by comparison with the U.S. and its allies who have been more cautious and selective. We have no reason to expect a change in this Soviet approach although the Western nations may accelerate their weapon decisionmaking and acquisition processes somewhat, changing the relative situation. Accordingly, it is to be expected that new, e.g., laser beam, weapons may often appear first in the Soviet inventory, albeit in a form we may regard as "primitive."

(U) Soviet adoption of "primitive" forms of new weapons are often interpreted as reflecting the practical workings of some doctrinal, ideological or philosophical devotion to simplicity in the Soviet Union weapon system acquisition processes. While the virtues of simplicity are no doubt extolled (and

often actually pursued), history reveals that simplicity in early versions of Soviet weapon systems is often abandoned for performance advantages as more advanced technology becomes available even though this requires substantial increases in the unit cost. Thus, variable-sweep wings on aircraft make them more complicated than aircraft with fixed wings. Yet most new Soviet military aircraft since the mid-1960's (FITTER C, FLOGGER, FENCER, BACKFIRE) have had variable-sweep wings. Turbofan engines are much more complicated than turbojets, yet they can confidently be predicted to be the wave of the future in the Soviet Union as in the West for their performance advantages. It is important that the Intelligence Community not interpret lags in technology (D) in components, devices and subsystems as evidence of a general Soviet policy or practice of not building complicated (relative to the U.S. is usually meant) weapon systems.

(U) The intelligence assessment and forecasting process for Soviet technology and weapon systems would greatly benefit if the usual weapon by weapon detailed assessments and general materials device, component and subsystem technology assessments were augmented by three types of integrated analyses. These are:

- Studies of trends in device, component and subsystem applications across the entire range of Soviet weapons systems, including, where appropriate, civil applications. Such studies would help discern the state and direction of the Soviet industrial base as well as the full extent of the motivation which might exist for particular directions of technological advances in terms of overall contributions to Soviet weapon system effectiveness.

- Studies of the role of particular weapons and possible future weapons as part of the integrated Soviet force structure in relation to its capability to meet declared objectives, considering established doctrine and tactics, and such evidence on operational performance as may be available from exercises, defectors, etc.
- Studies of technology transfer to the Soviet Union from the West both in areas of direct military application and in civilian areas which could potentially contribute to military systems or to the supporting industrial base.

~~(C)~~ Although the Panel endeavored to examine a broad range of Soviet technology and reviewed virtually the entire spectrum of weapon systems and technologies, it is important to note that, in order to keep the effort within manageable size and in consideration of the limited time available, the scope of the effort was necessarily restricted. The roles of technology in the economic and political warfare areas, e.g., "third world transfers", were omitted, and

(b)(1),1.4 (c)

were not included. Perhaps the largest and most broadly significant areas not considered in depth were command, control, communications and intelligence (C^3I), although some of the device and component technologies reviewed by the Panel had obvious C^3I applications, e.g., signal processing, millimeter wave technology and computer technology.

(b)(1),1.4 (c)

TERMS OF REFERENCE
FOR THE
DIA ADVISORY COMMITTEE (DIAAC) PANEL
ON
TECHNOLOGY

1. OBJECTIVE: ~~(C)~~ The Panel will undertake to highlight and explore the five to ten technology areas most likely to give the greatest leverage in military advantage to the Soviets if pursued to successful applications. An assessment will be made of the current state of progress and the key intelligence issues (including collection problems) associated with these areas. Attention will also be given to state of development of the other necessary technolgies in the systems areas to which these high leverage technologies may be applied. Emphasis will be placed on pivotal technologies and system applications, e.g., to those which could give important new capabilities not now possessed by the Soviets as opposed to progressive improvements in existing capabilities.

2. APPROACH: ~~(C)~~ An ad hoc Panel designated by the Chairman, DIAAC, and approved by the Director of the DIA, will conduct the study. The Panel will review the available information on the structure and composition of the Soviet R&D with particular reference to the technology base. Such sources as the STIC reports, papers presented at the Annapolis meeting, (b)(1),1.4(c) and the DSB Summer Study will be considered.

~~(C)~~ Concurrent with the Panel's review of Soviet R&D, the S&T intelligence agencies will be tasked to identify and report (to the Panel) on Soviet R&D activities in their areas of responsibility which meet one or more of the following criteria:

a. (U) Are aimed at fulfilling a major perceived military need.

b. ~~(C)~~ Give indications of being a major effort by comparison with other Soviet efforts at the same stage of R&D and/or in comparison with Western efforts in the same field.

c. ~~(C)~~ If successful, might give a marked advantage over the U.S., including as one form of advantage, technological surprise.

d. ~~(C)~~ Show at least some indications of being potentially successful (e.g., not bogged down in some research institute or design bureau for a decade or more).

~~(C)~~ In addition, S&T intelligence agencies will be requested to supplement this compilation with an assessment of fields of military advanced technology in which known Soviet efforts have been below standard (by the criteria of b. above) in light of the potential value of that technology (e.g., from past situations: look-down, shoot-down missiles and fire-control systems; pulse-Doppler radars, synthetic aperture radars; high bypass ratio aircraft fan

engines; integrated circuits, airborne digital computers; liquid hydrogen rocket engines; etc.). Special attention should be given to assessing whether these areas in which Soviet effort and/or progress is lacking is being aided and abetted through technology transfer, either directly from the U.S. or through third parties. Distinction should be made between laboratory level capabilities and industrial capabilities and theoretical knowledge and system applications (surveys of the unclassified literature will often throw considerable light on the state of theoretical knowledge and many areas of laboratory effort as well).

3. LEVEL-OF-EFFORT: (U) The Panel will consist of about eight members and require about six meeting sessions. An interim report and a final written report will be submitted to the Director, DIA. The DIA technical advisor for the effort is (b)(3):10 USC 424 (DT).

4. PANEL CHAIRMAN: (U) (b)(3):10 USC 424

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Five pages are denied in full and are not included.

TOP SECRET [redacted]

MEMORANDUM 80-3

of the

ADVISORY COMMITTEE

to the

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

REPORT OF THE

SS-16/20 PANEL

MAY 1980

[redacted]

COPY ___/___ OF ___/___ COPIES

[redacted]

TOP SECRET [redacted]

[redacted]

THIS MEMORANDUM WAS APPROVED BY THE
DIA ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

(b)(3):10 USC 424

LIAISON TO THE COMMITTEE

(b)(3):10 USC 424,(b)(6)

THIS MEMORANDUM WAS PREPARED BY THE
SS-16/20 PANEL

(b)(3):10 USC 424

(b)(3):10 USC 424

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SS-16/20 PANEL REPORT

BACKGROUND: (U) The Panel was formed at the request of the Director to review available information on the three stage SS-16 missile and the two stage SS-20 missile. As requested by the Director, the membership focused on five issue areas that were identified during previous full Committee meetings.

(b)(1),1.4 (c) ~~(S/NF)~~ The Panel met for a single day and received briefings from representatives of DIA, [redacted] NPIC and FTD. Our findings are largely based upon these briefings and discussions and we have grouped our findings according to the five issue areas.

(b)(1),(b)(3):50 USC 403 (g)

(b)(1),(b)(3):50 USC 403 (g)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g)

~~CLASSIFIED BY DOD INSTR S-5210.51 (M-1)~~
~~REVIEW ON MAY 2000~~

(b)(3):50 USC 403-1 (i)

(b)(3):50 USC 403-1 (i)

(b)(3):50 USC 403-1 (i)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

(S/NF) In summary, the Panel believes that the SS-20 was designed specifically for the IRBM role and we find that there is no evidence to support the hypothesis that the Soviets might, under certain circumstances, convert the missile to a SS-16. Consequently, we do not believe that the Soviets are planning to rapidly convert the SS-20 to the SS-16 system. [redacted] Although we are uncertain as to the exact number, 400-500 launchers would not surprise the Panel members. With respect to reloading the TEL, there is no data which specifically indicates how the Soviets would operationally use

extra missiles. Further, since we cannot develop a plausible scenario where more than 2 missiles per TEL could be used, we believe the Soviets would not provide for more than 2 missiles per TEL.

(TS)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(3):10 USC 424

Chairman, SS-16/20 Panel

(b)(3):50 USC 403-1(i)

[redacted]

UNITED STATES GOVERNMENT

memorandum

DATE: 18 Oct 96
REPLY TO ATTN OF: DI [redacted]
SUBJECT: Minutes of 10-11 October 1996 DIA Scientific Advisory Board Meeting

TO: Memorandum of Record

1. (U) The Scientific Advisory Board held a closed meeting on 10-11 October in the DIAC. The following are the meeting minutes:

2. [redacted] The Scientific Advisory Board completed its first quarterly full board meeting. As part of their continuing mission, several key briefings were presented for baseline information to be used for SAB panel studies in FY 97.

[redacted] began the first day with an update on HUMINT and how requirements are tasked through the system. Following that, [redacted] briefed the SAB on MASINT to help focus the SAB MASINT Panel efforts for the new fiscal year.

[redacted] provided briefings regarding "Future Threats," "Advanced Technology Concepts," and the [redacted]

The panel then spent some time with the Director, LTG Hughes discussing some "hot topics" which continued into the second day. The first day concluded with a discussion on S&T issues.

On the second day [redacted] briefed the DR on the SAB MASINT Panel findings which a formal report will be forwarded. Future study by the MASINT Panel will focus on counter-terrorism and the [redacted]

The Director presented the SAB an abbreviated JIVA briefing. Briefings were then presented on [redacted]

Board business included a discussion regarding a spring study for the full board and consultants on a discrete topic such as "The Quality of Finished Intelligence Products" or "The Role of Tactical Intelligence"; however, a specific topic will be selected at a later date.

With the new charter in effect, the Board will add more full Board members and some consultants, particularly looking for scientists. The Chairman also discussed the new policy of term limits of 5 years and rotations to consultant as a means to build a turnover within the SAB.

The next full SAB board meeting will be scheduled in the Jan-Feb timeframe.

3. (U) Survey of members regarding the support and service they are receiving was completed by SAB members. Comments were extremely favorable and members stated they are very impressed

with the changes and highly professional support they are now receiving from [redacted]

4. (U) If you have any questions, please call (b)(3):10 USC 424
(b)(3):10 USC 424

(b)(3):10 USC 424
Staff Director/Executive Secretariat
Scientific Advisory Board

[redacted]

UNITED STATES GOVERNMENT

memorandum

DATE: 20 Jan 97
REPLY TO ATTN OF: DI [redacted]
SUBJECT: Minutes of 16-17 January 1997 DIA Scientific Advisory Board Meeting

TO: Memorandum of Record

1. (U) The Scientific Advisory Board (SAB) held a closed meeting on 16-17 January in the DIAC. The following are the meeting minutes:

2. [redacted] The Scientific Advisory Board completed its winter quarterly full board meeting. As part of their continuing mission, some key briefings were presented for baseline information to be used for SAB panel studies in FY 97. The majority of the board's time was spent in panel breakouts and discussions. Panel topics which are being studied include: [redacted] Terms of reference (TOR) are still being developed for the "Information Management - Joint Intelligence Virtual Architecture (JIVA)" panel.

The panel then spent some time with the Director, LTG Hughes where each Panel Chair briefed their action plans for the conduct of their respective studies. The DR provided feedback and guidance discussing the need for the board to be briefed on "Futures Threat". During the working lunch, the board received a program management briefing on JIVA. This briefing was followed by a briefing on a draft DIRD entitled "Forecasting Technology Leadership Methodology". The board endorsed this initial approach to formalize a method and tool for an analyst to assess technology leadership. There will be a follow-up after an initial trial run of this tool. The first day concluded with an executive session and discussion on the JIVA briefings and where the panel should focus its study. Final discussion was on the Summer Study topic for the SAB. The board agreed to develop a TOR on a study on the [redacted]. A draft proposal is in work and a chair will be selected.

On the second day, LTGEN Williams briefed the history and status of the DO HUMINT Panel which the SAB has provided five consultants. The board then discussed a possible significant study, short-term, regarding [redacted] and the impacts of the Comprehensive Test Ban Treaty

OPTIONAL FORM NO. 10
(Rev. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

[redacted]

(CTBT). Panels then met to set their tentative meeting schedules and detail their action plans. At a working lunch, the Director presented the SAB the "DIA Future Threats" briefing. Comments from members were the briefing "was on target" and "essential" to the SAB panels.

Board business concluded with Panel Chairs turning in their draft Panel Action Plans. The next full SAB board meeting will be scheduled for 14-15 April 1997.

3. (U) Survey of members regarding the support and service they are receiving was again completed by SAB members. Comments were highly praiseworthy for the improvements in organization and staff management ["the best I have seen in my many years with the Science Board."] Members remain very impressed with the changes and highly professional support they are receiving from [redacted] DI, and DR. Some expressed concerns to be sure that [redacted] is allowed to provide its full support and attention for the five panels and upcoming spring study. (b)(3):10 USC 424

4. (U) If you have any questions, please call (b)(3):10 USC 424 DI (b)(3):10 USC 424 and (b)(3):10 USC 424

(b)(3):10 USC 424
Staff Director/Executive Secretariat
Scientific Advisory Board

Action items from the SAB 22 April 97 meeting:

1. [redacted] requested the Science Advisory Board members review and make recommendations on the SAB Fall Study strawman and be prepared to discuss them at the 23 April 97 meeting.

2. [redacted] requested that the Science Advisory Board consider methods for preventing foreign future "scientific surprise". This is of great concern to LTGEN Hughes.

3. [redacted] requested that the Science Advisory Board members read and provide critical guidance on the [redacted]

4. LTGEN Hughes requested:

a. S&TI Resource Panel

= Include PACOM & EUCOM visits under the Customer list cited in the vugraph presented

= Include: FAA< DOE< FBI< [redacted] MASINT under the S&TI Panel Phase IV vugraph presented

= Need to Define the jobs of S&TI analysts working the various S&TI disciplines in order to give meaning to the numbers on the vugraph presented.

b. Requested that all the Science Advisory Board members provide him with hardnosed comments on the [redacted]

5. (b)(3):10 USC 424 DI, requested that the S&TI Resources Panel meet with his "Production 2000" team to discuss the S&TI Resource issues.

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Date: 22 and 23 April 1997

Attn: DI-[redacted]

Subj: Minutes of the 22-23 April 1997 DIA Scientific Advisory Board Meeting

To: Memorandum of Record

1. (U) The Scientific Advisory Board (SAB) held a formal meeting on 22-23 April in the DIAC. The following text is the meeting minutes:

2. (U) Immediately prior to the 22 April 1997 formal meeting of the Scientific Advisory Board, the S&TI Panel, chaired by [redacted] met to review their vugraphs in preparation for their presentation to LTGEN Patrick Hughes, Director of DIA during the working lunch.

(b)(1),1.4 (c)

3. [redacted]

4. [redacted] Chairperson of the Scientific Advisory Board, presented his strawman for the DIA SAB Fall Study topic. "Integration/Fusion of Intelligence Information". Board members were concerned about the Terms of Reference: they felt it was duplicative of JIVA and other DoD studies; it is a very large subject; need to focus this study in time scale and must be mission specific. [redacted] suggested that all board members reflect on the proposal and make suggestions to tailor it into a doable task that provides a meaningful contribution.

5. [redacted] Further, [redacted] indicated that the LTGEN Hughes has asked him several times "how do we go about preventing foreign scientific surprise"? The Board members indicated that it was a difficult job which they could not do. But rather is the DR really referring to "engineering surprises" rather than scientific breakthroughs. Science breakthroughs take years to develop and incorporate into military systems. [redacted] LTGEN Hughes wants the Board members to careful consider and comment on the "Purple Book". At the 23 April meeting we will discuss the SAB members overall comments with the DR. This discussion is to be followed up by each of the board members submitting a letter to the DR with their comments within a couple weeks after this meeting.

6. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

(b)(3):10 USC 424

7. (U) [redacted] Chair of the [redacted] Panel also briefed during the working lunch on their efforts, direction, and preliminary findings. The panel thought that DODIPP was a good concept; needs time to work; but needs to be refined. The refinements included some degree of centralization/control and consideration of the national and strategic interests rather than service dominated interests. LTGEN Hughes indicated that the NGIC table on [redacted] resources against the [redacted] topics was wrong. The panel needs to define what it means by [redacted] resources and topics. A board member recommended that DIA establish a [redacted] exchange program with DOE and DOD laboratories. The DR indicated that it is not costless to enact such a program. [redacted] suggested that this [redacted] Panel compare notes with the DIs "Production 2000". Further, that DI is aware of no senior [redacted] ranking spokespersons and no career ladder, therefore this year they have instituted the DIELs program (supergrades structure--GG16s and GG17 for technical experts).

(b)(3):10 USC 424

8. (U) LTGEN Hughes, commented on the following areas during the lunch working session. He asked all Science Advisory Board members to provide him hardnosed comments on the "Purple Book". The DR indicated that in his recently written congressional testimony that DIA has decreased in size by [redacted] and most of that came out of the [redacted] staffing. He is aware that [redacted] is inadequately staffed. Further that there is no refreshments in [redacted] staffing; basically we are in danger of breaking. At the recent NATO meeting he attended, the member nations were looking for military missions for their expeditionary forces, because budgets are tight and there is no big threat. Therefore, the many little situations are big deals. [redacted]

(b)(3):10 USC 424

(b)(1),1.4 (c) [redacted]

(b)(1),1.4 (c) [redacted]

9. (U) The Science Advisory Board viewed the "live Crisis Update via DIN" and then broke up into panel meetings of the [redacted] and the MASINT panel.

(b)(1),(b)(3):10 USC 424,1.4 (c)

10. (U) [redacted]

(b)(1),(b)(3):10
USC 424,1.4 (c)

11. [redacted]

12. (U) During the working lunch, [redacted] chairperson of the Science Advisory Board Masint/Humint Interface Panel provided a status of the panel endeavors to LTGEN Hughes. The panel determined that the Terms of Reference document should be modified to focus this effort on: (b)(3):10 USC 424 This study will examine: (b)(3):10 USC 424 (b)(3):10 USC 424 During the panels efforts to survey the various communities, J34 has been uncooperative. LTGEN Hughes indicated that since he has help them, invoke his past participation as a lever in enlisting their support for SABs project. The panels preliminary findings indicate there are no (b)(3):10 USC 424 involvement. The panel will be developing a questionnaire and making visits to the military operational commands to determine their needs and how well their terrorism intelligence needs are being addressed. It is thought that the panel findings will be useful in setting up (b)(3):10 USC 424 (b)(3):10 USC 424

13. (U) [redacted] introduced the concept and focus of the proposed Science Advisory Board fall study topic: Integration/Fusion of Intelligence Information to LTGEN Hughes [redacted] stated that when the SAB had come to grips with the terms of reference that he would present it to the DR for his guidance.

14. (U) The Science Advisory Board, lead by (b)(3):10 USC 424 provided preliminary feedback to LTGEN Hughes on the "Purple Book". Basically, the "Purple Book" is not based on the classical linear logic normally associated with reading cover to cover, but rather a complex highly integrated hypertext document created to cause creative thinking . The DR indicated that the document is intended to be a "thought" provoking document aimed at the civilian DoD and military leadership taking part in the DoD

(b)(3) 10 USC 424

QDR process and the CINCs. The ideas are inter and intra cast in the "Environmental Threat Perspective". The SAB members felt this book could be made more user friendly if it was professionally edited; conclusions presented up front; and contained a table of contents. [redacted] encouraged all SAB members to write a letter to the DR with their technical suggestions and comments.

15. (U) The LTGEN Hughes, suggested that the Science Advisory Board members review the book: [redacted] for their awareness of the types of terrorist material being presented to the general public. [redacted] (The book is to be returned to the DR)

(b)(1),(b)(3):10 USC 424,1.4 (c)

16. [redacted] The Science Advisory Board was updated on the status of North Korean forces [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

17 [redacted] The Science Advisory Board also received a briefing on the current "N. Korean Missile Situation" [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

18. [redacted] briefed the Science Advisory Board on "Counter Terrorism a Threat Briefing". [redacted]

(b)(1),(b)(3):10 USC 424.1.4 (c)

[redacted]

(b)(3):10 USC 424

19. (U) If there are any questions on the minutes, please call [redacted]

(b)(3):10 USC 424

[redacted]

(b)(3):10 USC 424

Physical Scientist

[redacted]

(b)(3):10 USC 424

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~~SECRET~~

MEMORANDUM 83-1

of the

ADVISORY COMMITTEE

to the

DIRECTOR

DEFENSE INTELLIGENCE AGENCY

26 PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED.

FINAL REPORT OF THE SOVIET NAVAL TRENDS PANEL

MAY 1983

~~NOT RELEASABLE TO FOREIGN NATIONALS~~

CLASSIFIED BY DIA (DT [redacted]
DECLASSIFY ON ~~OADR~~

~~SECRET~~

THIS MEMORANDUM WAS APPROVED BY THE DIA ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

LIAISON TO THE COMMITTEE

(b)(3):10 USC 424

EX OFFICIO

(b)(3):10 USC 424

EXECUTIVE SECRETARY

(b)(3):10 USC 424

THIS MEMORANDUM WAS PREPARED BY THE SOVIET NAVAL TRENDS PANEL

(b)(3):10 USC 424

(This Page is Unclassified)

SOVIET NAVAL TRENDS PANEL

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EXECUTIVE SUMMARY (U)

~~(C)~~ The Director, DIA commissioned an ad hoc panel of the DIA Advisory Committee to take a fresh look at Soviet naval trends and the factors that shape them. The panel considered evidence provided by an evaluation of [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel concluded that present intelligence projections of Soviet naval trends tend to be extrapolations of [redacted] This approach tends to provide only short range and evolutionary predictions. Additional means for forecasting naval trends should include: [redacted] In addition to these three approaches, the panel recommends that an assessment of the U.S. naval threat from a Soviet point of view and a determination of how the Soviets might react to the perceived threat be considered. In general, the panel found that the U.S. Intelligence Community does not put on the Soviet planner's hat and does not do Soviet mission and force structure planning analyses. As a result, we sometimes miss anticipating threat trends.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel noted that in the past, drastic changes in Soviet naval trends were initiated by top-down policy decisions caused by political factors and changes in Soviet leadership. [redacted] changes were noted only years later when major new weapons were developed. With the new Soviet leadership, a similar discontinuity may occur, therefore the panel recommends that possible changes be postulated [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel believes that alternative trend projections (rather than just the single projection made now) should be developed. By assuming alternative Soviet policies, concerns and intentions, it is possible to project likely

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Soviet naval trends, developments and even tactics. When the intelligence indicators of these different trends are identified and recognized, it may be possible not only to forecast the trend, but also to determine likely Soviet intent. The panel recommends the projection of several alternative trends together with their intelligence indicators.

~~(S)~~ A consideration of these factors led the panel to identify the following key drivers based upon a Soviet perception of their own need to develop: [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ Soviet developments may take alternative directions. Some are described in this report. However, based on the panel's perception of Soviet needs, there are some areas that appear more likely than other. One of these development needs is an increase in the [redacted] This could be accomplished in the near term even before Soviet carriers could begin to play a significant role. Such a thrust could include: [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ Another likely major thrust would be to attain a sea-based force projection capability. This could consist of developing and operating Conventional Take-Off and Landing (CTOL) carriers in battle groups and amphibious forces to intervene in client state conflicts.

~~(C)~~ Creation of an ASW capability to contain the U.S. SSBN threat is believed to be another major thrust of the Soviet Navy. This could include [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ Still another major thrust of the Soviet Navy is likely to be the creation of a [redacted] This system would utilize [redacted] and would coordinate the orbits of several satellites to provide multi-sensor, short revisit time, surveillance and targeting data.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The technical trend setters to watch for include: [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel's method of looking at Soviet trends from multiple points of view has highlighted several important uncertainties to resolve. These include the question of whether or not the Soviets [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The main conclusion of the panel is that threat forecasting for the period of five to ten years should be done from the point of view of Soviet planners. These planners are following alternative top-down policies, constrained by development lead times and resource limitations, and are trying to adjust their force mix and force capabilities by correcting deficiences and by reacting to U.S. initiatives and the lessons learned from world events. The panel recommends that this methodology be adopted for forecasts covering the medium and longer range assessments. Alternative forecasts which contain intelligence indicators should be identified. Periodic threat forecast updates should focus on resolution of the alternative hypotheses.

SECTION 1
INTRODUCTION (U)

~~(C)~~ The Director, DIA commissioned an ad hoc panel of the DIA Advisory Committee to take a fresh look at Soviet naval developments. The terms of reference for the panel is included as Appendix A.

~~(C)~~ The pace and vigor of Soviet naval programs in recent years, the seemingly unexplainable emphasis on certain warfare areas, and the generally [redacted] Soviet naval growth have highlighted the need for a reassessment of recent trends and the factors that shape them and our methods of analyses.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(U) To identify the emergent trends, the panel considered the evidence provided by: [redacted]

(b)(3) 10 USC 424,(b)(5)

(U) These varying sources produced several views of Soviet intent, doctrine, strategies and probable hardware developments and highlighted inconsistencies which the panel attempted to resolve. The resultant analysis is presented in this report.

(U) In the following sections, the panel begins by discussing its methodology. Then, the panel examines the political and economic bounds on the Soviet naval developmental process and assesses the impact of technology. Next, the panel discusses the key issues and uncertainties. These are the issues to which the answers, if available, would hold the key to a better

understanding and forecasting of Soviet developments. The panel then discusses the evolution of and some possible future directions in selected areas of naval warfare, hardware and policy that seem to be most relevant to resolving the key issues and uncertainties. Finally, the panel offers its findings of the most likely directions that future Soviet naval developments could take and the indicators that could serve to verify the stated hypotheses.

(U) The findings and recommendations are grouped by their areas of interest to the Intelligence Community because of the additional insight they may provide in the assessment of Soviet naval trends. They provide a different perception of the future threat against which possible changes in the U.S. acquisition process may be appropriate.

(U) The panel appreciates the assistance from the many briefers and specialists provided in support of this study by the Intelligence Community. It is especially grateful to the Director of Naval Warfare of the Office of the Chief of Naval Operations for its continuing interest and cooperation.

SECTION 2

MULTIPLE APPROACHES TO PROJECTING SOVIET NAVAL TRENDS (U)

(U) The panel considered five approaches to projecting Soviet naval trends in order to forecast future developments. In several cases these paths led to the same conclusion, thereby, reinforcing our confidence in the results.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

(U) Program, Personnel and Facility Considerations -- Soviet weapon systems development is driven by political and economic as well as military considerations. [redacted] Thus, the inertia of their design process must be considered in projecting the future threat.

(b)(1),(b)(3):10 USC 424,(b)(5),1 4 (c)

~~(C)~~ Operations and Exercises -- The Soviets exercise extensively. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1 4 (c)

~~(C)~~ Declaratory Policy -- Soviet policy pronouncements and writings [redacted] public often provide a measure of Soviet intent. Frequently, these are [redacted] Public statements can also provide clues on how the Soviets might react under certain circumstances. However, declaratory policy is usually so general or ambiguous that it will accommodate a wide range of interpretation. In addition, such policy is often stated with an eye toward foreign consumption and may contain elements of misinformation.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel reviewed the prevailing assessments of the future Soviet naval threat. The projections were based mostly on [redacted] lent themselves mostly to short range projections. Except for analysis of Soviet exercises, [redacted] had only a relatively modest routine impact on the resulting forecast. Of special note was an apparent lack of analysis of possible Soviet reactions to U.S. developments and policy.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(U) Soviet Perceptions of the Blue Threat -- The panel, believing that at least some Soviet actions are taken in reaction to U.S. developments and policy, also assessed the threat from a Soviet perspective. Although the Soviets may not always react to U.S. developments, when U.S. initiatives impact on high priority Soviet objectives, missions, and doctrine, they respond strongly.

(U) There may be some uncertainty as to Soviet interpretation of U.S. objectives or actions, and these may lead them to draw substantially different conclusions from those the U.S. would form under similar circumstances. The panel, playing the role of Soviet Naval Intelligence and Naval Material Command, assumed a worst case Soviet reaction to U.S. initiatives.

~~(C)~~ Another way in which the panel departed from traditional intelligence assessment methods was through its attempt to develop a set of alternative trends and intelligence indicators, instead of a single trend

projection. Since the time period addressed by the panel extends from about five years from now to the end of this century, it undoubtedly will cross boundaries of changes in Soviet political leadership, rapid changes in political realities and technical developments. While it may not be possible to develop a single view of the Soviet threat, projection alternatives that form consistent "sets" under well-defined assumptions can be developed.

~~(C)~~ To illustrate why a "single-thread" definition of the future threat is difficult and may not provide adequate information on which to base U.S. policy, consider the "much easier" problem of forecasting U.S. trends. Who could have forecast in 1970 that the U.S. would undertake a cruise missile program in 1972; in 1977 that we would have a stealth program in 1981; in 1977 that we would not have a VSTOL program, that we would not build small helicopter or VSTOL carriers; in 1980 that we would resurrect old battle ships in 1982?

~~(C)~~ The cruise missile program is a consequence of SALT, the stealth program a consequence of new technical approaches to an old problem, the helicopter carriers a consequence of budgetary pressures, developing a "Hi-Low Mix" concept and not building them a consequence of complex political factors. Yet under different assumptions each of these developments was a distinct possibility.

~~(C)~~ What might be U.S. reactions if SALT favors the Soviets? What might be U.S. trends under a reduced military budget? What might be U.S. naval trends under an aggressive defense buildup? Having asked these questions, or having made these assumptions, the actions the U.S. has taken are not so unpredictable. They are not the only developments that could have been predicted, but those that have occurred, likely would have been among those a Soviet analyst of the U.S. Navy would have predicted.

~~(C)~~ In those instances where Soviet naval trends seem to be uncertain, the panel made alternative assumptions to forecast alternative trends and the attendant intelligence indicators.

SECTION 3

CONSTRAINTS ON SOVIET NAVAL DEVELOPMENTS (U)

(U) Any projection of Soviet naval trends must consider the possibility that discontinuities in current trends may be introduced by political, economic or technical factors. These factors also bound Soviet developments.

(U) The Political Influence -- The Soviet Navy has always been an instrument of state policy. Soviet naval policy has developed in conjunction with the modernization of all elements of the traditional Russian continental military strategy to accommodate the nuclear age. Although geography, economics and a ground-oriented military have remained major Soviet influences, maritime power has now become an important part of both their military and foreign policies.

(U) Since World War II the Soviet Navy has changed from a limited capability coastal defense force to a global navy capable of a wide variety of missions in support of Soviet political and military objectives. This transition has been steady but not without change in direction.

(U) [redacted] characterizes post-war Soviet strategic naval policy as having shown at least four discrete phases.* He asserts that none of these phases has either been identified immediately or predicted by the West. Each was a result of a change in the philosophy of Soviet leadership.

(U) During the first phase (1945-53), Stalin invested heavily in conventional technology and established many of the existing shipyards and design bureaus which were charged with producing a fleet to control the regional European seas and to prevent enemy amphibious operations. Stalin emphasized shipbuilding, the construction of a large submarine force and the protection of the homeland. However, this initial thrust toward a "blue water" naval capability based on major capital ships was subsequently redirected.

[redacted] "Naval Trends Briefing", 4 March 1982

(U) The second phase (1954-1960) began with Khrushchev, who abandoned programs for large ships and shifted the naval emphasis to missiles, submarines, technology and Anticarrier Warfare (ACW), thereby reducing the navy's strategic role. He stressed an aggressive coastal defense force comprised primarily of smaller ships designed to attack approaching U.S. carriers and to counter the threat from U.S. strategic missile submarines. Admiral Gorshkov's stewardship of the Soviet Navy also began during this period.

(U) The third phase, from 1961 to the late 1960's, responded in part to the rapid acceleration of the U.S. Polaris program. Khrushchev expanded the navy's strategic offensive role and broadened it to include modern submarine-launched ballistic missiles. He also mounted a strong effort to expand Soviet Antisubmarine Warfare (ASW) and Anticarrier Warfare (ACW) capabilities and sponsored programs which marked the start of a general-purpose, oceangoing navy. This emphasis led to the construction of the KRESTA II and KARA class cruisers and the MOSKVA class helicopter carriers. In addition, the navy acquired BADGER and BACKFIRE bombers equipped with air-to-surface missiles to enhance its capability for conducting ACW.

(U) The fourth phase began in the late 1960's when programs were initiated which eventually produced more classes of simultaneously constructed combatants than at any time since the Stalin era. These included several large, multipurpose ships such as the KIEV class carrier, and the KIROV class cruiser. Likewise, the Soviets developed an extensive overseas staging structure which allowed them to conduct operations in many remote parts of the world, including the Horn of Africa, Southeast Asia, and the Persian Gulf. The number of ships assigned to the Pacific Fleet increased significantly, and it now possesses a large number of modern units, seemingly in response to a perceived U.S. and Chinese regional threat. This phase demonstrated a Soviet ability to commit to massive forces, with innovation and capability, but balanced by a willingness to refine and modify programs, based in part upon their perspective of threat.

(U) Thus, since the early 1970's, the rise of the large, oceangoing navy with a balanced capability for sea control under the umbrella of land-based

air cover emerges as the dominant naval trend. In the last few years, the necessity of fighting from a distance and to overcome U.S. sea-based air superiority has become evident and characterizes the present thrust of the Soviet Navy.

~~(C)~~ With the passing of Brezhnev the change in Soviet leadership will now begin and this may well give rise to another shift in naval policy and future trends. An early perception of these new trends may well be the dominant factor in the success or failure of U.S. intelligence to forecast the future threat.

~~(C)~~ The Soviet Navy has been held in high regard by the political leadership and has received commensurate budgetary support for a very expensive ship and submarine building program. While the number of ships constructed per year have not changed substantially, the tonnage, building cost, crew size and annual operating expenditures have almost doubled. The departure from relatively simple weapons (external cruise missile launchers, conventional radars, short range SAM weapons) to the more sophisticated and costly weapons of below-deck launchers, phased array and multifunction radars and long range SAMs have further increased the Soviet's financial burden of supporting the navy. The new leadership may now be confronting the task of making policy decisions with a background of heavy preexisting commitments. The new Soviet leaders could make a number of alternative decisons, outlined below:

1. ~~(C)~~ They could continue the present policy of building a blue ocean, general purpose, powerful navy to surpass the U.S. and to exercise control of the seas in any area outside the range of U.S. land bases. This policy, while costly, in effect would say, "let us not tamper with success; our present policy is working, we are on our way to becoming the dominant naval power on earth, and we obviously have been able to afford it; so let us not rock the boat, at least not yet, until we see what happens in a few more years". [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (e)

2. ~~(C)~~ They could adopt a policy that gives a visible signal to the present U.S. administration that the announced rebuilding of U.S. military capabilities (which the Soviets may interpret as an increase rather than rebuilding) cannot be left unanswered. So they may well have to announce publicly new and dramatic programs to counter the U.S. Navy. Such programs are likely in the areas of ACW and ASW against the TRIDENT FBM submarines; and once started, the inertia of the Soviet planning process would keep them going even if the political need would go away.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

3. ~~(C)~~ Alternatively, Soviet policy may shift to rebuild detente and a more conciliatory position with respect to the United States and China. It may also attempt to increase the rift between Europe and the U.S. and avert a rebuilding of Japanese military power. To accomplish these objectives, the Soviets may wish to keep a low profile and deemphasize their military programs, particularly those (like the navy) which are of a more offensive character. Such a policy might lead to:

O Deferral of some high visibility programs that would excite the West [redacted]

(b)(1),(b)(3):10 USC 424,(b) (5),1 4 (c)

O Deferral of operations from new foreign bases.

4. ~~(C)~~ Yet another policy option is to genuinely turn to solving Soviet economic problems by shifting resources from the military to the civil sector. Reducing the Soviet Navy budget may be the easiest way of accomplishing this objective. [redacted] His replacement by the new leadership might be a sign of a policy shift. Reductions in the Soviet Navy budget might have indicators similar to those listed above. More drastic changes are less likely to show up as reductions in hardware acquisition programs than as reductions in operations and maintenance costs (numbers of out-of-area ship days per year).

(b)(1),(b)(3):10 USC 424,(b) (5),1 4 (c)

~~(C)~~ It is seen from the foregoing that the impact of policy changes is very significant in predicting Soviet naval trends. We are at the threshold of probable policy changes. It is very important that the Intelligence Community carefully formulate Soviet policy change options, list their indicators, and [redacted]

(b)(1),(b)(3):10 USC 424,(b) (5),1 4 (c)

~~(C)~~ <u>The Economic Influence</u> -- The constraints imposed by a planned economy and the practice of maintaining work force stability also affects Soviet naval developments. Design bureaus, shipyards and factories are normally continuously utilized, reflecting the multiyear stability of the five-year planning cycles. [redacted]

(b)(1),(b)(3):10 USC 424,(b) (5),1 4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (g)

[redacted]

(U) While the Soviet Navy is a vital element of maritime policy, it is complimented by substantial merchant and fishing fleets. These fleets earn hard currency, extend economic influence, show the flag and shuttle protein to the Russian diet. The growing Soviet commercial maritime investment needs protection and the naval presence, in turn, is followed by commercial ties. Thus, economic interests and naval requirements are interrelated. The export of Soviet military equipment to other nations accompanies this process. The resulting N-th country threat must be taken into account by U.S. assessments of naval trends.

(U) The Impact of Technology -- Soviet naval developments in the past have been influenced more by the "requirements pull" than the "technology push". However, as the technology gap between the Soviets and the U.S. decreases, and as rapid advances in technology make new weapon systems possible, it is expected that the balance in Soviet naval developments will begin to shift more in the direction of the "technology push". For this reason it is possible that [redacted] It is important to review some of the possible and probable technical developments that may have great influence on future trends and to assess how these developments may shape the balance of U.S. versus Soviet naval capabilities. The panel discussed the possible future technical developments with [redacted] of the Naval Research Laboratory. A summary of potential developments and the impact they might have on trends and capabilities is shown in Table 3.1.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] "Naval Technology Briefing", 8 December 1981

Table 3.2. Possible Technical Developments Benefiting U.S. Navy Capabilities (U)

(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

~~(C)~~ Technical developments such as these can trigger significant changes in naval trends. The difficulty in projecting trends based on technical factors is that we most often do not know [redacted] and whether it will lead to a weapon systems improvement or just to scientific experiments. [redacted] In the case of high technology innovations (like the ALFA submarine) the Soviets are [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ At the same time, this attitude permits the Soviets to undertake an expensive program at a slow pace over a long time, whereas the U.S., which is used to shorter programs, would not undertake the program because of its great concentrated cost. [redacted] It has almost continuously spent money on [redacted] studies and on component development efforts. The aggregate funds spent to date would have been almost sufficient to deploy a worldwide radar satellite coverage; yet we have nothing to show for the money spent, for the cost of such a development, if conducted over a short period of time, exceeded the affordable.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(c)~~ To look for indicators of long range technical developments one can look in the open literature, [redacted] and at U.S. activities that might trigger long range Soviet reactions. The latter is thought to be particularly useful. For example, the sudden start of the U.S. cruise missile program in the '72 time frame, allowing two years or so for a Soviet reaction to be formulated and started, could have triggered a [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(c)~~ From a combination of top-down policy direction, economic and technology bounds and opportunities, a set of likely development trend drivers emerge. These are:

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(U) The major concerns or options listed above are not to be considered as the panel's forecast of naval trends. They are merely those possibilities that could arise from policy, economic or technical factors. A discussion of the possible trends is contained in section 4.

SECTION 4

KEY ISSUES AND UNCERTAINTIES OF SOVIET NAVAL TRENDS (U)

~~(C)~~ U.S. naval material RDTE, procurements and improvements in capabilities are undertaken in order to provide the U.S. Navy with an improved capability to perform its missions [redacted] under an assumed set of Soviet present and future capabilities. Present Soviet capabilities [redacted] while future capability assessments are provided by the Intelligence Community. These future capabilities [redacted] into the future to permit the slow U.S. RDT&E and acquisition process to react to unexpected developments in time. Intelligence [redacted] For this reason an assessment of Soviet naval trends into the farther out future is needed, and this assessment, by definition, cannot be based [redacted] In addition, unless we were [redacted] a U.S. assessment of future Soviet naval trends cannot (and should not) forecast only a single Soviet course of action.

(b)(1),(b)(3) 10 USC 424,(b)(5) 1.4 (c)

b)(1),(b)(3) 10 USC 424,(b)(5) 1.4 (c)

(U) Clearly, differences in trend forecasts matter to the U.S. only insofar as they foretell of different relative U.S. vs Soviet operational capabilities or insofar as they indicate the need for different planned U.S. Navy RDT&E and procurement actions. In this section, the panel lists some of the key issues and uncertainties in Soviet Naval trends which would or should make a difference in U.S. assessments of future Soviet capabilities or in the content of the U.S. Navy RDT&E and procurement programs.

(U) Force Level Issues -- Limitations of the U.S. defense budget have resulted in a sharp erosion of U.S. Navy force levels almost across the board, but particularly in surface ship and attack aircraft force levels. The outlook for the future is that it is not going to be possible to rebuild from current force levels in a major way. [redacted]

(b)(3):10 USC 424,(b)(5)

SECTION 5

MAJOR TRENDS IN THE SOVIET THREAT, TREND ALTERNATIVES (U)

(U) In seeking answers to the type of questions that were listed in the preceding section, the panel organized its conclusions and trend projections into a discussion of the topics listed below. These topics are not a summary of the trends but merely the structure of the panel's deliberations.

(b)(3):10 USC 424,(b)(5)

[redacted]

(U) These topics are discussed in more detail in the following paragraphs.

(b)(3):10 USC 424,(b)(5)

5.1 (U) Soviet Shipbuilding -- Since 1956 when [redacted] the Soviet surface fleet has not only grown in

SECTION 6

CONCLUSIONS AND RECOMMENDATIONS (U)

(U) The conclusions and recommendations of the panel on Soviet Naval Trends are summarized below.

6.1 (U) Trend Projection Methodology

a. ~~(C)~~ The panel concludes that historically, there have been sudden and drastic changes in the Soviet naval development programs and underpinning policies, and that these changes were caused by political factors and changes in Soviet leadership. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel concludes that the imminent change in Soviet leadership may again introduce such a discontinuity in naval trends, and the panel recommends that such changes should be anticipated [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

b. ~~(C)~~ The panel concludes that present intelligence projections of Soviet naval trends tend to be extrapolations of [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(C)~~ The panel concludes that there are alternative tools for forecasting naval trends: [redacted] These methods do not seem to be used simultaneously in present projections of naval trends. In addition to these four methods, the panel recommends a fifth, that of assessing the U.S. naval threat from a Soviet intelligence point of view and determining how the Soviets might react to the U.S. threat.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

c. ~~(C)~~ The panel believes that it is useful to develop alternative trend projections (rather than just the single projection that is made currently). By assuming alternative Soviet policies, concerns, intentions, it is possible to project different and likely Soviet naval trends, developments, and even tactics. When the intelligence indicators of these different trends are identified and recognized, it may be possible not only to forecast the trend, in some cases, to also determine the likely Soviet intent.

~~(C)~~ The panel recommends that the Intelligence Community consider projecting several alternative trends, in some cases, (together with their intelligence indicators) as a way to arrive at a most likely trend and at some of the leading alternatives that might hold some suprises. The panel recommends that the alternative intelligence indicators should be closely monitored for an early perception of changes.

6.2 (U) Key Drivers of Soviet Naval Trends

~~(C)~~ Key deficiencies the Soviets are likely to want to correct in their naval developments are listed below.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(U) Key naval policies the Soviets are likely to pursue are listed below.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

APPENDIX A

SOVIET NAVAL TRENDS

BACKGROUND: ~~(S/NOFORN)~~ Soviet naval policy and programs have developed under different sets of imperatives and priorities than those of the U.S. or most other Western nations. More often than not, Moscow's perceptions of its naval requirements, and its solutions to them, have been uniquely Soviet and Russian. Obviously, an aim has been set many years ago -- the aim of a balanced fleet designed to support the policies of the state in all conditions of peace and war, and so structured that it would provide the most effective force should hostilities come to pass. Although Soviet naval growth has been characterized as [redacted] Nevertheless, force development options do exist along the path of Soviet naval evolution, and the trend in Soviet naval development must be accurately projected to adequately support Western defense decisions. [redacted] A requirement exists to examine the Soviet navy in terms of likely near-term military warfare capabilities with due consideration toward other competing political, economical and technical resource requirements in the USSR. A macro-view of probable Soviet gains for the balance of the century is urgently required.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

OBJECTIVES: ~~(S/NOFORN)~~ A fresh look at Soviet naval trends can improve our ability to provide timely predictions of technical developments. The Panel will conduct an examination of the Soviet naval threat and its military implications for the balance of the century. The investigation will include:

- An assessment of mission capabilities in naval warfare areas -- now, at the end of the decade, and the year 2000;
- An evaluation of likely priorities in Soviet naval programs and possible initiatives for satisfying them; and
- Identification of technical, economic and political obstacles facing the Soviets in expanding their seapower and likely courses of action to overcome them.

Specific attention will be focused on identification of trends and rationale for:

(b)(1),(b)(3):10 USC 424,(b)(5),1.4(c) [redacted]

~~NOT RELEASABLE TO FOREIGN NATIONALS~~

CLASSIFIED BY DIA [redacted]
DECLASSIFY ON ~~OADR~~

LEVEL-OF-EFFORT: (U) The Panel will consist of about five members and require about six meeting sessions. Status reports will be given at each Advisory Committee meeting and an interim report of progress will be developed within six months after Panel initiation. The final written report will be submitted to the Director within one year. The DIA Technical Advisor for this effort is (b)(3):10 USC 424

PANEL CHAIRMAN: (U) (b)(3):10 USC 424

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ON SOVIET RESPONSES TO MX CLOSELY SPACED BASING (U)

14 OCTOBER 1982

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(b)(3):10 USC 424

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SECTION 1
INTRODUCTION

~~(S)~~ The DIA Panel on Soviet Responses to MX Closely Spaced Basing (CSB) was formed at the request of USDR&E to evaluate the technical feasibility and potential timing of possible threats to the MX CSB concept. The panel was requested to address the following three specific points:

1. ~~(S)~~ The [redacted] engineering development, test, production, and deployment which the Soviets would have to undertake [redacted]

2. ~~(S)~~ The most probable time for IOC of these responses, the spread in probability about the most probable time, and the time for force buildup after IOC to a level that would form a counter to CSB.

3. ~~(S)~~ The time before IOC at which we will identify the responsive threat(s) under development so we can make our own responses.

(U) The panel met during the last week in September and received a number of excellent briefings from USDR&E, the Air Force, DIA, CIA, and Sandia and Los Alamos National Laboratories. These briefings summarized the relevant in-depth studies which the above named organizations had conducted as part of the overall evaluation of MX basing alternatives. The briefings highlighted several issues as to the relative technical difficulty of certain Soviet responses to MX, particularly the [redacted] as well as the potential pace and timing of a Soviet response.

(b)(3):10 USC 424,(b)(5)

(U) The panel was asked to provide their evaluation to the SECDEF no later than 15 October 1982. Within this short time period and the limited resources of the panel, it was not feasible to conduct an independent in-depth study of potential Soviet threats to MX. Rather, the panel's evaluation was limited to an assessment of existing intelligence information and related technology studies

together with a statement of the views of the panel with respect to likely Soviet prioritization of responses, their relative technical difficulty, and their potential deployment time frames.

SECTION 2
CONCLUSIONS

(U) The panel has reached the following conclusions:

1. (U) With regard to the technical difficulty of the responses:

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403 (g),1.4 (c)

2. (U) With regard to the pace of Soviet responses:

a. ~~(S)~~ The program IOC schedule estimates from the community represent the likely normal range for most Soviet programs--they are driven by Soviet bureaucratic programmatics, not technology.

b. ~~(S)~~ We must assume the possibility of short cuts or "work-arounds" for high-urgency programs particularly when the basic technology is in hand. This could cut 3-5 years off of the normal programmatically driven schedules.

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403 (g),.1.4 (c)

(b)(1),1.4 (c)

3. (U) With regard to the detectability of Soviet responsive threats:

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

SECTION 3
BACKGROUND

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

~~(S)~~ The initial deployment of MX, [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] may not be sufficient to cope with responsive threats in the future. As a result, Air Force planning considers possible future MX expansion options [redacted]

(b)(1),(b)(3):10 USC 124,1 4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

SECTION 4
POTENTIAL SOVIET RESPONSES TO MX CLOSELY SPACED BASING

~~(S)~~ The panel's views on the relative technical difficulty of Soviet responses are summarized in the following paragraphs. (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted] This is not to say that the Soviets do not employ sophisticated technology when it is necessary. (b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c) [redacted]

~~(S)~~ The Soviets also place significant emphasis on testing through the full range of operational environments in order to provide confidence in their forces. Given a choice, we believe the Soviets would select an approach which could be tested vigorously and which would not rely upon analytical simulations of relatively poorly understood nuclear effects to assure effectiveness.

(U) The primary Soviet responses considered in previous studies and by the panel include the following:

1. (U) FRATRICIDE AVOIDANCE:

~~(S)~~ Fratricide Avoidance uses precise time on target control and carefully structured targeting to avoid the radiation, blast, and dust effects of fratricide. (b)(1),(b)(3):10 USC 424,(b)(5) [redacted]

~~(S)~~ The Fratricide Avoidance tactic is dependent on a detailed and high confidence understanding of the multiple atmospheric burst nuclear environment. This

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

~~(S)~~ This is not to say that the Soviets would not target MX with their existing forces. They traditionally do the best they can with what they have and would likely target MX silos with the best hard target killers they have until a better response can be developed. [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

SECTION 7
OTHER CONSIDERATIONS

(U) While not within the panel's charter, we would like to offer comments on two additional points:

1. (U) CREDIBILITY OF THE MX DETERRENT

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

2. (U) SOVIET THREAT TO STRATEGIC C^3

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ The charge to the panel was to assess the Soviet threat to the MX Silo.

[redacted]

FINAL REPORT OF THE DIA ADVISORY COMMITTEE

BOMBER PRELAUNCH SURVIVABILITY PANEL

~~(S)~~ At the request of the Deputy Under Secretary of Defense for Research & Engineering and the Director, DIA, an ad hoc panel of the DIA Advisory Committee addressed the current and potential capability of the Soviets to launch a surprise attack, using SLBMs [redacted] as a means of destroying the U.S. B-52 bomber force. The panel probed the available evidence to determine whether such a capability exists, reviewed differing intelligence views of its potential development, and examined the likely payoffs that would result. The panel reviewed [redacted] and the ease with which pertinent aspects of these systems could be changed. The group discussed current trends in Soviet SSBN operations and briefly investigated the Soviet ability to develop an equivalent capability that would avoid U.S. early warning detection to carry out a surprise attack using [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5):1.4(c)

~~(S)~~ An effective SLBM surprise attack against the U.S. bomber/tanker force as currently or potentially dispersed [redacted] (These flight profiles are often referred to [redacted] however, in this context, the phrase [redacted] is more appropriate.) An effective Soviet SLBM attack against the alert U.S. bomber/tanker force would require missile [redacted] This establishes the launch region for the Soviet SSBNs to be no greater than [redacted] from the U.S. bases, and thus, the most severe threat would be presented to B-52s based along the U.S. coasts.

~~(S)~~ Potentially any of the Soviet SLBMs could be employed in a surprise attack against SAC bases, either in an attempt to severely damage a significant number of alert bombers before or during take-off or in a barrage mode in an attempt to destroy the bombers [redacted] An attack against the alert aircraft could require [redacted] delivered weapons against a single base. Depending on the actual dispersal of the U.S. bomber/

(b)(1),(b)(3):10 USC 424,(b)(5):1.4(c)

Classified by DIA (DT)

Declassify on

WARNING NOTICE - INTELLIGENCE ~~SOURCES AND METHODS INVOLVED~~

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

tanker force, the Soviets [redacted] carried on Soviet SSBNs, this equates [redacted] Yankee or Delta class submarines).

~~(S)~~ On the other hand, a barrage attack with the requirement to target tens of weapons in the vicinity of each SAC base would require the Soviets to coordinate, in time, a very large SLBM attack with [redacted] Although the B-52s can safely withstand [redacted] a conservative "sure kill" Soviet targeting value would probably be [redacted] This would necessitate even greater quantities of weapons and SSBNs and would require the Soviets to dedicate a very large fraction, if not all, of their SLBMs to this single objective. The panel believes such a barrage attack to be unrealistic.

~~(S)~~ Even in the more "modest" strike on the airbases a carefully coordinated Soviet attack taking into account [redacted] Errors in execution would provide the very warning time to U.S. forces that the attack is attempting to negate.

~~(S)~~ The panel reviewed the deployment and capabilities of the current Soviet SLBM/SSBN force. At present this force consists of:

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

Submarine	[redacted]	[redacted]	[redacted]
Yankee I			
Yankee II			
Delta I			
Delta II			
Delta III			
Typhoon			

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

~~(S)~~ Although variations are noted in the Soviet SSBN patrols, usually there are [redacted] YANKEEs patrolling in the [redacted] The patrols normally are no closer [redacted] from the U.S. coastline. Delta patrol areas include the [redacted] and the [redacted] These patrol areas are generally [redacted] from the CONUS coast line, and the Deltas have the capability to launch the long range SS-N-8 and SS-N-18 SLBMs from home ports.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ From the panel's examination of the available intelligence information on these Soviet SLBM programs, [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

~~(S)~~ To illustrate the theoretical Soviet capabilities, two candidate reduced [redacted] were presented to the panel by [redacted] and NISC. The NISC [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ There are different views about the adequacy of current Soviet SLBM [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] NISC believes that adequate margins exist in Soviet designs to enable any of the [redacted] that would be encountered. [redacted]

(b)(1),(b)(3):50 USC 403(g),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted]

~~(S)~~ [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] Accuracy requirements would not appear to pose any significant limitations to the Soviets, particularly for the attacks against alert aircraft on individual bases. Although guidance & control modifications to the Soviet SLBMs are needed as described below, accuracies of a mile or so would be acceptable. The panel believes this accuracy to be reasonably attainable even without modifications to current systems.

(b)(1),(b)(3):50 USC 403(g),1.4 (c)

[redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ Perhaps the best candidate in which to incorporate a [redacted] is the SS-N-17. [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted] However, it is unlikely that the Soviets would use the SS-N-17 in such a role since the [redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

[redacted] Because it is the [redacted] a continuous on-station capability [redacted] and if such a capability were intended for this platform, it would be more readily observed. [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

[redacted] Although some design information about the SS-NX-20 is lacking, the panel supports the community's view that the missile is designed to improve SLBM accuracy and to provide long range capabilities.

~~(S/NOFORN/WNINTEL)~~ The changes to the candidate missiles (SS-N-6 and the SS-N-8) would appear to warrant at least a modest flight test program which, in the panel's view, would require a minimum of five tests for the Soviets to gain design change confidence and trajectory verification. This is especially true in light of known Soviet conservative design practices. [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ Development of a [redacted] would appear to contradict trends seen in current Soviet naval capabilities and deployment patterns. As the DELTAs have entered the inventory, the Soviets have developed higher energy, longer range, and more accurate SLBMs to be put on them. The panel notes an attendant Soviet tendency to pull back their SSBNs to sanctuaries where they can presumably be protected from a capable U.S. ASW force. Although the Soviets still maintain the YANKEE patrol areas [redacted] there is no known effort to upgrade or replace this system. The panel acknowledges that DELTAs probably could slip undetected into the YANKEE patrol areas; however we do not believe that DELTAs could routinely accomplish this without detection nor that the Soviets would think that they could do it with confidence.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S/NOFORN/WNINTEL)~~ In conclusion, the panel found no evidence that the Soviets possess or intend to develop [redacted] to attack U.S. bomber bases. We concluded that they could do it with moderately significant modifications to existing systems, but that a more prudent option would be to develop a new missile in which the design is optimized for this purpose. In any event, if the Soviets chose to develop such a capability, a minimum flight test program would appear to be required unless they depart substantively from their current approach to weapons system development. [redacted]

(b)(1),(b)(3):50 USC 403 ~~(g),1.4 (c)~~

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

~~(S)~~ The panel does not discount the possibility that the Soviets could develop a [redacted] for other U.S. time urgent targets, such as against C^3 nodes. Such an attack would require [redacted] and the need to execute a well-coordinated, well-timed attack would be less critical.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

Thus, despite our questioning the likelihood of a Soviet development of [redacted] bomber attack, the Intelligence Community should remain alert to any indicators of efforts to [redacted]

~~(S)~~ The panel also briefly reviewed Soviet cruise missile capabilities, especially those projected for the SS-NX-21, to attack U.S. bomber bases. Soviet GLCMs (e.g., Cuban-based) and SLCMs which could potentially penetrate U.S. air space undetected may pose a more serious threat to U.S. bomber bases if the existing sensors are inadequate and/or warning networks are not configured for the purpose. We recommend that USDRE take action to determine how good U.S. warning systems are against these projected Soviet cruise missile capabilities.

(b)(3):10 USC 424,(b)(6)

Chairman,
DIA, Advisory Committee
Bomber Prelaunch Survivability Panel

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REPORT 83-3

of the

DIA ADVISORY COMMITTEE

to the

Director

DEFENSE INTELLIGENCE AGENCY

DEPARTMENT OF DEFENSE INTELLIGENCE INFORMATION SYSTEM (DoDIIS) PANEL

July 1983

This report is ~~classified SECRET~~ because the aggregate data on the plans, budget capability, and weaknesses of DoDIIS reveal sensitive information status that warrants protection. When the details of the report that discuss budget and system shortcomings are removed the report or portion thereof can be considered unclassified

CLASSIFIED BY: DIA/AC
DECLASSIFY ON: ~~OADR~~

DIA/AC REPORT 83-3

THIS REPORT WAS APPROVED BY THE DIA ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

LIAISON TO THE COMMITTEE

(b)(3):P.L. 86-36

EX OFFICIO

(b)(3):10 USC 424

EXECUTIVE SECRETARY

(b)(3):10 USC 424

THIS REPORT WAS PREPARED BY THE DEPARTMENT OF DEFENSE INTELLIGENCE INFORMATION SYSTEM (DODIIS) PANEL

(b)(3):10 USC 424

(b)(3):P.L. 86-36 (NSA Technical Advisor)

(b)(3):10 USC 424 (DIA Technical Advisor)

(DIA Technical Advisor)

DEPARTMENT OF DEFENSE INTELLIGENCE INFORMATION SYSTEM (DoDIIS) PANEL

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SECTION I.

INTRODUCTION

The DoDIIS Panel of the DIA Advisory Committee (AC) held seven meetings during the period November 1981 to October 1982. Its original charter is at Appendix A. The panel, with the informal concurrence of the AC and DIA senior management consciously deviated from the very specific working-level set of questions in its charter to more fundamental policy, management, and process issues of immediate concern to DIA management.

Panel membership is contained at Appendix B, and Appendix C lists the Agency/staff briefings which the panel heard.

During the course of the panel's activities, some very serious problems arose with the joint CIA/DIA Support for the Analyst's File Environment (SAFE) Program. The panel devoted the better portion of two meetings to these problems, and the panel chairman with the approval of the AC chairman wrote a letter to General Williams summarizing the panel's observations and recommendations. These proved to be timely and useful. This letter is at Appendix D. Other later observations were provided verbally either to [redacted]

(b)(3):10 USC 424

The complexity and detailed nature of the subject, i.e., DoDIIS, led the panel to choose an issue-oriented approach rather than attempting a comprehensive treatment in preparing its report. For this reason, the substantive content of the report is presented in terms of seven issues: each issue is discussed in a format comprised of (1) Comments and Observations and (2) Recommendations.

Additionally, the report's focus is on the near term (the immediate, subsequent five years) rather than the long term. Near term actions associated with DoDIIS policy and practices were deemed critical because of

SECTION II.

DESCRIPTIVE COMMENTS ABOUT DoDIIS

DoDIIS is comprised of some 55 computer systems located at 33 sites with over 200 central processing units (CPU's) ranging upwards in capacity from the PDP 11/45 (used as a measure of computer capability). DoDIIS includes the associated telecommunications assets which interconnect its computers and its users with computers. Important exceptions are the National Security Agency (NSA) systems utilized by DoDIIS users. These systems are included in the Consolidated Cryptologic Program (CCP). DoDIIS systems are distributed among DIA, U&S Commands, component commands, Service headquarters' units and other selected organizations primarily within the S&T intelligence community. DoD Directive 5105.21 dated 19 May 1977 assigns DIA central management responsibility for DoDIIS.

DoDIIS was spawned from the Intelligence Data Handling System (IDHS) of the 1961-1975 era and was augmented by all the other defense Intelligence Community fixed (as opposed to mobile) automated information systems. Prior to DoDIIS, which became a distinguishable entity in 1973, (budget entity, 1980) the defense intelligence data handling systems are described as being a "loosely knit collection of stand-alone computers supporting local intelligence operations".[1]

The principal communications assets which provide computer-to-computer and computer-to-terminal interconnectivity to DoDIIS participants are designated as the Intelligence Data Handling System Communications (IDHSC) network. The Community On Line Intelligence System (COINS) and AUTODIN I are also used by DoDIIS. The other major, widely used support component of DoDIIS is DIAOLS

[1] DoDIIS Master Plan (U), October 1981, DRS-2600-1568-81

(DIA On-Line System) which since 1968 has provided interactive user response services via some 2,000 users in about 70 organizations.

Figure 1 depicts DoDIIS user groupings. Figure 2 is a listing of DoDIIS supported activities keyed to Figure 1.

As is readily apparent, DoDIIS elements range in size and capability from major systems at the Strategic Air Command (SAC) and DIA to small remote terminal facilities such as that supporting Headquarters, Fifth Air Force, Japan.

The principal document which provides for the management of DoDIIS is the DoDIIS Master Plan, first distributed in 1978 and most recently updated in February 1983 to cover the period FY 82 - FY 92.

UNCLASSIFIED

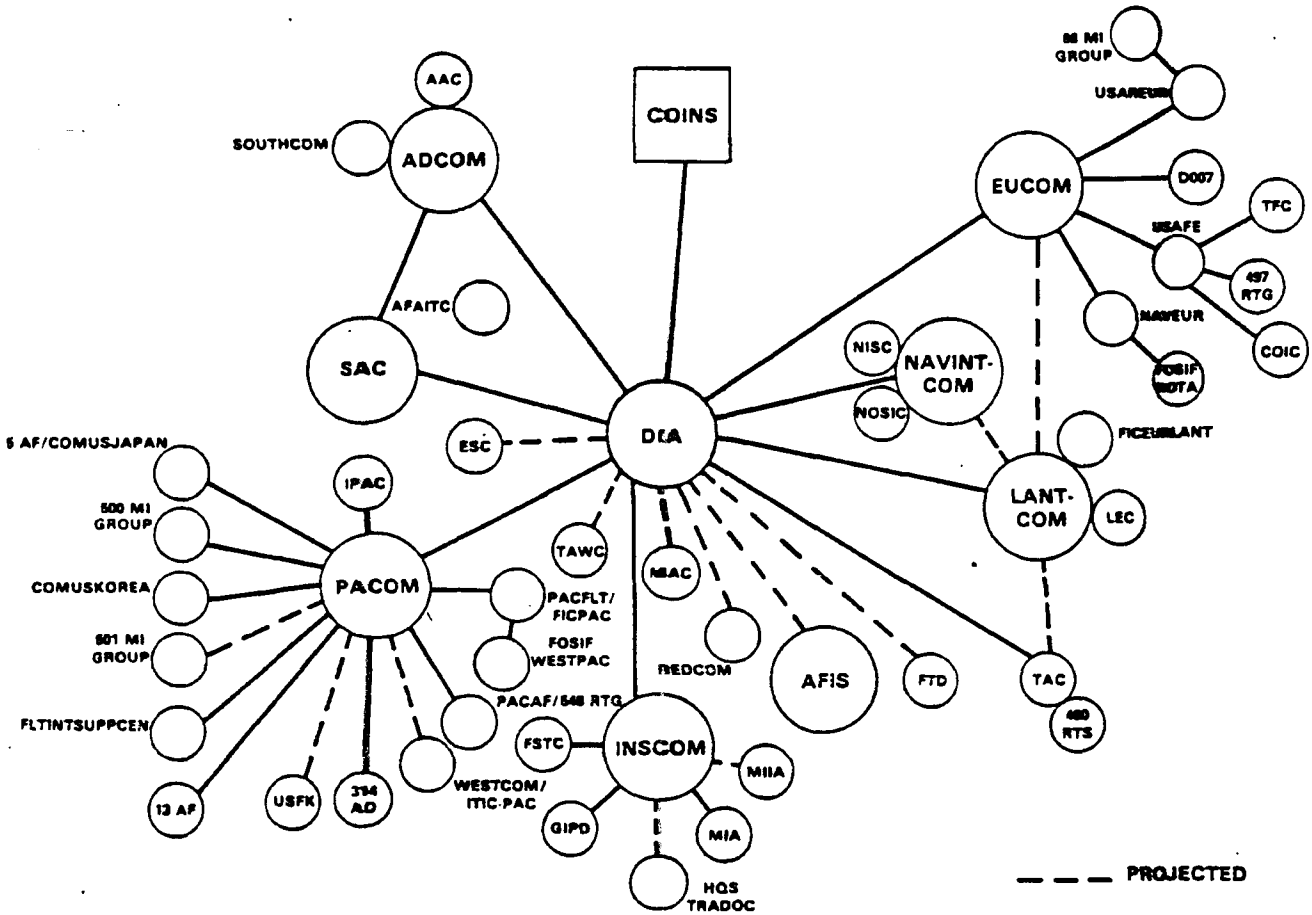


FIGURE 1. DOD INTELLIGENCE INFORMATION SYSTEMS COMPONENT ELEMENTS

UNCLASSIFIED

(b)(1),(b)(3):P.L. 86-36,(b)(3):50 USC 403

Defense Intelligence Agency (DIA)

Strategic Air Command (SAC) HQS
- 544th Strategic Intelligence Wing (544th SIW)
- Joint Strategic Target Planning Staff (JSTPS)

Aerospace Defense Command (ADCOM) HQS

Military Airlift Command (MAC) HQS

Atlantic Command (LANTCOM) HQS
- [redacted]
- Fleet Intelligence Center Europe and Atlantic (FICEURLANT)

U.S. Readiness Command (REDCOM)
- Rapid Deployment Joint Task Force (RDJTF) (in garrison)
- Joint Deployment Agency (JDA)
- Joint Special Operations Support Element (JSOSE)
- Joint Communications Support Element (JCSE)

U.S. Southern Command (SOUTHCOM)

U.S. European Command (USEUCOM) HQS
- European Defense Analysis Center (EUDAC)
- United States Air Forces, Europe (USAFE)
  - 497th Reconnaissance Technical Group (497th RTG)
  - Tactical Fusion Center (TFC)
  - Combat Operations Intelligence Center (COIC)
- U.S. Naval Forces Europe (USNAVEUR)
  - Fleet Ocean Surveillance Information Facility, Rota (FOSIF ROTA)
- U.S. Army Europe (USAREUR)
- U.S. National Military Representative (USNMR) SHAPE (site D007)

Pacific Command (PACOM) HQS and Intelligence Center PACIFIC (IPAC)
- Pacific Air Forces (PACAF)
  - 548th Reconnaissance Technical Group (548 RTG)
- Pacific Fleet (PACFLT)
  - Fleet Ocean Surveillance Information Facility, Western Pacific (FOSIF WESTPAC)
- Fleet Intelligence Center Pacific (FICPAC)

Assistant Chief of Staff Intelligence, Department of the Army (ACSI)

U.S. Army Intelligence and Security Command (INSCOM)

Foreign Science and Technology Center (FSTC)

Missile Intelligence Agency (MIA)

U.S. Army Medical Intelligence Information Agency (MIIA)

Navy Intelligence Command (NAVINTCOM) HQS
- Naval Intelligence Support Center (NISC)
- Navy Field Operational Intelligence Office (NFOIC)
  - Navy Ocean Surveillance Information Center (NOSIC)

Air Force Intelligence Service (AFIS)

Alaskan Air Command (AAC)

Electronic Security Command (ESC)

Foreign Technology Division (FTD)

Tactical Air Command (TAC)
- 460th Reconnaissance Technical Squadron (460th RTS)

Tactical Air Warfare Center (TAWC)

FIGURE 2. DODIIS SUPPORTED ACTIVITIES

SECTION III.

DoDIIS ISSUE SUMMARY

A complete listing of the issues discussed by the panel and included in this report is presented in this section in order to facilitate an overview of panel coverage. Each issue is treated separately in subsequent sections.

Issue 1

Does DIA's management of DoDIIS need clarification and/or strengthening? "Management" as used here includes minimally the responsibility for policy, practices, controls, funding, implementation, the conduct of Research and Development (R&D), and evaluation.

Issue 2

DoDIIS as presently implemented is a peace-time system. Does the defense intelligence community need a consciously planned or describable automated intelligence handling capability, e.g., DoDIIS, throughout the spectrum of hostilities ranging from local crises to "all-out" warfare?

Issue 3

A continuing, "usable" and useful system needs a life cycle management process. Is there an adequate life cycle process in place now, either for DoDIIS as a whole or for individual DoDIIS elements?

Issue 4

A major DoDIIS element supporting DIA itself, has its planned improvements incorporated in the joint CIA-DIA SAFE program. Specifically, the replacement for DIAOLS is in the DIA SAFE program. Is the DIA SAFE program being carried out and scheduled so that it can adequately meet DIA's near term requirements?

Issue 5

What are the principal specific "user-related" or defense intelligence community problems to which DIA, as DoDIIS manager, should be directing more effort?

Issue 6

Will DoDIIS as a defense community wide information handling system be able to support new collection systems being implemented in the near term (i.e., the mid-to late-1980's)?

Issue 7

Does the DIA DoDIIS structure consisting of RSD (Deputy Assistant Director for Defense Intelligence Systems), RSM (Executive Director for DoDIIS Planning and Management); and RSE (Executive Director for DoDIIS Engineering) have the organizational, personnel, and financial capabilities to "manage" DoDIIS activities?

SECTION IV.

Issue 1

Does DIA's management of DoDIIS need clarification and/or strengthening? Management as used here includes minimally the responsibility for policy, practices, controls, funding, implementation, the conduct of R&D, and evaluation.

1. COMMENTS AND OBSERVATIONS

DoDIIS "operates" today primarily as a set of local automated intelligence handling component systems with each such system (node) supporting its local users' requirements. The adequacy of these local DoDIIS components are dependent upon the local host organization's prowess in defending resources for its DoDIIS mode.

Funding is through military department channels except for DIA's systems. DIA provides GDIP program guidance which assists the DoDIIS managers in determining their requirements and budgets. In FY83, DIA was instrumental in adding $2M for DoDIIS in the GDIP. However, the DoDIIS component host organizations remain the dominant force in obtaining and allocating DoDIIS funds. As a result, DIA-DoDIIS priorities for overall DoD Intelligence Community needs play little or no part in determining what component systems are actually implemented.

The principal features which presently qualify DoDIIS to be termed a system entity are:

a. The first DoDIIS Draft Master Plan distributed for review in October 1978 and promulgated in complete final form in June 1980. The plan provides "corporate direction for the DoDIIS elements" for a ten year period.

b. The establishment of a DIA DoDIIS Management office in 1978 which reviews and approves DoDIIS fiscal programs in the General Defense

Intelligence Program (GDIP). This provides for a central support resource which could serve as an advocate for DoDIIS components at the OSD (DIA), IC Staff, and Congressional level and should allow for better relative priorities and emphasis to be placed on DoDIIS programs and fiscal requirements. Additionally, DIA's DoDIIS Planning and Management Office holds regularly scheduled conferences for DoDIIS component managers.

c. The establishment of a DIA DoDIIS Engineering Office (RSE) in 1978 to provide overall engineering policy and standards for Automated Data Processing (ADP), interoperability and security. This office has assumed responsibility for computer security accreditation and design and has expedited transfer of software and hardware subsystems throughout the DoDIIS community. The successful transfer of PACOM Data Support Center (PDSC) and Air Force MAXI Message handling software are examples.

d. Access to intelligence information assets of other organizations via IDHSC by DoDIIS components. It is apparent, however, that components would have access to the COINS network, and its Washington-based information/program banks, for example, whether or not DoDIIS existed. DIA/RSE does provide a single point of interface between DoDIIS and COINS and has been attempting to foster complementary system improvements between both systems.

The relatively loose coupling of DoDIIS component systems along with a pre-1980 history of "permissive" management by the DIA DoDIIS Office is a reflection of past lack of resources, and lack of senior management attention within DIA. The Deputy Assistant Director for Defense Intelligence Systems (RSD) and the DoDIIS staff itself has performed admirably and is highly regarded within the DoDIIS community.

As our collection systems improve and increase and as computing capability and capacity decrease in cost, greater demand and greater use of DoDIIS

computer and communications assets can be anticipated. The labor intensive portion of costs (system design and software) coupled with communications costs will comprise the bulk of DoDIIS total costs resulting from any additional requirements. Stronger central management can generally assure better sharing of these expensive products and services. And, indeed if DoD's Intelligence Systems are going to provide uniform quality services, DIA's central management direction and support will be needed.

Some specific observations the panel would like to make are as follows:

a. DIA has no DoDIIS or Information Management Policy. The DoDIIS Master Plan appears to be the only substitute to make up for the absence of a policy document. The master plan is very useful but cannot fill the policy void.

b. The DoDIIS Technical Development Plan is quite adequate for its intended purpose. DoDIIS managers were consistent in validating its utility.

c. A principal weakness of DoDIIS ascribable to weakness of DIA DoDIIS management is that individual DoDIIS component managers can make their own system architectural decisions independent of overall DoDIIS considerations, e.g., access procedures, information or file availability, etc. The major exception is with communication protocols which are being strictly controlled by the DIA DoDIIS Engineering Office.

d. There is great difficulty in relating total DoDIIS costs to user needs, to system performance, or to adequate use of the products of collection assets, either national or theater in nature. Hence, the panel believes the data does not exist to allow it to answer the question implicitly posed in its charter, namely:

"Is the percentage of the GDIP budget devoted to DoDIIS ADP correct?"

In this regard, the approximate percentage of the GDIP budget devoted to

DoDIIS ADP over the last several years is as follows:

(b)(1),1.4 (c)

	1979	1980	1981	1982	1983	1984
[redacted]						

e. Because the funding for DoDIIS is contained in so many disparate budget documents and is mixed between Operation and Management (O&M), Procurement, and RTD&E funding as well as being spread among the Services, there is no real DoDIIS funding management or budget execution control. One of the more important fallouts of this confusing budget situation is an inability for realistic long range DoDIIS planning except during a short period each year when the budgets are reviewed for the GDIP formulation.

f. There are a number of standardization processes in place that impact DoDIIS designers, managers, and users. These include ANSI (American National Standards Institute), FIPS (Federal Information Processing Standards) and the DoD Standardization Process. Neither the DIA DoDIIS Management Office nor the individual DoDIIS component managers have focused enough attention on standardization to determine cost benefits to DoDIIS of any particular standard or the cost benefits of having a DoDIIS Standards mechanism. Emphasis has been placed primarily on standardization to achieve interoperability.

g. DIA's DoDIIS management and planning is not adequately exploiting, influencing or supporting relevant R&D. Most DoD R&D of value to DoDIIS is planned and budgeted by the Military Departments in budget categories and/or organizations (e.g., RADC, NISC) which are not part of the GDIP. If included in the GDIP, the budget categories are in functional areas not related to DoDIIS. The mechanism for correlating these R&D activities with DoDIIS requirements is not in place.

2. RECOMMENDATIONS

The panel makes the following explicit recommendations. Some of the Findings and Observations also imply additional desired action by DIA.

a. DIA should strengthen its DoDIIS Management and Engineering Offices (with both authority and resources) to carry out those functions which will provide significant benefit to all DoDIIS managers and/or users and which transcend the responsibilities and resources of any individual DoDIIS component. Exemplary functions of high priority include:

- Developing of a DoDIIS Policy and/or an Intelligence Information Management Policy which will include DoDIIS components in their "operational" role of providing intelligence information services and products.
- Setting DoDIIS-wide priorities against which to allocate resources.
- Develop a DoDIIS life cycle management plan to govern DoDIIS procurement, upgrading, uprating, etc. This is discussed in detail in Issue 3.
- Developing and playing the lead role in a DoDIIS program and budget infrastructure that will:
  - -- Provide OSD-level support for DoDIIS programs and budgets
  - -- Allow for "fenced" budgets
  - -- Provide OSD-level guidance to assure a reasonable balance between collection and processing resources.
- Provide a single DoDIIS management contact (e.g., RSD) to interface with Collection Management Offices, with the Intelligence Communications Architecture Offices (INCA), with the IC Staff, etc.

At the same time as it recommends strengthening DoDIIS management, the panel also urges that the controls, infrastructure, review, and evaluation

imposed by DIA be in consonance with the overall management role assumed by the Director, DIA in working with intelligence commands and agencies.

b. The DIA DoDIIS Engineering Office needs to invoke its Technical Development Plan as the vehicle for (i) faster and more wide spread application of existing technology within DoDIIS, (ii) more effective technology transfer to and within DoDIIS, and (iii) providing the basis for determining needed technology resources within Military Departments and Defense Agencies. The Technical Development Plan (TDP) should be a joint effort of all DoDIIS component managers and supporting organizations. A first step recommended by the panel is the annual review, updating and revalidation of the TDP.

c. As a corollary to strengthening the Technical Development Plan process, action should be initiated to develop a mechanism by which DoDIIS Engineering can more effectively exploit, influence and support relevant R&D. This mechanism should include consideration of processes for activities both within and external to the GDIP. The results of this action should then be reflected in the Technical Development Plan and the DoDIIS Master Plan.

d. The DoDIIS Engineering Office should establish a DoDIIS standards process to expedite the imposition of cost-effective standards and the reduction of overall DODIIS costs. Care must be exerted in setting standards to avoid inadvertently precluding the entry of new technology into DoDIIS.

e. Computer and information security are essential to the continued operation of DoDIIS component systems and communications. DIA must take a more active role in levying requirements, developing standards, working with the NSA Computer Security Evaluation Center (CSEC), developing realistic accreditation processes, determining vulnerabilities, etc. The panel felt that the area of Computer and Information Security was probably the single

most important problem area for the DoDIIS management to attempt to resolve since it affects every DoDIIS component.

Issue 2

DoDIIS as presently implemented is a peacetime system. Does the defense intelligence community need a consciously planned or describable automated intelligence handling capability, e.g., DoDIIS, throughout the spectrum of hostilities ranging from local crises to "all-out" warfare?

1. COMMENTS AND OBSERVATIONS

When the DoDIIS Panel convened, the Reconstitutable and Enduring Intelligence System (REIS) Panel of the AC was also meeting. As a result the DoDIIS Panel did not consider in any detail how DoDIIS functions should be accomplished in other than peacetime. When NSC activities later embraced such topics, the DoDIIS Panel continued to not address DoDIIS-like functions in a "hostilities" environment.

It is quite apparent however that there is no understanding of how current DoDIIS facilities will transition to, or pass off their functions to survivable facilities at certain times in crisis or warfare escalation. What is more disturbing is that DoDIIS is a peacetime only system. The existing, implied assumption is that DoDIIS components are designed to the survivability levels of commands/agencies which that component serves. Even this, however, was not validated to any significant extent by briefers, DIA, or the panel itself, except for the reference to such an assumption in the DoDIIS Master Plan.

Whether this assumption is proper and whether there are requirements for DoDIIS components' survival beyond that of its peacetime users was a topic on which the panel could find no information.

Finally, the panel was unable to assess what match existed between DoDIIS components' survival and its telecommunications links.

2. RECOMMENDATIONS

The panel understands that the topic of survivability is being addressed by other groups. It makes the following recommendations, specific to DoDIIS, to provide constructive input to DIA in its involvement with these other groups.

a. The Director, DIA through direct contact with operational commands and intelligence agencies, and with DoDIIS management [redacted] as his action agent should develop as soon as possible, a set of critical DoDIIS functions that should survive during crisis or hostility escalation.

(b)(3):10 USC 424

b. The Director, INCA Office should be tasked to work with the Director, DoDIIS Office [redacted] to depict what will be the survival DoDIIS communications assets and accompanying architecture.

c. With the above information on needs and survivability in hand, DIA should promulgate policy guidance on the role of DoDIIS in other than peacetime situations. This will in turn guide program and budget decisions.

d. The panel itself encourages the use of DoDIIS in other than peacetime situations and believes there is a need for DoDIIS survival to some agreed upon point in all hostility situations.

Issue 3

A continuing "usable" and useful system needs a life cycle management process. Is there an adequate life cycle process in place now, either for DoDIIS as a whole, or for individual DoDIIS elements?

1. COMMENTS AND OBSERVATIONS

A typical life cycle process is subdivided into phases (See Figure 3) such as:

a. Pre-solicitation process

b. Formal procurement process

c. Post-procurement, pre-utilization process

d. Utilization process

e. Upgrading/Uprating process

f. Obsolescing process

g. Pre-replacement process

When properly implemented, a life cycle process will, for example, permit upgrading (increase in system capability) and uprating (increase in system capacity) without having to go through the equivalent of an entire "new" systems procurement process.

The panel believes that life cycle management is, as yet, not done adequately by DIA or by DoDIIS components. Generally, changes in system capacity or capability are accomplished via a traditional procurement process with a typical length of 3-7 years, often times longer than the obsolescence period for the equipment involved.

The DIA DoDIIS Management Office along with DoDIIS component managers have allowed the Data Base System (DBS) on which DoDIIS users constantly rely to degrade to a state of dangerous disarray because of senior DIA management's

inattention to life cycle management. The DBS, known as DIAOLS (DIA On Line System) languished for over 5 years and then was consigned to the DIA SAFE Project in 1979 for upgrading, uprating, and/or replacement. The panel considers as irresponsible the reliance, with no real backup, on such a DBS, which has changed many times over its 15 years of existence with inadequate accompanying documentation.

DoDIIS' computer assets include over 200 CPUs. Typical inventory turn over time for the different models in these 200 CPUs is known. Good life cycle management based on inventory turnover times would involve plans for replacement, upgrading, etc., with predictable optimum times for software and hardware modifications. The panel found little evidence of such management on which good budget justification depends. A current question is, for example, how to transition from the [redacted] computer base of DoDIIS to a new generation of computers.

(b)(1),1.4 (c)

One of the questions in the panel's initial charter was whether DoDIIS systems implementation is inordinately long. The panel believes this to be unanswerable with the paucity of data collected to date: further, the flexible nature of computer systems with their capability for retrofit implies that upgrading and uprating should considerably diminish the need for total system replacement in a single step.

The briefings received by the panel highlighted:

- Lack of forward-planning by DoDIIS component managers,
- Over-dependence on DIA for life cycle management when the DIA DoDIIS Management and Engineering Offices are already understaffed,
- Little attempt to relate the software or hardware improvements to good life cycle management.
- An urgent need for on-the-job training (OJT) of the DoDIIS constituency-

in the elements of life cycle management, and

- Little relationship between budget requests and good life cycle management.

2. RECOMMENDATIONS

The panel recommends that:

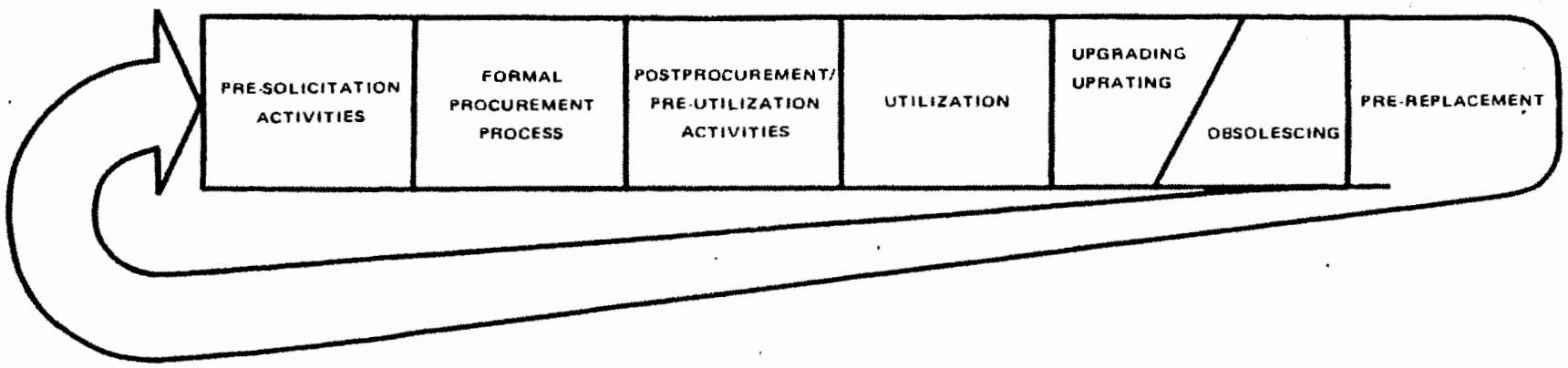
a. The DIA DoDIIS Management Office use existing data, or task DoDIIS components to provide data, related to planned inventory turnover so that budget priorities (including "fenced budgets") can be assigned to assure proper timing for acquisition of hardware and software assets.

b. DoDIIS Management should tie life cycle phases such as when to incorporate computer security features, and when (or if) to introduce the ADA as the DoDIIS Higher Order Language (HOL) into the planning and GDIP process. A plan for introducing such improvements should be provided expeditiously by RSD.

c. HOLs, specifically ADA, should not be introduced as a standard into DoDIIS until users, programs, and budgets are all better prepared through the introduction of life cycle management, and

d. GDIP Functional Managers should be kept closely advised via life cycle management based briefings, related to overall DIA strategic planning, of what are the significant planned bench marks for future DoDIIS actions. In this way, DoDIIS managers can exert a beneficial influence on GDIP activities such as I&W, targeting and imagery exploitation and reporting.

FIGURE 3 COMPUTER LIFE-CYCLE FRAMEWORK



Issue 4

The DoDIIS element supporting DIA itself has its planned improvements incorporated in the joint CIA-DIA SAFE Program. Specifically, the replacement for DIAOLS (the DIA On Line System) is in the DIA SAFE Program. Is the DIA SAFE Program being carried out and scheduled so that it can adequately meet DIA's near term requirements?

1. COMMENTS AND OBSERVATIONS

The Support for Analyst File Environment (SAFE) Project is a joint CIA/DIA project mandated by Congress and concurred in by both CIA and DIA Directors in 1977. [redacted] The SAFE PMO Director is from CIA with DIA providing the Deputy Director.

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

DIA management at the start of the SAFE Project made an extremely significant decision to rely entirely on the SAFE effort for replacing its DIAOLS (Data Base System) with an upgraded and modern DBS. The importance of this decision can be illustrated by saying that all DoDIIS components depend on DIAOLS for access to all national intelligence files and many theater and local intelligence files.

During the period in which the DoDIIS Panel was active, the SAFE Project was in a continuous state of flux. Contractual arrangements with the prime contractor were extensively modified, equipment vendors were changed, project scope was reduced and schedules for deliverables lengthened.

Most of the panel's principal concerns about the DIA SAFE Project were transmitted to the Director, DIA either via DIA-AC memoranda or directly via discussion.

The DIA-AC was kept informed of these concerns and of panel actions: they are not reiterated here. The memorandum to the Director, DIA is in Appendix A-4.

Since November 1982 when the panel became inactive there have been additional continuing changes in the SAFE Project. The recommendations listed below are believed to be currently relevant as of June 1983.

2. RECOMMENDATIONS

a. DIA should, through its GDIP budgetary process, retain "control" over the "DIA-portion" of the SAFE budget, particularly for the continuing years of the SAFE project. DIA's priorities were initially almost totally ignored and contractor effort in support of DIA was long in coming.

b. It is difficult to determine any ongoing advantage to DIA in having SAFE be a joint CIA-DIA project. Now that products are being delivered to DIA and DIA'S "operational" involvement must be more intensive, DIA should assume control of the DIA-SAFE budget.

c. The DIA DoDIIS Office [redacted] should, with direct DoDIIS Community involvement, determine needed augmentation and follow on actions to current SAFE efforts and staff a "DIA-SAFE" PMO accordingly.

(b)(3):10 USC 424

d. The DIA DoDIIS Office [redacted] should assess whether it has adequate programming and fiscal control over the SAFE contractor to ensure delivery of products on a DIA-set schedule; the assessment and any accompanying proposed actions should be provided expeditiously to the Director, DIA. This effort should include revalidation of requirements, changes if needed, a risk assessment and the development of alternatives for future actions.

Issue 5

What are the principal DoDIIS-member-related problems and/or defense intelligence community problems to which DIA as the DoDIIS Executive should be directing more attention and effort?

1. COMMENTS AND OBSERVATIONS

The present DIA DoDIIS Management and Engineering Offices were established in October 1978: concepts and structure for the DoDIIS "System" and Community have emerged and solidified in the intervening four years.

During this same four years, radical changes in computer equipment, capability, and capacity dominated the information system marketplace. Examples include the word processor, the 64K Random Access Memory (RAM) chip, the desk-top computer, the Local Area Network (LAN), and fiber optics.

The Worldwide Military Command and Control System (WWMCCS) matured; direct satellite communications became available for local, remote, and small users; and, collection system assets with greater capacity and wider diversity emerged. As could be anticipated, intelligence users' anticipations rose with an accompanying demand for more intelligence and more reliable intelligence.

Also, larger and more complex DoDIIS component systems left the drawing board and went into development and implementation. Examples are the Navy's Integrated Analysts' Information Processing System (IAIPS) and SAC's SOLARS System.

There is, in the panel's judgment, a need for an active, competent DoDIIS Executive. The panel is convinced that the DIA DoDIIS Office [redacted] should function in this role. The panel, in its recommendations under Issue 1 has also recommended strengthening this office in order that it be able to operate effectively as the DoDIIS Executive.

(b)(3):10 USC 424

At the same time, there did not emerge either from briefings to the panel, or in panel discussions, a clear picture of what were the meaning, advantages, and responsibilities of being a member of the DoDIIS Community. What did become apparent to the panel was the need for the DIA DoDIIS Office to address on a fast track schedule a few general topics and some very specific topics of high interest to DoDIIS members. Some of these topics, because of their high visibility are dealt with in other sections of this report. The majority are treated in the recommendations which follow.

The panel observes that the multiplicity of network services, offerings, communication modalities, and computer equipments that are available result in two primary problems or characteristics for a DoDIIS like network, namely:

- A highly structured, tightly controlled management will be constraining as well as impossible to justify.
- A vigorous near term effort needs to be mounted to delineate the benefits to user and manager alike of being a member of the DoDIIS Community.

2. RECOMMENDATIONS

The DIA DoDIIS Office should explicitly address the following topics and prepare position papers for DoDIIS member discussion and/or for decisions by DIA senior management.

a. Is configuration control of DoDIIS as a whole and of DoDIIS component systems a needed and appropriate function for the DIA DoDIIS Office?

b. Should the DIA DoDIIS Office confine itself to activities bounded by network links, access equipment or "ports" at each DoDIIS node, DIA DoDIIS nodes and "trans-component" information/flow?

c. How should DIA improve DoDIIS member access to DoDIIS files as well as to files of NSA, CIA, etc.?

d. What quality control should be exercised over data generated by DoDIIS members and accessed by other DoDIIS members?

e. What responsibilities for training should DIA assume or require of DoDIIS members? Should DIA mount an initiative to retain via rotation military personnel trained "in DoDIIS"?

f. The panel believes there are serious weaknesses in a few areas which need immediate attention and correction by DIA both senior management and the DoDIIS Executive. Discussion follows:

(1) DoDIIS as a single entity or as a loose federation of components has no performance requirements which must be met. A DoDIIS performance plan should be developed and qualification testing against this plan initiated. To date, there appears to have been no evaluation of performance within the DoDIIS system.

(2) In addition to testing and qualifying DoDIIS against a performance plan, DoDIIS needs to be "exercised" against a variety of scenarios. Even though DoDIIS is considered a peacetime system, there are no "figures of merit" for it in scenarios describing normal operation, local "outages", high stress situations, and the like.

(3) Technology transfer among and to DoDIIS members is inadequate and needs direction by the DIA DoDIIS Office.

(4) Accountability systems or measures do not appear to exist in DoDIIS today. Without such accountability, file usage, information usage, access controls, etc., cannot be determined. Developing DoDIIS accountability procedures should be given high priority.

Issue 6

Will DoDIIS as a Defense Community-wide intelligence handling system be able to support new collection systems being implemented in the near term (i.e., in the mid-to-late 1980's)?

1. COMMENTS AND OBSERVATIONS

One of the very specific concerns of the panel was whether DoDIIS, as the principal DoD intelligence handling system had either a clearly defined mission or a clearly defined capacity to handle the increasing load of raw and/or finished intelligence from planned new collection systems.

Some of the questions raised by the panel were:

a. What is the estimated increased load on input, communications, DBMS, and display within DoDIIS?

b. Can collected imagery be assimilated into existing DoDIIS files?

c. Is the DoDIIS file "update" capability adequate for the increased load?

d. If new intelligence processing systems are being developed to handle the new collection systems has the necessary planning for interface to DoDIIS or DoDIIS users been adequate?

e. Is the functional planning from the Defense Intelligence Plan (DIP) to DoDIIS in place?

Unfortunately, the DoDIIS Office had neither adequate organizational access nor resources to satisfy the panel that the question posed by this Issue was well-in-hand.

The panel can note nevertheless that any augmented data handling capacity to "exploit" the new collection products will require a minimum of three years to come on-line. Actions to acquire some measure of augmented capacity were not apparent by November 1982. Hence, any FOC dates will be late dates.

Dissemination to theater and local commanders of usable overhead imagery is not well-in-hand. DoDIIS responsibility is still unclear and needs clarification. Also, the uncertainty of transition of DoDIIS functions as crisis/warfare escalates makes separate and directed DoDIIS action on this topic much more critical and more complex than those previously and currently within DoDIIS purview.

2. RECOMMENDATIONS

a. DoDIIS should concentrate its current efforts in the imagery field to imagery data handling (file update/file distribution), as exemplified by Advanced Imagery Requirements and Exploitation System (AIRES). The existing working relationship between DIA/[redacted] AND DIA/[redacted] in the development and operation of AIRES has been, relatively speaking, very satisfactory from a user point of view. This relationship should be continued and enhanced. It should form the basis for initiating, expeditiously, a joint [redacted] planning project for the next step to timely and effective ADP support to imagery exploitation. The primary support areas will be in the incorporation of current advances in intelligence, graphics terminals for "soft copy" exploitation and the currently obvious availability of very high capacity digital image storage devices in the last half of the 1980's. This project should also provide the foundation for recommendation c. below.

(b)(3):10 USC 424

(b)(3):10 USC 424

b. DoDIIS management should vigorously pursue organized efforts to familiarize DoD and Congressional policymakers with the need for complementary processing resources matching, by product, the resources already assigned to new collection systems.

c. The DoDIIS Office should develop expeditiously, with the formal cooperation of DIA/DC and the DoDIIS managers and users, a position paper treating the responsibilities of DoDIIS in the collection environment of the

mid-to-late 1980's. Needed resources should be specifically identified. DIA senior management should, utilizing this position paper, develop a DoDIIS-specific policy for the collection environment of the mid-to-late 1980's.

Issue 7

Does the DoDIIS Office have the organizational stature, assigned responsibilities and the personal and financial resources to manage or be the "Executive" for the DoDIIS Community?

1. COMMENTS AND OBSERVATIONS

The Director of the DIA DoDIIS [redacted] reports to the Assistant Director for Resource and Systems (RS). This appears to the panel to be an appropriate organizational position for the Office and to allow its Director adequate access to the Director, DIA.

(b)(3):10 USC 424

The panel observes that the DIA DoDIIS Office has had limited involvement with the GDIP Managers in collection, I&W system planning, and other major areas of responsibility of DIA. This would seem short-sighted and perhaps inhibitory to good management practices since DoDIIS components play an important role in providing collection materials and I&W information to intelligence analysts. The panel understands that this is being corrected.

The staffing of the DoDIIS Office [redacted] is as follows:

(b)(3):10 USC 424

	1982	1983	1984	1985
PROFESSIONAL				
Civilian				
Military				
ADMIN/CLERICAL*				

(b)(1),1.4 (c)

*(No military clerical)

The panel is uncertain as to how these staffing levels match office functional loads, but does not wish to practice micromanagement so it plans no specific comment here on what is an appropriate staffing level.

It is clear, however, that many of the DoDIIS Office functions are in direct support of DoDIIS components and often of individual components. An example would be assisting an individual DoDIIS component in applying adequate computer security processes to gain accreditation for compartmented operation.

For such support functions the DoDIIS Office performs an overhead activity for DoDIIS components which would otherwise have to be borne by them. Some budgetary relief would appear to be in order. There is a precedent here, since in the 1960's, the predecessor DIA office to the present DoDIIS Office had funding included for such overhead functions in the DIA budget. This office was DIA-MS and the system in question was the Intelligence Data Handling System (IDHS).

The DoDIIS Office, until very recently, has been principally concerned with individual developmental project management and resource needs and with basic system matters such as networking, the design and use of specific systems standards, and with computer security. While these are of critical importance and should not be slighted, significant benefits to Defense Intelligence can be achieved when the DoDIIS Manager and his GDIP functional manager counterparts in DIA work closely together with common goals for improving operations within each functional area across the total GDIP community.

The GDIP Functional Managers, until recently, have principally focused their attention on DIA's internal functional operations. Where functional interface has been required with Command and Service activities, it has been pursued from the perspective of access to a "DIA system" or file. Past levels of ADP and telecommunications technology have been such that this approach to providing functional support to the Commands and Services has been satisfactory. However, with the advent of the newest networking and

processing technologies, this approach has been recognized as having limited utility and a distinct evolution toward the development of a truly GDIP-wide functional perspective by the GDIP Functional Manager will significantly impact DoDIIS and the way the DoDIIS Manager does business.

The movement toward greater GDIP community-wide "standardized" functional activity is being pursued by the various GDIP Functional Managers at varying levels of intensity. The degree of intensity in each case is a function of multiple factors, some of which fall outside the control of the GDIP Functional Managers.

2. RECOMMENDATIONS

a. DIA senior management should review DoDIIS Office staffing and funding resources to reflect their adequacy to meet those additional functions recommended in this report and accepted by the Director, DIA.

b. DoDIIS Office functions should be listed against its four major areas of responsibilities and resources should be matched against these areas of responsibilities.

- Direct support of individual DoDIIS components in such areas as computer security accreditation, specific technology or product transfers, etc.
- Engineering planning and project execution for the DoDIIS Network, and the DoDIIS Technical Development Plan (as discussed in Issue 3).
- Policy, programming and budgetary activities performed in conjunction with DIA peer staffs to effect coordinated DIA efforts. Examples include working with functional GDIP managers, with the INCA Office and with DIA-DT to support S&T analysts.
- Indirect DoDIIS management support functions needed for cohesive

DoDIIS operation and which transcend responsibilities of individual DoDIIS components.

c. The Director, DoDIIS Office (b)(3):10 USC 424 should be encouraged to continue his excellent performance and the continuing addition of highly qualified personnel to his staff. The DIA DoDIIS Office staff is already highly competent, highly professional, and superbly motivated.

d. DIA and DoDIIS need to be prepared for a rather different future. With few exceptions, each of the operational functions being defined by one GDIP Functional Manager impacts on how another will do business; and the total of the functional efforts being developed requires an approach to integrated functional and ADP (DoDIIS) management that goes far beyond the single function/single ADP system management now pursued within the GDIP Intelligence Community. This evolving GDIP-wide perspective on the part of the GDIP Functional and DoDIIS Managers requires the development of new, more integrated techniques for the management of efforts in both areas. GDIP Functional Managers must define, in the planning stage, exactly how it is they intend DoD intelligence to operate and what impact changes in one functional area will have on the others. Based on these detailed plans, analysis must be conducted to determine the least costly approaches to satisfying the new integrated data handling requirements DoD-wide. Then, and only then, can and should new DoDIIS subsystems be developed.

e. The establishment of above recommended management systems should be undertaken without delay. In the near term this will require better definition of responsibilities and authorities for the GDIP Functional and DoDIIS Managers in the overall management process; access by these managers to additional resources earlier for performance of the planning and analysis functions; and fuller incorporation of the functional and ADP managers of the

Operating Commands and Military Services into the management process. (The DoDIIS Office has in development a life cycle management concept which is intended to satisfy the last of these needs).

SECTION XI.

The Panel's original charter contained five questions posed for Panel response. The Panel, as noted in the Introduction, modified its focus of attention with the concurrence of DIA/AC. However, to satisfy possible anticipation, "one-liner" responses are provided below.

QUESTION 1

Are the objectives as well as the architectural and acquisition approaches in the Master Plan appropriate for the DoDIIS? Will the currently planned architectural and acquisition approaches meet the desired set of objectives and best serve the system users?

ANSWER: Yes

QUESTION 2

Does the Technical Development Plan properly identify the tasks to be accomplished and provide reasonable schedules for those tasks? Is there adequate progress in achieving the technical direction? For example, what criteria are available to choose the specific type of operating system or data base management software? Do the requirements and criteria accommodate different choices at each node while maintaining required interoperability?

ANSWER: See discussion of the Technical Development Plan in Issue 1.

QUESTION 3

Why does implementation take so long? For example, the Army System for Standard Intelligence Support Terminals (ASSIST) has been in existence -- at least as a system name -- for over 10 years. What is its current status? Did it ever serve the user? What about DIA's own node, the SAFE Program, and the extension of its technology both within DIA and within the Community.

ANSWER: The Panel does not believe ASSIST is a typical case. It believes "software" transfers between DoDIIS components will significantly speed up implementation. See Issue 4 for a discussion of SAFE.

QUESTION 4

What new user language, data base and other hardware and software technologies are being factored into DoDIIS to keep it from becoming obsolete? How do DoDIIS data base systems compare with the needs of the users of those data bases? How can technology implemented by other intelligence agencies and the private sector be factored into DoDIIS?

ANSWER: The Panel suggests active investigation of any Higher Order Language (HOL) for possible entry into DoDIIS as a standard. A key action is to develop a plan for phasing out of 21 V computers and phasing in a new computer suite(s). Program Descriptive Languages (PDLs) deserve more attention by DoDIIS. For useful technology transfer, the 7930 document series serves as an excellent example for software technology transfer.

QUESTION 5

Should ADA be adopted as the higher order programming language for DoDIIS? If so, when should it be phased in? Would any modifications need to be made to the architectural plans?

ANSWER: The Panel recommends against adoption of ADA as a standard DoDIIS HOL at the present time. N.B. DoD Directives now require use of ADA for "real-time" systems.

APPENDIX A

TERMS OF REFERENCE

DoDIIS PANEL

20 November 1981

BACKGROUND: On 1 June 1980, the Defense Intelligence Agency published a comprehensive Department of Defense Intelligence Information System (DoDIIS) Master Plan. The plan is regularly updated with a new edition expected in October 1981. The plan also incorporates a Technical Development Plan which defines the major technical tasks required to support the Master Plan objectives. The plan is intended to provide rational boundaries for all DoDIIS efforts throughout this decade. Certain major deficiencies in the baseline DoDIIS have been identified in that plan. These are: a limited capability to handle required volume and meet timeliness criteria for intelligence information, technological obsolescence in both hardware and software at many DoDIIS locations, and the lack of an architectural and acquisition approach with sufficient flexibility to accommodate changes in requirements and technology. At this juncture, a review by the Advisory Committee should prove beneficial.

OBJECTIVES: The DoDIIS Panel will address the following questions:

(a) Are the objectives as well as the architectural and acquisition approaches in the Master Plan appororpiate for the DoDIIS? Will the currently planned architectural and acquistion approaches meet the desired set of objectives and best serve the system users?

(b) Does the Technical Development Plan properly identify the tasks to be accomplished and provide reasonable schedules for those tasks? Is there adequate progress in achieving the technical direction? For example, what criteria are available to choose the specific type of operating system or data base management software? Do the requirements and criteria accommodate different choices at each node while maintaining required interoperability?

(c) Why does implementation take so long? For example, ASSIST (an Army system in several DoDIIS nodes) has been in existence--at least as a system name--for over 10 years. What is its current status? Did it ever serve the user? What about DIA's own node, the SAFE program, and the extension of its technology both within DIA and within the Community.

(d) What new user language, data base and other hardware and software technologies are being factored into DoDIIS to keep it from becoming obsolete? How do DoDIIS data base systems compare with the needs of the users of those data bases? How can technology implemented by other intelligence agencies and the private sector be factored into DoDIIS?

(e) Should ADA be adopted as the higher order programming language for DoDIIS? If so, when should it be phased in? Would any modifications need to be made to the architectural plans?

In the search for answers to the above questions, recommendations on systems approaches for various functions will result. However, the effort also will include interface with various user elements and will grapple with the question of how well the DoDIIS concept achieves the ultimate goal of serving the user/analyst.

LEVEL OF EFFORT: The panel will consist of about six members and require about six meeting sessions. The panel will provide status reports at each Advisory Committee meeting and will submit an interim written report to the Director within six months. A follow-up report will be provided to the Director within one year which will include a program assessment and recommendations for further activities of the panel. Thereafter the panel will convene and provide update reports as required. The DIA Technical Advisors for this effort are (b)(3) 10 USC 424

PANEL CHAIRMAN: (b)(3) 10 USC 424

APPRENDIX B

DIA/AC DODIIS PANEL

(b)(3) 10 USC 424 hairman

(Member)

(b)(3):10 USC 424)

(Associate)

(b)(3) 10 USC 424 (Member)

(Associate)

(b)(3):10 USC 424 (DIA Technical Advisor)

(DIA Technical Advisor)

(b)(3):P.L. 86-36 (NSA Technical Advisor)

APPENDIX C

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
25 NOVEMBER 1981 - POMPONIO PLAZA - ROSSLYN, VA.

0900 EXECUTIVE SESSION (b)(3):10 USC 424

- Discussion of the agenda for the session and the objectives to be accomplished.

0915 DODIIS OVERVIEW (b)(3):10 USC 424

- A refresher briefing on the organization and management of DODISS, the various projects included and related funding profiles.

0945 DODIIS ENGINEERING (b)(3):10 USC 424

- An overview of the plans, budget and design approach used by DODIIS Engineering to satisfy the DODIIS user.

1045 BREAK -------

1100 REPRESENTATIVE USER REQUIREMENTS (b)(3):10 USC 424

- An assessment of the various DIA user requrements that DODIIS should satisfy, how the user defines his requirements and how well the user expects current and planned DODIIS elements to satisfy his requirements.

1215 BREAK FOR LUNCH --------

1300 SAFE PROGRAM (b)(3):10 USC 424

- Discussion of the DIA node of the DODIIS program.

1400-1630 EXECUTIVE SESSION (b)(3):10 USC 424

- Detailed discussion of the Terms of Reference.
- Command Element views. (b)(1):10 USC 424
- Planning of dates and topics for future sessions.

1630 ADJOURN

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
11 JANUARY 1982 - PLAZA WEST - ROSSLYN, VA.

0900 EXECUTIVE SESSION

(b)(3):10 USC 424

- Discussion of the agenda for the session and the objectives to be accomplished.

0910 NAVY DODIIS PROGRAM

(b)(3):10 USC 424

- This briefing and the two that follow are intended to provide the individual Service perspectives of the DODIIS program, to include Service unique initiatives.

0950 ARMY DODIIS PROGRAM

(b)(3):10 USC 424

1030 AIR FORCE DODIIS PROGRAM

1110 BREAK FOR LUNCH

1130 COINS PROGRAM OVERVIEW

1230 COINS DEMONSTRATION

(b)(3):P.L. 86-36

COINS User Support Group

1315 COINS TERMINAL ACCESS SYSTEM (TAS)

(b)(3):10 USC 424

1415 MULTI RETRIEVAL LANGUAGE TRANSLATION MAN-MACHINE RELATION PROGRAM

1500 ADAPT II DEMONSTRATION

1600 ADJOURN

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
22 FEBRUARY 1982 - PLAZA WEST - ROSSLYN, VA.

0900 EXECUTIVE SESSION (b)(3):10 USC 424

- Discussion of the agenda for the session and the objectives to be accomplished.

0910 SAC DODIIS PROGRAM (b)(3):10 USC 424

- This briefing and those that follow are intended to provide the individual user perspectives of the DODIIS program, to include element unique initiatives.

1030 BREAK --------

1045 REDCOM DODIIS PROGRAM (b)(3):10 USC 424

1145 BREAK FOR LUNCH

1230 LANTCOM DODIIS PROGRAM

1345 BREAK

1400 FTD DODIIS PROGRAM

1530 DODIIS MANAGEMENT BRIEF--NETWORKING

1600 EXECUTIVE SESSION

1630 ADJOURN

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
15 MARCH 1982 - PLAZA WEST - ROSSLYN, VA.

0900 EXECUTIVE SESSION

(b)(3):10 USC 424

- Discussion of the agenda for the session and the objectives to be accomplished.

0915 ADA PROGRAM

(b)(3):10 USC 424

1015 BREAK

1030 EUCOM DODIIS PROGRAM

1115 DODIIS MANAGEMENT BRIEF--NETWORKING

1200 LUNCH

1230 DIA LONG RANGE ADP PLANNING

1330 BREAK

1345 DODIIS MASTER PLAN

1445 DODIIS TECHNICAL DEVELOPMENT PLAN

1545 EXECUTIVE SESSION

1630 ADJOURN

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
12-13 APRIL 1982 - PLAZA WEST - ROSSLYN, VA.

12 April

0900 EXECUTIVE SESSION (b)(3):10 USC 424

- Discussion of the agenda for the session and the objectives to be accomplished.

0910 IMAGERY EXPLOITATION CYCLE

0930 THEATER LEVEL EXPLOITATION SYSTEMS

- Army
- Air Force

(b)(3):10 USC 424,(b)(6)

1045 BREAK

1100 IRDC ADVANCED TECHNOLOGY

1145 BREAK FOR LUNCH --------

1230 DEPART FOR CIA

1300 CIA INTERIM SAFE HARDWARE DEMONSTRATIONS (b)(1),(b)(3):50 USC 403 (g)

1500 DEPART FOR ROSSLYN

1530 SAFE PROGRAM REVIEW (b)(3):10 USC 424

1630 ADJOURN

13 April

0900 EXECUTIVE SESSION (b)(1),(b)(3):50 USC 403 (g)

0930 NPIC MANAGER'S PERSPECTIVE (b)(6)

- Briefing provides a description of NPIC system and acquisition planning and provides an overview of the activities necessary for implementation of a new NPIC system.

1045 BREAK ----------

1100 DODIIS MANAGER'S PERSPECTIVE (b)(3):10 USC 424

- (b)(2),(b)(3):10 USC 424 will discuss the existing and near term exploitation systems and their relation to DoDIIS.

1200 BREAK FOR LUNCH ----------

1300 AIRES PROGRAM REVIEW (b)(3):10 USC 424

- Briefing reviews the Advanced Imagery Requirements and Exploitation System from the standpoint of integration with DoDIIS and the unique planning that is being accomplished.

1400 DEFENSE DISSEMINATION SYSTEM (b)(3):10 USC 424

1500 EXECUTIVE SESSION

- Planning for future sessions
- Planning for final report

1630 ADJOURN

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
27 MAY 1982 - PLAZA WEST - ROSSLYN, VA.

0900 EXECUTIVE SESSION

(b)(3):10 USC 424

- Discussion of the agenda for the session and the objectives to be accomplished.

0915 ADP ACQUISITION AND MANAGEMENT

(b)(2),(b)(3):10 USC 424

1015 BREAK

1030 DODIIS ARCHITECTURE

1115 LONG RANGE R&D REQUIREMENTS FOR DODIIS

1200 LUNCH

1300 EXECUTIVE SESSION

1630 ADJOURN

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
14 JUNE 1982 - PLAZA WEST - ROSSLYN, VA.

0900	EXECUTIVE SESSION	(b)(3):10 USC 424
0910	DoDIIS COMPUTER SECURITY	
1000	BREAK	----------
1015	BLACKER PROGRAM UPDATE	(b)(3):P.L. 86-36
1130	SAFE PERSPECTIVES	(b)(1),(b)(3):50 USC 403 (g)
1215	LUNCH	-------
1315	SAFE PROGRAM UPDATE	(b)(3):10 USC 424
1400	SAFE USER PERSPECTIVE	
1500	DOD COMPUTER SECURITY CENTER	(b)(3):P.L. 86-36
1600	EXECUTIVE SESSION	(b)(3):10 USC 424
1630	ADJOURN	

AGENDA
DIA ADVISORY COMMITTEE - DODIIS PANEL
13 JULY 1982 - PLAZA WEST - ROSSLYN, VA.

0900	EXECUTIVE SESSION
0915	DEFENSE DATA NETWORK
1000	DODIIS NETWORK & TRANSITION INTO DDN
1045	BREAK
1100	COMPUTER SECURITY & NETWORKING
1200	LUNCH
1300	EXECUTIVE SESSION
1630	ADJOURN

(b)(3):10 USC 424,(b)(6)

APPENDIX D

DEFENSE INTELLIGENCE AGENCY
ADVISORY COMMITTEE
WASHINGTON, D.C. 20301

U-113/AC

21 April 1982

Lieutenant General James A. Williams, USA
Director
Defense Intelligence Agency
Washington, D.C. 20301

Dear Jim:

The CIA/DIA SAFE Program has recently been audited by a joint CIA/DIA Team as well as having been reviewed by a CIA Advisory Group. Both groups found the SAFE Program to be seriously flawed.

SAFE is important to DIA not only for its contribution to DIA's automated capabilities but also because it reflects DIA's ability to satisfactorily manage developments of automated information handling systems.

The progress and status of SAFE are also of considerable interest to the DCI, SecDef, the NSC and Congress. As a consequence, the remedial managerial actions taken by DIA in the immediate near term will be significant in the perceived credibility of DIA to manage other DoDIIS planning and operational functions.

The DoDIIS Panel of the DIA Advisory Committee would like to call to your attention the following observations and suggestions we have developed after hearing the results of the SAFE audit and an account of the CIA Advisory Group's review:

1. DIA should be a full partner in the decisions which must be made within the next few weeks. You should have a senior representative with your full support working with whatever managerial mechanism is set up by DCI to address SAFE issues. DIA participation in the past on policy issues has not appeared to be as a co-partner with CIA.

2. You should request an impact assessment from the DoDIIS office of the effect on DIA of the options under consideration for SAFE's continuation. These appear to include three from the audit team report, one from the CIA Advisory Group and several from Admiral Inman. You should have these impact assessments before having to make SAFE decisions, not after such decisions are made. One option which should be included is what realistically can be expected from a SAFE system within the current approved funding profile.

(b)(1),(b)(3):50
USC 403 (g)

3. The panel has been told that contractor funds are being expended at the rate of slightly over [redacted] and that none of these funds are being applied directly to the DIA components of SAFE (Blocks 3 and 4). You should not tolerate this imbalance of emphasis. The SAFE Project Office should direct the prime contractor [redacted] to include in his ongoing efforts,

(b)(1),(b)(3):50
USC 403 (g)

parallel activities supporting both CIA and DIA. Experience has shown that if such parallel emphasis is not in place, the components of lower priority, i.e., DIA, never "make it" within the approved funding profile.

(b)(1),(b)(3):50 USC 403 (g)

4. Admiral Inman has set up a four person advisory group to review the revised schedule and costing estimates requested [redacted] This group, all from the private sector, would appear to benefit from the addition of someone who could more specifically represent DoD, i.e., DIA's interest. We suggest you consider adding someone to the group with this end in mind. I would add personally that on 15 April I talked to [(b)(3):10 USC 424,(b)(6)] one of the members of the group, who highlighted the fact that Bobby Inman plans to retain this group as an ongoing advisory body for SAFE activities. This lends emphasis to the panel's recommendation to you on this point.

(b)(1),(b)(3):50 USC 403 (g)

5. The panel believes that inadequate scheduling, costing, risk and benefit analyses, and priority information have been provided by or requested from the prime contractor [redacted] We suggest that you ask the contractor to provide this management data matched to your revalidated DIA SAFE requirements. No decision on SAFE's future can properly be made by you or the DCI without this data in hand. DIA's internal revalidation of its SAFE requirements and priorities will provide a necessary template against which to judge the adequacy of proposed revisions to SAFE.

6. The composition and performance of the DIA SAFE Program Office should be assessed immediately in an effort to strengthen it or to make needed changes. The panel is strongly convinced that DIA's interests need to be taken more into account in SAFE scheduling than they have been to date.

The panel makes these suggestions and observations to you because it endorses the basic precepts which have led to the initiation of the SAFE program. It also encourages the continuation of the SAFE program as a joint DIA/CIA activity. At the same time the panel is concerned that the risks and uncertainties attendant to the SAFE program as currenly being managed and implemented, may seriously erode the anticipated benefits. Accordingly, we urge your attention to this report.

Sincerely,

/Signed/

[(b)(3):10 USC 424]

Chairman,
AC DoDIIS Panel

29

REPORT 85-2

of the

DIA SCIENTIFIC ADVISORY COMMITTEE

to the

Director

DEFENSE INTELLIGENCE AGENCY

SPECIAL ACTIONS PANEL

July 1985

CLASSIFIED BY: DIA (DT-SAC)
DECLASSIFY ON: ~~OADR~~

(This Page is UNCLASSIFIED)

DIA/SAC REPORT 85-2

This report was prepared and approved by the

DIA Scientific Advisory Committee's

SPECIAL ACTIONS PANEL

MEMBERSHIP

(b)(3):10 USC 424

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THE DIA SCIENTIFIC ADVISORY COMMITTEE

Chairman

(b)(3):10 USC 424

Vice Chairman

(b)(3):10 USC 424

Members-at-Large

(b)(3):10 USC 424

Associate Members

(b)(3):10 USC 424

DIA Ex Officio

(b)(3):10 USC 424

Assistant Deputy Director for Scientific and Technical Intelligence

Executive Secretary

(b)(3):10 USC 424

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SPECIAL ACTIONS PANEL

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PREFACE (U)

1. (U) The Special Actions Panel was formed at the request of the Director, DIA to assess the full range of the internal DIA effort to fulfill its mission of providing the required intelligence support to counter terrorist actions. This assessment was to include the Agency's interactions with other government agencies having responsibilities in this area. Covered during the Panel's study were issues involving the resources available within and outside the Agency; the organization and planning required to collect, analyze and disseminate comprehensive and timely intelligence products to using activities; and the management functions necessary to the conduct of an effective program to anticipate, oppose, react to or counter the threat of potential terrorist action against U.S. Military Forces and facilities worldwide.

2. (U) The panel obtained data through briefings, interviews, and discussions with a variety of agencies, activities, and personnel (See Appendix C for agendas of these meetings.) Either individually or as a group, the members of the Panel received information on the collection, analysis and dissemination functions of the respective branches of the Services, the DIA, CIA, NSA, FBI, the Department of State, and the USDR&E. The Panel was also able to interview one member of the Long Commission (which investigated the bombing of the headquarters and billeting building in the U.S. Marine compound at the Beirut International Airport), and visited the headquarters of CENTCOM, the U.S. Command having deployment responsibilities to many areas of the world where the threat of serious terrorist activity is prevalent.

3. (U) Throughout the course of its study, the Panel concentrated its inquiry on the role of the DIA in providing timely intelligence support during crisis situations and the ability of the Agency to provide the intelligence analyses

required to permit preparation for contingency situations involving terrorist action and counter action.

INTRODUCTION (U)

1. (U) The threat of international terrorism and the U.S. response to that threat presents new challenges to the intelligence community in general and to the DIA, specifically. Terrorism is, in essence, a current "state of war" with the near real time responsibilities such a state places on the intelligence apparatus, as well as a long term problem that can expand geographically and technologically. This dual problem represents a new management challenge.

2. (U) Because of the sensitivity of highly developed societies to acts of terrorism and the saturated media attention of each event, the U.S. response is virtually government-wide. The complexity of interagency relationships and responsibilities is further complicated by the overlay of existing law which proscribes certain actions or even access to data by various parts of the intelligence community.

3. (U) The DIA has one unique responsibility amongst the intelligence agencies. Namely, the Director is (b)(3):10 USC 424 [redacted] Considering the diverse nature of the threat worldwide, and within each command's areas of responsibility, this is a formidable task and one not readily susceptible to a single outline or approach. The DIA must construct a program that will permit it to (b)(3):10 USC 424 [redacted]

4. (U) Evaluation of the DIA's planning of its intelligence support program in the field of terrorist counteractions appeared to the Panel to fall into the following broad categories: (a) Organization, (b) Fusion of data,

(c) Relationships with other governmental agencies, (d) Training of analysts, and (e) Technology. Each of these areas were examined by the Panel and addressed in turn in this report.

SECTION I

ORGANIZATION (U)

1. (U) The organizational assignments within the DIA for terrorism/counterterrorism (T/CT) and related functions are defined in the Director's memorandum of 30 July 1982 (Appendix A). In that memorandum, primary responsibility for counterterrorism/counterintelligence was assigned to [redacted] with the lead supporting role being given to [redacted] Other T/CT assignments within DIA were made to [redacted]. Since receiving the new assignments, the overall organization appears to have worked relatively well in implementing the objectives of the revised DIA T/CT program.

2. (U) OS [redacted] organized itself rapidly and appears to have done an excellent job to date. It has provided focus and coordination with respect to all T/CT activities, and has been particularly effective in terms of leadership, emphasis and focus during this transitional period. For its part, [redacted] has provided generally effective support to all efforts tasked to it, and, in the process, has created a highly capable and impressive subgroup [redacted] (b)(3):10 USC 424 [redacted] to handle assignments relating to CT targeting. These accomplishments would appear to be due to three factors:

a. (U) The overall quality of the personnel assigned to the [redacted] and [redacted] activities. (b)(3):10 USC 424

b. (U) The strong personal interest in and support from the Director in the T/CT program has permitted [redacted] to act as his representative in utilizing the capabilities within DIA, and has been influential in the dealings by [redacted] (b)(3):10 USC 424 with other government agencies having responsibilities in the T/CT area.

c. (U) The professional expertise and background required by the T/CT program have been provided by the broad, in-depth analytical capabilities of [redacted]

3. (U) It appears to the Panel that the assignment of primary responsibility for T/CT activities to [redacted] has been an important factor in the overall success experienced by the DIA to date. Of equal importance, however, has been the substantial resources which [redacted] has been able to provide in its major supporting role. There are obvious indications of some competition between [redacted] and [redacted] in the developmental stages of the process. However, these organizations do not operate, and have not operated, at cross purposes, and it would appear the the working relationships observed have been both satisfactory and result producing.

(b)(3):10 USC 424

4. (U) It is the Panel's view that the original organization has worked well to date. However, the questions of how best to anticipate future intelligence needs in the area of terrorism and how to organize to meet those needs remain. The answer, of course, depends upon how accurately the effort required in the future can be identified.

5. (U) As pointed out previously, counterterrorism activities are likely to involve an uncommon amount of liaison and coordination with other government agencies. While continued attention to "current" terrorism activities will be required, as recommended by this report, longer term analyses are required. These must include attention to parts of the world that have not yet felt the "heat" of terrorism but are likely candidates (e.g., Philippines, Japan, South or Central America), as well as anticipation of more "technologically advanced" terrorism including BW/CW and nuclear.

6. (U) With this in mind, the Panel considered three different organizational arrangements for the lead and principal support T/CT activities within DIA.

a. (U) Continuing with the present organization where the lead effort is in [redacted] and the key support and targeting work being accomplished is in [redacted]

(b)(3):10 USC 424

b. (U) Placing all T/CT activities in [redacted] (b)(3):10 USC 424

c. (U) Placing all T/CT activities in [redacted]

7. (U) After considering the various factors and weighing the pros and cons, the Panel concludes that the current organizational structure, with a minor modification, is best suited to deal with the critical issues that lie ahead. Our reasoning is based on the following considerations:

a. (U) The need for a special group reporting directly to the Director's office to assure that the needed emphasis and attention will continue. Also, the critical, longer range planning related to other geographical areas and to other unconventional threats (BW/CW and nuclear) needs to be initiated with the Director's close association and guidance.

b. (U) The need for the continuing close coupling of the [redacted] T/CT efforts to the other professional intelligence activities in [redacted] (b)(3):10 USC 424

8. (U) It is recommended that the present Counterterrorist Threat Branch [redacted] be elevated to a position parallel with the Counterintelligence Division [redacted] and directly under OS. It is also recommended that [redacted] then have two branches, one addressing current problems and the other devoted to the longer term issues. (b)(3):10 USC 424

SECTION II

FUSION (U)

1. (U) One of the findings of the DOD Commission on the Beirut International Airport Terrorist Act of October 23, 1983 (hereafter the "Long Commission Report") was the conclusion that there was no institutionalized process then in being for the "fusion" of all of the intelligence mechanisms within the U.S. Government into an "all-source" support mechanism available to the Commander, U.S. Multinational Force. Further, the Long Commission Report went on to note that the U.S. intelligence effort is primarily oriented to support requirements which are more strategic in nature (air and naval forces engaged in nuclear and conventional warfare) than tactical (ground forces, task forces, and special operational units). The Panel did not attempt to evaluate the findings of the Long Commission Report; rather it recognized and considered that the task of reducing an abundance of generalized data into pointed analysis on a very limited subject or target is a rigorous one and requires a methodology that is both comprehensive and integrated.

2. (U) Recent terrorist activities have focused attention on the shortcomings (both real and perceived) of the methodologies of U.S. intelligence activities within the T/CT field. One specific criticism has been the seemingly inability of our intelligence agencies to provide precise information on the how, where, and when of a potential terrorist incident, whether it is a violent act aimed at disrupting U.S. activities abroad or at one of our Allies. The principal challenge facing the DOD, and thus the DIA, is the tailoring and timely delivery of terrorist related intelligence which fits the specific needs of the U.S. Commander who would be involved.

3. (U) During its work, the Panel was, and remains, aware of the interest evidenced by the Long Commission in the creation of an all-source "Fusion

Center" to serve as the focal point for the receipt of collected data which the Center would thereafter tailor to suit the needs for commanders in areas of high threat, conflict or crisis. The data to be processed by such a Center would include foreign intelligence, counterintelligence, and information received from the FBI and other law enforcement agencies operating worldwide. One possible location for a Fusion Center might be the Washington, D.C. area, but with a mobile feature permitting transportation of a portion of the Center to the field for easier access by the on-scene commander during a terrorist incident.

4. (U) TENCAP and other examples suggest that a primary difficulty which the proposed Fusion Center would encounter during its operation is the "we'll send you all the information you need but we shall decide what material you need" attitude on the part of the various national intelligence sources which will feed data to it. Most notable of these agencies are the FBI and law enforcement agencies which have other considerations with respect to the sort of information which can be disseminated (e.g., prosecution of crimes, Privacy Act, etc.). To meet this potential problem, the Panel suggests a "learn-as-we-go" approach to the idea of a Center, rather than the sudden creation of a new intelligence entity before its charter can be fully agreed upon (perhaps making it an irreversible, but not well thought out event).

5. (U) The Panel has seen ample evidence that the entire Intelligence Community was stunned by the events in Lebanon and has subsequently recognized the need to work in a unified way within the community to provide timely, precise, tailored and effective intelligence support to commanders who face the terrorist threat in a wide variety of difficult overseas situations. As the community gains additional experience with tools such as FLASHBOARD's communication link between terrorism analysts and the shared terrorism data

base offered by DESIST, a focused or coordinated intelligence product regarding future terrorist incidents should emerge as the result of this nationwide discourse.

6. ~~(S)~~ Considering the essential role of DIA in this field, the implementation of the National Military Intelligence Support Team (NMIST) and its blending with the already available FLASHBOARD and DESIST, should be the next evolutionary step toward real tactical, and timely, fusion of terrorist intelligence data. NMIST is a quick reaction intelligence capability consisting of analysts/operators, portable communication gear, and low capacity data handling equipment that can be configured and quickly deployed to areas of increased terrorist activity. The design of NMIST allows it to be used in two modes, flyaway and expanded. The flyaway mode uses 2-4 people and equipment that can be carried in suitcases. Operating in the UHF region, it provides an almost immediate hook up to the NMIC, where FLASHBOARD and DESIST are available. It can receive interpreted data selected to support the on-scene commander with which NMIST is collocated. In the expanded mode there are 4-6 analysts/operators and the communication is in the SHF region. More data including limited imagery and ELINT, and some messages and collection management functions are part of this mode. In either mode, NMIST is manned by analysts from DIA who assist in receiving, analyzing and interpreting data from the NMIC which in turn is receiving multi-source data in support of counterterrorist activity on the part of the U.S. forces and facilities involved. The intentions of the Long Commission Report recommendation for a Fusion Center appear to be achieved by the NMIST concept. Therefore NMIST should be exercised and refined for this purpose.

SECTION III

RELATIONSHIPS WITH OTHER AGENCIES (U)

1. (U) From the standpoint of the Defense Department, the organization and structure within the United States capable of dealing with the activities of terrorists is a diffuse, complex, and often overlapping network of agencies. Because of the existence of multiple law enforcement agencies, whether federal or state, which may have both jurisdiction and cognizance within any given political subdivision within the United States, it is often unclear exactly which agency or entity is authorized, or indeed charged with the responsibility, to act, and in what manner, under the circumstances of a terrorist incident (e.g., the bombing or takeover of a Post Office, or Reserve Training Center in the middle of Des Moines, Iowa, or Boise, Idaho, could well involve at least a half dozen municipal, county, state and federal agencies). Thus, because "terrorism" or "counterterrorism" is not the primary responsibility of any particular agency, state or federal, an effective counterterrorism program (whether from the standpoint of intelligence collection and analysis, or terrorist counteraction) must be predicated upon the development of close coordination and effective working relationship among the spectrum of diverse agencies. This becomes all the more important when the safety of U.S. military installations and personnel is concerned.

2. (U) Putting aside the question of how the federal agencies deal with civilian law enforcement agencies at the municipal, county, and state level, it must be recognized that the roles of some of the federal agencies are based upon statute, while those of others may be based upon recognized statements of mission, historical precedent, and common practice. One example of this is the role of the Federal Bureau of Investigation (FBI) as the lead CT agency within the United States, because it is the agency authorized by existing law

to investigate and recommend prosecuting of criminal activity in the United States. Terrorism is still considered as activity constituting criminal conduct; prosecutable as such, when an incident, instigated by groups of this ilk, results in violence, damage to persons and property of U.S. citizens. Thus, the law enforcement activities of the FBI takes on a dual role, even when the conduct being investigated involves violent incidents on installations of the U.S. Armed Forces: namely, the potential criminal activity which is chargeable under existing U.S. criminal law, and the obvious threat to the military posture of the United States. Once outside CONUS, responsibility for CT efforts is shifted to the Department of State which, with considerable support from the CIA, is the lead agency in overseas areas, and particularly within each country where a U.S. consular mission or embassy is established. Thus, in each country, the Ambassador is the legal head of the U.S. "country team", and all coordination with the law enforcement agencies local to that country is conducted through the embassy involved. Once the overseas environment is the stage of a terrorist incident, neither DoD (including parenthetically, the DIA) nor other federal agencies have prime responsibilities for the prevention or handling of such incidents, except to the extent that reaction is required to protect their own agencies, facilities, or personnel. This delineation of responsibility creates problems for military commanders (whether in charge of in-country military installations or as part of some mobile, afloat military contingency unit (e.g., a Marine BLT afloat in the Mediterranean,) because of the following reasons: (a) the military commander may not be in charge, or (b) the other federal agencies with whom the commander must deal (e.g., the State Department, CIA, FBI, etc.) may have other legitimate concerns and priorities. Hence, military considerations may have a relatively low priority. Thus, the

preservation of a viable military capability to respond to its mission requirements may not be uppermost on the minds of the heads of these other activities. Planning for the protection of military forces abroad, and all of our treaty facilities, must include all of these features. Planning for the protection of military forces against terrorist activities rests essentially with DoD and the intelligence support required for this effort rests, in turn, with the DIA. To carry out its part of this effort, the DIA, as well as the local military commander, must have a dedicated, ongoing effort that coordinates well with similar activity on the part of the State Department, CIA, and the FBI with respect to the collection, analysis and dissemination of data.

3. (U) Within DoD, the Services largely "do their own thing", and, in this area, there is much overlap and little direction and coordination. Given the structure, this result is probably understandable, and may actually enhance one desired result, namely, the initiation of vigorous anti-terrorist programs and getting them in place across the spectrum of DoD's activities. However, in order to insure better overall coordination, central direction, timely reaction, and prevention of wasteful overlap of effort, it is apparent that some coherent planning must take place.

4. (U) Coordination and cooperation between DoD and the FBI varies from extremely good to often inadequate, depending upon the quality of the relationships of the personnel concerned. In this respect, it should be understood that the FBI must operate within a mandate imposed upon it by existing law with respect to the sort of information which it can collect and disseminate to other agencies, including DoD, on a routine basis. This is so because data collected by the FBI may often have implications related to prospective, pending or actual prosecution of criminal cases in the civilian

sector. Misunderstanding on the part of military personnel of this situation facing the FBI has been the cause of considerable suspicion regarding the wholeheartedness of the FBI's cooperation and sharing of information, both in the terrorist and other criminal related fields. This suspicion is often not warranted given the constraints with which this law enforcement agency must presently operate, and the additional constraints which may be imposed in the future. By way of contrast, the cooperation and coordination between DIA and CIA appear to be excellent in all respects.

5. ~~(S)~~ The Panel found that DIA personnel involved in counterterrorism activities have, in recent months, devoted considerable time interfacing with their CIA, Service, FBI, and State Department counterparts. Data exchanges like these, at appropriate levels, improve the value of intelligence support and foster an attitude of understanding and cooperation. By encouraging and supporting regular meetings of analysts, the DIA can best insure that its particular counterterrorism concerns continue to receive the attention and response that it needs from other agencies in times of crisis. Because the roles and missions of some agencies are "fixed" either by statute or precedence, DIA is limited in its ability to make substantial changes in the structure of the counterterrorism community. Recognizing this, DIA can however, exert influence on the inter-working of the community by continually expressing its support needs in the appropriate forums (e.g., MIB, NFIB, CIPC, etc.).

SECTION IV

TRAINING (U)

1. (U) When the Intelligence Community launched intensified efforts to counter the worldwide terrorism threat against U.S. personnel and facilities, it examined the various resources which were available to accomplish the objective assigned. Among the key resources available to these efforts were, and remain, the analysts who produce the usable intelligence needed by the consumers who were and are faced with the threat. One of the first areas which the Panel examined was the availability and conduct of training for these analysts and their successors. The Panel discovered that training has been, and remains, a neglected area. As a result, it appears that persons who are now identified as "terrorism analysts" usually are those who have "emerged" as "experts" in this field simply by sheer dint of their having worked within a particular specialty area (i.e., the Middle East, Central America, etc.) for a long time. Consequently, these analysts possess a certain conversance about political parties and entities, and groups with interest to be served by such violent terrorist activity. This handful of analysts has gathered a considerable body of data on groups and activities which, unfortunately until recently, was not focused on terrorism as a separate discipline. When the "need" to deal with this area of intelligence gathering became paramount within the Intelligence Community, it was discovered that many agencies possessed no "terrorism analysts" as such, and had to make do with qualified in-country or area specialists. Thus, the analysts now available to being committed in the T/CT effort have been trained in the economic, political, social, and military aspects of particular geographical areas or countries, but not necessarily with respect to the so-called "indicators" of potential terrorism and/or criminal intent.

2. (U) Events in the Middle East and the issuance of NSDD-138 have caused the U.S. Intelligence Community to take a more aggressive approach to the acquisition and training of analysts with the specialty of counterterrorism and related activities. Heretofore, such training was acquired or received on an ad hoc basis. Now, however, there are some programmed efforts underway in the Community, such as the U.S. Army's two week course at Fort Huachuca, Arizona, entitled "Intelligence in Terrorism Counteraction." For its part, the Air Force has a one week course entitled "Dynamics of International Terrorism" which is taught at Hulburt Field in Florida. The Defense Intelligence College includes a section on "International Terrorism" in its SO 680 course entitled, "Introduction to Indications and Warning Intelligence and Terrorism". There is however no single, integrated course developed to address the coordinated objectives (e.g., among the Services, JCS, and the DIA) for an orchestrated counterterrorism program in the Intelligence Community. The Panel believes that DIA, under the auspices of the General Intelligence Training System (GITS) should lead the efforts to eliminate this deficiency.

3. (U) The Panel also recommends that a joint, national level course on terrorism should be formed by and taught at the Defense Intelligence College. This course should be offered to experienced analysts and draw material from schools, courses and other sources already mentioned. Also, material in the form of intelligence products being generated on a continuing basis by the DIA in this field should be included in this course.

SECTION V

TECHNOLOGY (U)

1. (U) Earlier in this report it was recommended that the counterterrorism activities of the DIA consciously address both the short range as well as the long term issues. The long term issues include the potential geographical expansion of terrorist activities as well as growth into new (for terrorists) technological regimes.

2. (U) It appeared to the Panel that there has been a technological "disconnect" between the intelligence and technical communities when it comes to predicting future terrorist activities. Thus, there was some surprise in Intelligence at the ease in which terrorists adapted to the use of "gas-enhanced" bombs in its strikes in Lebanon and elsewhere, even though the technical feasibility and destructive power of such devices have long been known to the technical experts.

3. (U) Accordingly, it is recommended that the DIA devote particular attention to the potential of terrorism activities expanding into new higher-technology formats. Included should be electronic interruptions ("softkills" of a computer-based society and its computer related C3), biological and chemical attacks, and even nuclear incidents and irregularities. This might be an activity for a future DIA/SAC Panel.

APPENDIX A

DIRECTOR'S MEMORANDUM OF 30 JULY 1982

UNITED STATES GOVERNMENT

memorandum

C-154/OS

DATE: 30 July 1982

REPLY TO ATTN OF: OS

SUBJECT: DIA Terrorism/Counterterrorism (T/CT) Program (U)

TO: DD CS VP JS DC
DI AT RS OS

1. ~~(C)~~ Recognizing that the terrorist threat to U.S. personnel, facilities and weapons worldwide is real and growing, DIA must expand intelligence production on terrorism and tailor its T/CT program to best meet this threat. In deciding how this Agency can best perform its mission of providing T/CT support to OSD, JCS, the U&S Commands and national level activities, I have had the benefit of a number of studies concerned with the manner in which DIA can best accomplish its T/CT mission. These studies took note of the fact that the primary Executive Branch T/CT concern currently involves the protection of U.S. interests from terrorist attacks; identified the multiple DIA elements [redacted] legitimately involved in T/CT support; and found the coordination process on T/CT matters to be less than satisfactory. In addition, I have felt that a need exists for a DIA Office of Primary Interest (OPI) on T/CT matters. Such designation would enable me to go to one source to determine the status of any, or all, of DIA's T/CT related actions at any given point in time. Such action also will enhance management direction and control of DIA's T/CT program.

(b)(3):10 USC 424

2. ~~(C)~~ Accordingly, I hereby designate the [redacted] of the [redacted] as the OPI for terrorism intelligence and CT security matters. All T/CT related actions will henceforth be coordinated with [redacted]

(b)(3):10 USC 424

3. ~~(C)~~ In order to further enhance DIA's T/CT program the following actions are directed:

a. ~~(C)~~ [redacted] will continue to support DIA on:

(1) ~~(C)~~ The White House Special Coordination Committee on Terrorism and the Interdepartmental Intelligence Committee on Terrorism and other related committees and working groups, as appropriate.

(2) (U) Continue to publish a daily terrorism summary and other studies as required, in coordination with [redacted] and [redacted]

(3) (U) Provide support to the NMIC IAW JCS CONPLAN 0300.

(4) ~~(C)~~ Absorb three currently authorized [redacted] personnel spaces dedicated to the terrorism function, as well as programmed [redacted] terrorism spaces. This element will continue to operate in the NMIC area.

(b)(3):10 USC 424

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REVIEW ON ~~28 Jul 88~~

The merger of resources involved in current terrorism production will strengthen DIA's overall current terrorism support capability, thereby enhancing the level of such support we can provide to OSD and JCS. This merger will also provide a rotational base for these personnel. [redacted] will take action to ensure adequate space in the NMIC area is provided the analysts concerned.

b. ~~(C)~~ [redacted] will continue to produce general and estimative intelligence on terrorism in the form of political-military studies on a worldwide basis and prepare operational support intelligence for JSOC and others (to be coordinated with [redacted] and [redacted] as appropriate).

(b)(3):10 USC 424

c. (U) [redacted] will:

(1) ~~(C)~~ Continue to publish DIN's on current terrorist related events (to be coordinated with [redacted] and DB, as appropriate).

(b)(3):10 USC 424

(2) ~~(C)~~ Transfer personnel involved in terrorism functions, both now authorized and programmed, to [redacted]

(b)(3):10 USC 424

(3) ~~(C)~~ Continue as focal point for JCS contingency and operational support on terrorist matters, to include CONPLAN 0300.

d. ~~(C)~~ [redacted] will continue to be the DIA point of contact for all JSOC intelligence support.

(b)(3):10 USC 424

4. ~~(C)~~ A computerized terrorist intelligence data base is needed urgently. [redacted] and [redacted] will meet to define the form and direction such data base should take. RS will support this effort. Additionally, [redacted] will accelerate efforts to computerize its [redacted] and make it available to DIAOLS users.

(b)(3):10 USC 424

5. (U) Specific functions to be performed by [redacted] elements are listed in attachment. Some duplication of effort is unavoidable. Judgment must dictate the point at which a particular terrorist entity becomes a direct threat to U.S. interests (personnel, facilities, weapons, etc.) and therefore an [redacted] responsibility, or remains only a factor in the political developments of a foreign nation and therefore a [redacted] responsibility.

(b)(3):10 USC 424

6. ~~(C)~~ The goal of all DIA elements involved in the T/CT function must be to provide:

a. ~~(C)~~ The earliest possible warning for indications of terrorist attack directed against DoD personnel, weapons or facilities.

b. ~~(C)~~ The most thorough, accurate and timely analysis on terrorism as well as on its causes and effects.

(b)(6)

1 Enclosure
Assignment of Functions

JAMES A. WILLIAMS
Lieutenant General, U.S. Army
Director, DIA

~~CONFIDENTIAL~~

ASSIGNMENT OF TERRORISM/COUNTERTERRORISM RELATED FUNCTIONS TO DIA ELEMENTS

(b)(3):10 USC 424 o [redacted] Act as DIA OPI for all T/CT related activity. Responsible for:

- Collection/analysis/production on terrorist groups constituting a direct threat to U.S. interests worldwide.
- Reporting on significant terrorist incidents, personalities, tactics, techniques, operations.
- Organizational structure, capabilities, weapons, training, operational areas, manpower, leadership, logistical structure.
- Monitor terrorist threat to Defense Attache Offices.
- Prepare threat assessments for DIA, OSD, JCS, U&S Commands and Defense Agencies as required.
- [redacted] will continue to establish CT security policy involving equipment/training for DIA and Attache personnel.

o [redacted] will ensure that Attache schooling and CT equipment support needs are met.

o [redacted] Research military/political issues presented by terrorism, to include:

- Warsaw Pact support (financial/weapons/training/second party and KGB/GRU/SPETSNAZ connection).
- Effect on political stability of a nation (indigenous terrorism, indigenous terrorist connections with international terrorism, government use of terrorism, CT forces and capabilities).
- Installation and operation intelligence support effort (city plans, terrorism studies, demographic studies, etc.).
- [redacted] will be responsive to terrorism intelligence needs expressed by DoD customers in CIPR.
- Coordinate with [redacted] to determine terrorism research items assigned to FRD.

o [redacted] Will continue to produce estimative intelligence on terrorism, in coordination with DB and [redacted]

o [redacted] Will continue to prepare analysis/studies of terrorism weapons/arms and other equipment.

(b)(3):10 USC 424 o [redacted] Coordinate terrorist related activities with OPI for CT.

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Enclosure to C-154/OS

APPENDIX B

TERMS OF REFERENCE (U)

TERMS OF REFERENCE

6 JUN 1984

DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL

SUBJECT: Terrorism

PROBLEM: The threat of terrorist operations against U.S. military facilities is valid, unpredictable, and is intensifying.

BACKGROUND: Recent terrorist events around the world have heightened U.S. awareness of the threat and consequently has forced an examination of the Intelligence Community's problems and ability to support national and departmental programs in this area. The Director, DIA is responsible for providing counterintelligence support to the worldwide operations of the U&S Commanders and wants to ensure that DIA will be able to provide them timely and specific information on terrorism that can be converted to preventative action. Additionally, in the past the general military position on terrorism has been reactionary and as a result there has been only limited advance planning on the subject. Recent Executive Decisions are changing national policy to a more anticipatory and activist mode. How DIA can best respond to these recent changes in policy direction is another aspect of the problem to be considered.

OBJECTIVE: The panel will assess the entire internal DIA effort and its interaction with other government agencies in fulfilling the required intelligence support mission to counter terrorism. It will also look at the evolving nature of DIA's efforts in addressing a more activist counter-terrorist policy.

LEVEL-OF-EFFORT: The panel will consist of four members: (b)(3):10 USC 424 (b)(3):10 USC 424 (b)(3):10 USC 424 Four to six meeting sessions should be required to complete the panel's work. The panel will work closely with and be assisted by DIA/OS which can provide a technical representative to the panel activities. A report will be submitted to the Director in July.

APPROVED BY:

(b)(6)

JAMES A. WILLIAMS
Lieutenant General, USA
Director, DIA

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APPENDIX C

MEETING AGENDAS

AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
2A520, THE PENTAGON
25 APRIL 1984

0900-1200	Executive Session:	Panel
	Informal background discussions with [redacted] staff on DIA counterterrorism role. Also, to prepare a draft Terms of Reference.	(b)(3):10 USC 424

~~UNCLASSIFIED~~

AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
2A520 PENTAGON
21 MAY 1984

0800-0830	Executive Session Review Terms of Reference	Panel
0830-0900	Travel to the CIA	Van #185 (River Entrance)
0900-0945	Visit NIO for Terrorism	(b)(3):10 USC 424
0945-1100	Discussions with DDO	
1100-1200	Discussions with DDI	
1200-1330	Lunch, CIA Cafeteria	
1330-1400	Travel to the FBI	Van #143 (CIA)
1400-1600	Visit FBI Criminal Division	
1600-1630	Travel to the Pentagon	Van #153 (FBI)
1630-1730	National Fusion Center	(b)(3):10 USC 424

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AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
2A520 PENTAGON
22 MAY 1984

0800-0930	Executive Session Read and Discuss Long Commission Report
0930-1000	NSDD 138 Discussion
1000-1030	Joint Special Operations Agency (JSOA)
1030-1130	Security Preparation for the Olympics
1130-1230	Lunch
1230-1330	Executive Session
1330-1430	HUMINT Collection

(b)(3):10 USC 424

(b)(3):10 USC 424

1430 - as required: Executive Session/Chairman's Time

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AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
2A520 PENTAGON
14 JUNE 1984

0800-0900	Elaboration and Discussion on DIA Counterterrorism Role	(b)(3):10 USC 424
0900-1000	Technical Support Working Group/IGT	
1000-1100	(b)(3):10 USC 424 Commission Insight	Lt Gen Tighe, USAF, (Ret.)
1100-1200	Open	
1200-1300	Lunch	
1300-1500	Executive Session	
1500-1530	Meet with General Williams	
1530-1630	Chairman's Time	(b)(3):10 USC 424

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AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
MACDILL AFB, FLORIDA
11 JULY 1984

0830-1500	Visit to USCENTCOM:	Panel

The Panel was hosted by the CINC and J-2. It received presentations on the concerns of a Command with a high potential to encounter terrorist activities in its area of responsibility. The CENTCOM staff highlighted and emphasized their intelligence support needs in the counterterrorism field.

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AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
PENTAGON AND ROSSLYN, VA
17 AUGUST 1984

0900-1000	Targetting	(b)(3):10 USC 424,(b)(6)
1000-1100	Army Program	
1100-1200	Air Force Program, (AFOSI)	
1200-1300	Lunch, Travel to C.A.C.I. Bldg in Rosslyn	
1300-1430	Special Operations Intelligence System (SOIS) Demonstration/Briefing C.A.C.I. Bldg	(b)(6)
1430-1530	Navy Program	(b)(3):10 USC 424,(b)(6)
1530-1630	NSDD-138 Update	
1630-1700	Executive Session	

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AGENDA
DIA ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
PENTAGON 2A520
20 SEPTEMBER 1984

0830-0900	Review/Executive Session
0900-1020	Discussion with Representative from EUCOM
1020-1030	Break
1030-1115	Perspectives from DIA/DB
1115-1145	Perspectives from DIA/JS
1145-1215	Perspective from DIA/AT
1215-1300	Lunch
1300-1330	Comments from DIA/OS
1330-1700	Executive Session

(b)(3):10 USC 424,(b)(6)

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AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
SPECIAL ACTIONS PANEL
PENTAGON 2A520
23 OCTOBER 1984

0830-0930	Executive Session
0930-1000	Travel to State Department
1000-1130	Visit with (b)(3):50 USC 403 -1(i) Section, State Department, Room 2722
1130-1200	Travel to Pentagon
1200-1300	Lunch
1300-1600	Prepare Draft of Final Report

(b)(6)

UNCLASSIFIED

31

~~SECRET~~

REPORT OF THE DIA PANEL FOR REVIEW OF FOREIGN NUCLEAR TEST YIELD DETERMINATION (U)

DATE: 15 OCTOBER 1985

CLASSIFIED BY: DIA/DT-1
~~DECLASSIFY ON: OADR~~

~~SECRET~~
~~NOT RELEASABLE TO FOREIGN NATIONALS~~

DIA Review Panel Membership

(b)(3):10 USC 424,(b)(6)

(This page is Unclassified)

REVIEW PANEL ON DETERMINATION OF YIELDS OF FOREIGN UNDERGROUND NUCLEAR TESTS

(U) A panel was convened by the Director, Defense Intelligence Agency, to address the question of how best to determine foreign underground nuclear test yields. Panel membership is shown at Attachment 1.

(U) The Panel met three times in August and September, 1985, and restricted its study to the yield regime relevant (b)(1),1.4 (c)

(U) The Panel received an extensive series of briefings on (b)(1),1.4 (c) (b)(1),1.4 (c) methodologies and made the following observations:

~~(S/NF)~~ Over the past two decades, (b)(1),1.4 (c) increasingly mature as a methodology for yield estimation. Impressive advances have been made in both data acquisition and its interpretation, but significant uncertainties still result in (b)(1),1.4 (c) being uncertain by about a "factor

~~(S/NF)~~ Results (b)(1),1.4 (c) primarily of US and French origin, show that a simple relationship exists between the yield of the explosion and the magnitude of (b)(1),1.4 (c) at least for yields below about (b)(1),1.4 (c) Thus, specific calibration curves can be developed for each distinct test site which allow yields to be estimated (b)(1),1.4 (c) (b)(1),1.4 (c) While these curves have been assigned essentially the same slope, the absolute values are expected to differ from site to site and sometimes within a site, chiefly because differences exist in the physical properties of the rock in which the explosions occur or through which the (b)(1),1.4 (c) ~~propagate deep~~ under the test sites. In order to simplify procedures, a standard calibration curve was devised and is adjusted for each particular test site. This adjustment is commonly known as the (b)(1),1.4 (c) (b)(1),1.4 (c) Such a bias must be established for each test site, including the Nevada Test Site (NTS), before yields can be reliably estimated (b)(1),1.4 (c)

~~(S/NF)~~ Where yields are known, e.g., U.S. tests at NTS and Amchitka, (b)(1),1.4 (c) (b)(1),1.4 (c) a bias value can be directly estimated. For Soviet test sites [redacted] where yields are not known, all available sources of information should be considered in estimating the appropriate value of bias. (b)(1),1.4 (c) based on very Since that time a number of significant studies have been completed in the following subject areas:

(b)(1),1.4 (c)

- The availability of high quality digital data from (b)(1),1.4 (c) which have made the (b)(1),1.4 (c) more reliable.

- Determinations of site-dependent attenuation of seismic body waves.

- Use of revised yield information from the (b)(1),1.4 (c) (b)(1),1.4 (c)

(b)(1),1.4 (c)

~~(S/NF)~~ In addition to focusing on surface disturbances as a potential complement (b)(1),1.4 (c) the Panel considered specific yield evidence derived from (b)(1),1.4 (c) While it is not compelling evidence, the collection community is encouraged to continue their efforts.

~~(S/NF)~~ As a result of examining (b)(1),1.4 (c) the panel found only one instance the cratering shot which had (b)(1),1.4 (c)

(U) The panel considered crater phenomenology and explored the use of surface disturbances to complement (b)(1) If there exists a depth of burial at which, for a specific yield in a specific medium such as hard rock, a distinct surface effect such as a crater will result if the detonation takes place above that burial depth and no crater will result at detonation depths below that depth, then this so called "critical depth of burial" (DOB) may allow one to estimate yields in the yield regime of interest. The key question at issue is the magnitude of the difference in burial depth in hard rock which will either result in a crater or not. If the difference is small, this surveillance method could complement the (b)(1),1.4(c)

~~(S/NF)~~ Unfortunately, the understanding of crater phenomenology is least in the vicinity of the postulated critical DOB for hard rock. It is not certain that a sharp threshold exists; if it does , the scaled critical DOB may depend on yield, local geology, topography, test configuration, and other factors. No applicable U.S. hard rock data exists in the important scaled DOB range of [redacted] and the data between (b)(1),1.4(c),1.4(e) are inadequate to resolve the issue.

~~(S/NF)~~ There exists some evidence that the concept of a critical DOB has validity. It is noted that surface-disturbance observations [redacted] can be grouped into two classes, throw-out craters and other surface disturbances including spall (where all the disturbed material lies above the original ground plane but is not displaced laterally from its original position). These two classes appear to be separated by a boundary in the DOB versus yield plane. The boundary is well defined by a line. Certain investigators have assumed a particular value for the relationship between yield and depth of burial in hard rock and from these assumptions have come to the conclusion that (b)(1),1.4(c) at least for the test area [redacted] should be reduced rather than increased. However, until additional data are available, (b)(1),1.4(c) (b)(1),1.4(c) imprecise as it is.

~~(S/NF)~~ It is possible that carefully controlled high-explosive experiments combined with calculational efforts could improve the understanding of cratering phenomenology in the relevant yield regime. Provided the understanding can be quantified, existing craters at [redacted] (b)(1),1.4(c) could be used as an independent check of the [redacted] bias.

~~(S/NF)~~ In the absence of such necessary understanding, (b)(1),1.4(c) cratering data cannot be used to improve on or bound (b)(1),1.4(c) Research on cratering phenomenology and depth of burial should be encouraged and supported.

~~(S/NF)~~ Since this technique's sensitivity requires the existence of a well defined critical DOB, the Soviets could deny us additional information at Degelen Mountain or other test areas by modest increases in the scaled burial depth. Existing data from Degelen Mountain Test Area would still be useful, however, as a rough calibration of the entire Semipalatinsk area.

~~(S/NF)~~ It has been suggested in the intelligence community that a gap exists between Soviet nuclear test yields and the assessed yields of modern Soviet strategic warheads. The Panel addressed this issue. The US and the USSR each stated in 1976 that it would adhere to the provisions (b)(1),1.4 (c) (b)(1),1.4 (c) At approximately the same time, the test program at [redacted] (b)(1),1.4 (c) yields localized in the [redacted] abruptly ceased.

~~(S/NF)~~ At this time the SS-17-1 and the SS-19-1 RVs, which had been first flight tested in 1973-74, were being deployed. These RVs were very similar in profile and size to modern RVs (SS-17-3, SS-18-4, and SS-19-3) such that a common warhead, or one with small modifications could have been used in all. From the geometries, and using modern U.S. weapon design technology, the expected yields (oralloy loaded) would be a nominal (b)(1),1.4 (c),1.4 (e) (b)(1),1.4 (c) The next-generation weapons technology might permit increasing the yield to as much as (b)(1),1.4 (c),1.4 (e) The panel concludes that the apparent yield gap between cessation of the higher yield testing at (b)(1),1.4 (c) and the deployments has no significance.

~~(S/NF)~~ Regarding official community yield statements, (b)(1),1.4 (c)

~~(S)~~ The panel notes with concern the absence of any centralized management of research and analysis of determination of foreign test yields from remote locations. Over the years, each involved Department and Agency has tended to find its niche. While there appears to be reasonable interchange of information among these organizations, no single entity takes responsibility for identifying new requirements, for supporting new approaches for yield determination, for prioritizing these new approaches, for assuring that resources are properly applied to these new approaches, and for insuring that the various resulting methodologies are used to complement one another.

~~(S/NF)~~ In conclusion, technologies available to us today do not provide the precision to determine, in a legalistic manner, whether or (b)(1),1.4(c) Further, without calibration explosions which are independently verified by the U.S. at the specific Soviet test sites, it is not anticipated that one will ever be able to determine an equivalent high-explosive yield to better than (b)(1),1.4(c),1.4(e) even with on-site instrumentation. From a national security standpoint, however, a precise determination of Soviet nuclear test yields is not critical. For hard point targets, an improvement in RV accuracy of only (b)(1),1.4(c),1.4(e) is equivalent to a factor (b)(1),1.4(c),1.4(e) Moreover, to the present, yields assessed for Soviet strategic delivery vehicles have been derived (b)(1),1.4(c) (b)(1)

~~(S/NF)~~ We should indeed continue to improve (b)(1),1.4(c) we should devote increased resources we should centralize responsibility for research and analysis of foreign test yield determination; but most important is the need to recognize our inability to monitor precisely the existing (b)(1),1.4(c) agreement and the President should be so advised.

TWO PAGES ARE DENIED IN FULL AND ARE NOT INCLUDED.

DIA ADVISORY COMMITTEE

MEMBERSHIP

(b)(3):10 USC 424

(b)(3):10 USC 424

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),(b)(6)

DIA EX OFFICIO MEMBER

(b)(3):10 USC 424

EXECUTIVE SECRETARY

(b)(3):10 USC 424

THIS REPORT WAS PREPARED BY THE CHEMICAL/BIOLOGICAL WARFARE PANEL

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i),(b)(6)

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

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EXECUTIVE SUMMARY

~~(S)~~ The Nation's list of demands on the Intelligence Community usually exceeds available resources. Priorities, then, tend to service squeaky wheels. [redacted] for example, enjoys a high priority in national security consideration, [redacted] (b)(1),(b)(3),10 USC 424.1 4 (c) [redacted] The national repugnance for chemical matters is enough that CW/BW isn't squeaky; indeed, there is often a reluctance to even hear about it. The nation's attitude on CW/BW can be influenced by credible threat descriptions and related assessments of impact.

~~(S)~~ If (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]

~~(S)~~ We believe neither the government nor the traditional defense industries have the sufficient necessary technical expertise in these new scientific fields. Instead, the expertise is resident in a new set of commercial

enterprises, such as [redacted] etc., as well as in academia. We suggest that this special expertise be tapped by the Intelligence Community to help guide and focus the effort.

I. INTRODUCTION

1. (U) In February 1983, the Director, DIA [redacted] particularly those of DIA, against the growing threat of chemical and biological warfare. The Director asked the Advisory Committee to form a panel to investigate the DIA/DoD effort and make recommendations.

(b)(3):10 USC 424;

2. ~~(S)~~ The Chemical/Biological Warfare Panel has held four formal meetings and has had numerous contacts with consumers: [redacted] and DIA. The Panel believes it has contacted most of the agencies which are involved in a major way in either using or producing intelligence data particularly on the CW threat and to a lessor degree on the BW threat. The report presents an assessment of this effort and provides recommendations which could bring about needed improvement in certain areas.

(b)(1),(b)(3):10 USC 424,1.4 (c)

II. DISCUSSION

1. ~~(S)~~ Since the early 1970's [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1)(b)(3)10 USC 424,1.4(c)

[redacted]

5. ~~(S)~~ A better understanding of the full spectrum of the chemical and biological threat could reshape the national concern toward this kind of warfare. The Services need an understanding of the environment in which they

may have to operate and fight, and our own development community needs a better data base for development of defensive measures such as antidotes and protective gear. [redacted]

(b)(1),(b)(3):10 USC 424,1.4(a)

[redacted] It is important to have a comprehensive, well-defined intelligence data base to help guide and justify this large R&D expenditure. Some of the key areas where we need to beef up our intelligence base include:

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

6. (U) The intelligence requirements are not well defined or prioritized. Often, requirements focus on parametric data and thus, are presented in a list of details about a very narrow sector of the threat without any prioritization. What is needed is a practical-length, prioritized, top level set of requirements that can be used for resource allocation and decision-making. The work at [redacted] is directed to this end and is encouraging. There is clearly a need for a list which is accepted by the entire Intelligence Community.

(b)(1),(b)(3):10 USC 424,1.4 (c)

7. ~~(C)~~ The current level of intelligence resources is not adequate. The overall DoD funding for chemical R&D and procurement matters has increased by [redacted] (b)(1),1.4(a) and is planned to increase [redacted]. The panel was also told that the number of chemical officer billets in the Army has increased from 1,200 in 1979 to 8,000 in 1983 and will reach 24,000 eventually. This dramatic increase in the level of Army operational interest requires a corresponding increase in the understanding of Soviet chemical and biological strategy, doctrine and tactics. [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4(c) [redacted] and the new GDIP initiatives.

9. ~~(S)~~ We saw very little going on within the Intelligence Community to support arms control objectives, even though that is the first objective in the Defense Guidance and would be expected to be a major intelligence driver. A strong intelligence base, which we currently lack, is an essential step toward achieving these objectives.

10. ~~(S)~~ In reviewing the state of CW/BW, the Panel has concluded that the greatest single concern should [redacted] (b)(1),(b)(3):10 USC 424,(b)(5),1.4(c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c),1.4 (e)

With few exceptions, the leading edge of the U.S. capability resides in commercial laboratories and academic institutions, neither of which is currently supporting intelligence.

III. RECOMMENDATIONS

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

33

Five pages are denied in full and are not included.

REPORT 88-1

of the

DIA SCIENTIFIC ADVISORY COMMITTEE

to the

Director

DEFENSE INTELLIGENCE AGENCY

MICROELECTRONICS AND COMPUTERS PANEL

Information Cutoff Date: June 1987

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DIA/SAC REPORT 88-1

This report was prepared and approved by the

DIA Scientific Advisory Committee's

MICROELECTRONICS AND COMPUTERS PANEL

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(b)(3):10 USC 424,(b)(6)

*Messrs. (b)(3):10 USC 424 are no longer members of the Scientific Advisory Committee

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MICROELECTRONICS AND COMPUTERS PANEL

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EXECUTIVE SUMMARY (U)

1. ~~(S)~~ A DIA Scientific Advisory Committee Microelectronics and Computer Panel was formed in late 1984 to examine and assess the application of microelectronics and computer technology in selected Soviet military weapons and support systems.

2. ~~(C)~~ This Executive Summary presents the more important findings and observations of the panel's efforts, points out some areas for future concern resulting from possible surprises and presents several recommendations for improving the present state of U.S. understanding of the state of Soviet microelectronics and computer technology. For other findings and observations or supporting background material, the reader is referred to the body of the panel's report.

A. (U) SOVIET ACQUISITION AND FOREIGN DEPENDENCY POLICY AND PRACTICES

1. (U) The Soviets have easy access to U.S./Western microelectronic and computer technology/products; and, in the past, they have made such acquisitions an important part of their development efforts. This includes reverse-engineering advanced Western products for assimilation by Soviet industry.

2. ~~(S)~~ The Soviets either have consciously decided that it is in their best interests to, or have accepted the fact that they must, play second to the U.S. in microelectronics and computer technology. The Soviet's aggressive technology acquisition practices and their all-consuming interest in free-world research support this assertion.

3. ~~(S)~~ The recent rapid advance of U.S./Western microelectronics and computer technology coupled with a greater emphasis on technology insertion in U.S. weapon system procurements may make it impossible for the Soviets to continue to rationalize that they can be our peer in military capability while being

second in technology.

4. ~~(S)~~ The Soviets' easy access, [redacted] to U.S. design software and hardware, and more importantly to U.S. microelectronics fabrication foundries gives them access to application-specific integrated circuit (ASIC) foundries which may lead to Soviet attempts to use U.S. facilities to demonstrate that the Soviet ASIC designs are producible. As a result in such cases, the Soviets would eliminate the need to reverse-engineer the latest U.S. device technologies.

B. (U) SOVIET SELF-SUFFICIENCY IN THEIR DOMESTIC DEFENSE MANUFACTURING BASE

1. ~~(S)~~ The Soviets' [redacted] self-sufficiency in their domestic defense manufacturing base.

(b)(1),(b)(3):10 USC 424,1.4 (c)

a. ~~(S)~~ This objective has caused them, for over a decade, to follow a [redacted] in computers and related electronics equipment. That is, the Soviets have generally attempted to [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] Such hardware acquisition is required for their "domestic self-sufficiency" policy since [redacted] Tightened export

(b)(1),(b)(3):10 USC 424,1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

controls since 1978 appear to [redacted]

C. (U) NARROWING OF THE U.S. PERFORMANCE ADVANTAGE

1. ~~(S)~~ The Soviets are still several microelectronics technology generations behind the U.S.--some 3-7 years. However, it appears that the Soviets are able to compensate for their technology disadvantage. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] their overall operational capabilities continue to be dominated more by quantity of weapons than by the technological sophistication made possible by the present state-of-the-art of U.S. microelectronics. Additionally, the Soviets concentrate [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

2. ~~(S)~~ The performance advantage enjoyed by the U.S. should still be considered as significant even though its narrowing is a dangerous trend. Examples in which Soviet technology deficiencies still hinder its military capabilities include:

a. ~~(S)~~ Navigation--Currently, the Soviets do not have the microelectronics technology to exploit some of the tactical uses of their GLONASS navigation system as we exploit our GPS system in man-portable systems, tactical targeting and precision locating for the tactical battlefield.

b. ~~(S)~~ Communications--Soviet military communications systems are reliable, rugged and adequate. To the extent the Soviets lag the West in microelectronics and software, their communications equipment requires more weight and space, and cannot perform with the same complexity. In applications where complexity in a small package is important [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] their development is hindered. This fact also has implications for lessened Soviet force mobility. However, their capabilities to employ [redacted] could weigh in heavily against the advantages of the West in technology advances during wartime.

(b)(1),(b)(3):10 USC 424:1.4 (c)

c. ~~(S)~~ Electronic Warfare--Although the Soviets [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

d. ~~(S)~~ Battle Management/C^3 Systems--Perhaps the most serious technology inadequacies plaguing Soviet military systems are [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

D. (U) POSSIBLE SOVIET "SURPRISES"

(U) The analyses and judgments of panel members which went into preparation of this report also highlighted some surprises implicit in Soviet technology viewed from a military perspective. Some of the more notable are:

a. ~~(S)~~ The lack of any evidence that the Soviets [redacted] The U.S. has made really significant improvements in its military systems and its consumer appliance market in the last decade through [redacted] We suggest that it may eventually come as a real surprise to the U.S. to find that the Soviets can really never catch up with the West (including the U.S.) because they lack the large consumer/industrial market for "high-tech" products such as microelectronics and microprocessors.

(b)(1),(b)(3):10 USC 424,1.4 (c)

b. ~~(S)~~ The emphasis on [redacted] in the Soviet Union vis-a-vis

(b)(1),(b)(3):10 USC 424,1.4 (c)

U.S. efforts. This leads the panel to conjecture that we may see innovative and leapfrogging use of [redacted] rather than taking the present U.S. approach focused on incremental improvements to its [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

c. ~~(S)~~ The hypothesized willingness of the Soviets to play "second" to the U.S. in microelectronics/computer technology and to concentrate even more on using the U.S. and Western industrial base as a source for critical, small quantity devices and as its largest "design bureau."

d. ~~(S)~~ The increasing technology "leaks" of U.S. CAD/CAM and software design packages for application-specific integrated circuits (ASICs) creates a severe export control problem to the U.S. if the Soviets decide to make use of the increasingly available Western "silicon foundries," and micro-processor workstation networks.

E. (U) U.S. COLLECTION AND ANALYSIS RESOURCES

1. ~~(S)~~ The panel is concerned at the continuing lack of collection and analytic resources assigned to Soviet microelectronics and computer technology. It urges the Intelligence Community to greatly expand its [redacted] and its [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

2. ~~(S)~~ The uncertainties that exist in our ability to evaluate and judge the existing microelectronics between the Soviets and the U.S. are caused mainly by [redacted] This inadequacy will continue to exist until the U.S. does a better job with its [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

3. (U) [redacted]

(b)(3):10 USC 424,(b)(5)

SECTION I

INTRODUCTION AND BACKGROUND (U)

1. (U) A DIA Scientific Advisory Committee Panel on Soviet Microelectronics and Computer Technology was chartered in September 1984: it conducted its activities during the following 24 months in accordance with its terms of reference in Appendix 1.

2. (U) The panel focused its attention not on microelectronics and computer technology, per se, but on how that technology influenced Soviet military systems and capabilities. To best carry out this task, the panel selected five military-related areas for special attention in determining the associated impact of Soviet microelectronics and computer technology.

3. (U) These five areas are:

a. (U) Navigation and communications systems,

b. (U) Cruise missiles,

c. (U) Tactical warfare,

d. (U) Battle management and/or C^3 software, and

e. (U) The Soviet defense manufacturing base.

4. (U) The panel, in line with its charter, also assessed the adequacy of the Intelligence Community's (IC) collection efforts and of DIA's analytic resources. The panel then utilized a set of issues to serve as catalysts in treating the relationship between the selected military areas and microelectronics and computer technology. The issues were:

a. (U) The Soviet potential for surprises and/or breakthroughs,

b. (U) Soviet ability to acquire technology from abroad,

c. (U) Evidence of crippling dependencies on technology,

d. (U) Evidence of comparative technology leads with respect to U.S./friendly capabilities, and

e. (U) Identification of technology indicators.

5. (S) For its purposes, the panel considered microelectronics to encompass LSI, VLSI, and VHSIC, but not MSI or earlier "electronic generations" since it is clear that the Soviets utilize MSI technology widely in military systems as does the United States. In its review of computer technology, the panel looked at both microprocessors and conventional computer systems, although, today, military advantage appears to rest more and more on the application of

(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] In assessing Soviet software technology, the panel attempted to look only at military applications and state-of-the-art: [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

6. (U) The report is organized into sections treating the five selected military application or support areas and the adequacy of IC collection and DIA's analytic resources.

SECTION II

SOVIET ACQUISITION AND FOREIGN DEPENDENCY POLICY AND PRACTICES (U)

1. (U) The Soviets have easy access to U.S./Western microelectronic and computer technology/products; and, in the past, they have made such acquisitions an important part of their development efforts. This includes reverse-engineering advanced Western products for assimilation by Soviet industry.

(b)(1),(b)(3) 10 USC 424,1 4 (c)

[redacted]

3. ~~(S)~~ The Soviets either have consciously decided that it is in their best interests to, or have accepted the fact that they must, play second to the U.S. in microelectronics and computer technology. [redacted]

(b)(1),(b)(3) 10 USC 424,1 4 (c)

4. ~~(S)~~ For years the Soviets could assert that they could be second in technology, but still be a peer or leader to the U.S. in military operational capability through their expertise [redacted]

(b)(1),(b)(3) 10 USC 424,1 4 (c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

6. ~~(S)~~ This may force the Soviets to rethink their long-held commitment to total "self-reliance" in production of military systems. The Gorbachev administration has shown signs that such fundamental changes in policy may be tolerable. The panel believes that such a change in Soviet policy could even lead to Soviet reliance on U.S. industry for quick-reaction production of state-of-the-art items.

7. ~~(S)~~ The Soviets' easy access, (b)(1),(b)(3):10 USC 424,1.4 (c) [redacted] to U.S. design software and hardware, and more importantly to U.S. microelectronics fabrication foundries gives them access to application-specific integrated circuit (ASIC) foundries which may lead to Soviets attempts to use U.S. facilities to demonstrate that the Soviet ASIC designs are producible. As a result, in such cases, the Soviets would eliminate the need to reverse engineer the latest U.S. device technologies.

SECTION III

THE SOVIET DEFENSE MANUFACTURING BASE (U)

A. (U) SELF-SUFFICIENCY IN DEFENSE MANUFACTURING

1. (U) [redacted] Eliminating significant foreign sourcing from Warsaw Bloc countries is also part of this strategy of self-sufficiency. The historical priority accorded to acquisition of foreign manufacturing technology and equipment, coupled with [redacted] Attempts to limit such acquisition became a hallmark of DoD export control policy in the late 1970's.

(b)(3):10 USC 424

(b)(3):10 USC 424

2. (U) The Soviets have, for over a decade, followed [redacted]

(b)(3):10 USC 424

3. (U) [redacted] self-sufficiency in virtually all areas of defense production may prove impossible in the future--if the Soviets hope to narrow the, once again, growing U.S. technological lead in military electronics. Historically, the USSR has been willing to borrow Western technology and adapt it to Soviet industry and applications, but this did not extend to reliance upon foreign suppliers to support defense production. [redacted] of self-sufficiency, they will most likely continue to lose ground to U.S. technological

(b)(3):10 USC 424

advances--especially if the U.S. realizes its technology insertion plans for advanced microelectronics such as VHSIC.

4. ~~(S)~~ The Soviets appear to have a different perspective of R&D than of manufacturing--namely;

a. ~~(S)~~ The Soviets use [redacted] industry as a single largest design bureau, with [redacted] being close "seconds," and

(b)(1),(b)(3):10 USC 424,1.4 (c)

b. ~~(S)~~ In the future the Soviets may have to use these [redacted] foreign industries as [redacted]

(b)(1),(b)(3):10 USC 424.1.4 (c)

B. (U) MICROELECTRONICS MANUFACTURING

1. (U) The key to a strong and rapidly advancing microelectronics manufacturing industry is a well developed infrastructure to support production, or easy access to requisite foreign technology. The essentials of a microelectronics manufacturing infrastructure for production includes:

a. (U) Material inputs (silicon, gallium arsenide, etc., high purity chemicals, gases and metals),

b. (U) Design software and hardware,

c. (U) Fabrication equipment and clean room facilities,

d. (U) Assembly and test equipment, and

e. (U) Packaging (device, module and PWB).

2. (U) [redacted]

(b)(3):10 USC 424

Successful Soviet acquisitions of foreign microelectronics technologies during the 1970's accounts, in large measure, for impressive rates of progress through the early 1980s both in

Soviet state-of-the-art (SOA) and in production capabilities.

3. ~~(S)~~ Although the USSR reduced the Western microelectronics manufacturing lead to some 2-3 years by the early 1980's, the gap has now widened to 4-5 years. [redacted] As such, the USSR is now struggling to produce advanced LSI, and has yet to demonstrate a production capability for VLSI. Rapid progress from intense U.S./Japanese competition in VLSI and the U.S. VHSIC program, along with more effective export controls, have combined to reverse the trend of earlier Soviet gains through acquisitions from U.S. and western industry.

(b)(1),(b)(3):10 USC 424,1:4 (c)

4. ~~(S)~~ [redacted] Hence, while it remains easy for the Soviets to obtain samples of the latest Western devices (including design documentation) the process of reverse-engineering of ever increasingly complex devices, and subsequent duplication of necessary materials and fabrication processes and equipment, has become much more difficult for Soviet industry. Some U.S. industry experts maintain that, because of the growing difficulty of reverse-engineering of VLSI/VHSIC technology, this approach may actually be counter-productive to the Soviet goal of remaining close to Western SOA. These same experts argue that anyone capable of quick and successful duplication and production of VLSI/VHSIC level devices has the wherewithal to develop and manufacture his own designs.

(b)(1),(b)(3):10 USC 424,1:4 (c)

5. ~~(S)~~ [redacted]

(b)(1),(b)(3):10 USC 424.1.4 (c)

[redacted] Tightened export controls since 1978 appear to have slowed down such Soviet acquisitions and resultant VLSI/VHSIC production.

6. (U) [redacted]

(b)(3):10 USC 424

However, discussions with U.S. semiconductor/microelectronic industry officials, show that U.S. companies generally are willing to initiate production when yields are about 0.5%-1%. Such practice when coupled with differing Soviet economics and production priorities implies that the Soviets probably have achieved minimum satisfactory levels of self-sufficiency for their defense MSI and LSI manufacturing base.

C. (U) COMPUTERS AND COMPUTER PERIPHERALS MANUFACTURING

1. (U) In the case of computers, production plays a less critical role than for microelectronics. For computers, the more difficult aspects precede production (design of hardware and software) and follow production (applications). That is, computer production is basically an assembly and integration operation. For peripherals (especially disks), graphic display terminals and communications, the manufacturing phase is much more critical. In this latter case, the manufacturing process is more analogous to that of microelectronics and possesses many of the same types of problems for Soviet industry.

2. ~~(S)~~ Soviet computer production problems stem mainly from the [redacted]

(b)(1),(b)(3):10 USC 424:1.4 (c)

D. (U) DIFFERENT DEFENSE AND CONSUMER INDUSTRIES

1. ~~(S)~~ There is no evidence of the often cited assertion that the Soviets have two microelectronics and computer industries--one for defense and the other for consumers. What does seem circumstantially evident is that Soviet defense acquisition takes "from the top" of Soviet production with Soviet consumers getting "what is left."

2. ~~(S)~~ It may eventually come as a surprise to the U.S. to find that the Soviets can really never catch up with the West, including the U.S., because they lack the large consumer/industrial base existing in the West that stimulates innovation and production in microelectronics and microprocessors.

Neither do we see any evidence that the Soviets are starting to embed microprocessors into high technology products as the West is doing in its commercial electronics manufacturing and is starting to do quite extensively in its military electronics production base.

SECTION IV

SOVIET NAVIGATION AND COMMUNICATIONS SYSTEMS (U)

A. (U) NAVIGATION SYSTEMS

1. ~~(S)~~ A review of Soviet open-source literature reveals that they are well aware of Western state-of-the-art navigation and associated instrumentation. Panel members believe, based on their combined experiences, that the Soviets are "targeting" U.S. and other Western industrial companies that market technologies and products applicable to the navigation and guidance of submarine-launched and air-launched cruise missile (SLCMs and ALCMs) as well as to other weight/power constrained platforms. Soviet acquisitions of such navigation and guidance devices utilize both legal and illegal channels.

2. ~~(S)~~ [redacted] Although it is not clear why this situation continues, the most probable reason is the lack of manufacturing technology.

(b)(1),(b)(3):10 USC 424,1.4 (c)

3. (U) The range and accuracy capabilities of Soviet navigation systems can then be measured by the same comparison charts used for U.S. systems.

4. ~~(S)~~ Soviet navigation state-of-the-art is probably best exemplified by their [redacted]

(b)(1),(b)(3) 10 USC 424,1.4 (c)

(b)(1),1.4 (c)

[redacted]

7. (U) The U.S. avionics industry has seen the larger companies (Collins, Bendix, and Sperry) develop or acquire the latest in digital avionics (with high speed digital buses) and flight control systems for use in civilian aircraft. The USSR has outfitted a number of their civilian aircraft with U.S. vendor avionics. It should be a relatively easy task for the USSR to acquire these U.S. state-of-the-art systems. This does not imply equivalent fielded military systems (e.g., RPVs) with full digital FCS and navigational capabilities; [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c) [redacted] The commercially available Electronic Flight Information Systems (EFIS) which integrates navigational systems and radar into a "GLASS Cockpit" makes a tempting target for technology transfer.

B. (U) SOVIET COMMUNICATIONS SYSTEMS

1. (U) The current Soviet communications equipment (e.g., tactical VHF radios) seen by the panel appeared very rugged and reliable. This suggests the good practice of technology insertion, or expanded use of preplanned product improvement (P^3I) by the Soviets.

(b)(1),1.4 (c) [redacted]

(b)(1),1.4 (c)

5. ~~(S)~~ Soviet military communications systems are reliable, rugged and adequate. To the extent the Soviets lag the West in microelectronics and software, their communications equipment requires more weight and space, and cannot perform with the same complexity. In applications where complexity in a small package are important such as in equipment [redacted] their development is hindered. This fact also has implications for lessened Soviet force mobility. However, their capabilities [redacted] could weigh in heavily against the advantages of the West in technology advanced during wartime. The U.S. and NATO need to guard against the transfer of technologies that could increase their mobility [redacted] more effective such as VSLI/VHSIC and fiber optics. (b)(1),(b)(3);10 USC 424;1.4 (c)

SECTION V

SOVIET CRUISE MISSILES (U)

A. (U) DEPENDENCY ON MICROELECTRONICS

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

B. (U) TARGETING

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted]

U.S. open literature has

made available all the data the Soviets would need to develop their own TERCOM with current Soviet microelectronic state-of-the-art circuitry of 3-5 micron dimensionality.

C. (U) MAPPING, CHARTING, AND GEODESY

(b)(1),(b)(3):10 USC 424,1.4 (c)

~~(S)~~ [redacted] It is fairly evident that Soviet microelectronic/computer technology is inadequate for such sophisticated [redacted] However, it appears that the Soviets have no need for equivalent [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] Nevertheless, the task of digitizing the mapping information in a form suitable for TERCOM-type guidance systems for large numbers of targets is formidable and there should be considerable incentive for the Soviets to automate such processes through computerization.

D. (U) SUMMARY COMMENTS

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

(S) [redacted] There is somewhat more information indicating that application of digital computers to missile simulators and ground checkout and support equipment as replacements for older analog equipments is taking place.

SECTION VI

SOVIET TACTICAL SYSTEMS (U)

(U) A special effort was made by the panel to assess the degree to which Western microelectronics technology has migrated into the Soviets's tactical military electronics systems and the degree of Soviet sophistication in this technology. The assessment was accomplished primarily through special briefings by, and informal detailed discussions with; [redacted] and detailed discussions with DIA analysts.

(b)(3):10 USC 424

A. (U) BALLISTIC MISSILE SYSTEMS

1. ~~(S/WN/NF)~~ [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted] The SCUD missile system represents a 30-year-old application, with analog computer technology which is probably merely a somewhat upgraded German V2 technology. [redacted]

(b)(1) 1.4 (e)

(b)(1),1.4(d)

[redacted]

B. (U) NUCLEAR, BIOLOGICAL AND CHEMICAL DEFENSE

~~(S)~~ The Soviets appear to be placing considerable emphasis on reconnaissance and surveillance to detect use of nuclear, biological and chemical (NBC) weapons in the tactical environment. [redacted]

(b)(1),(b)(3):10 USC 424,1.4(c)

[redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted] Nonetheless, it is a real-time computer application that the U.S. itself has not as yet done, although it has the technology in hand to do so. (Mainly because the field problem is not computing but synoptic sensing.)

C. (U) LASER DESIGNATORS

~~(S)~~ There is considerable evidence that the Soviets use laser designators for a wide variety of tactical applications. For example, they have a [redacted] (b)(1),(b)(3):10 USC 424.1.4 (c) Although none of this capability requires microelectronics, it does indicate that they have practical, tactical systems which require only state-of-the-Soviet-art discrete transistor technology.

(b)(1),(b)(3):10 USC 424,1.4 (c)

E. (U) ELECTRONIC WARFARE

~~(S)~~ We heard no hard evidence that the Soviets were employing microelectronics in their electronic warfare systems. The emphasis that the Soviets place on fighting the "Radio Electronic Battle" is far greater than

the emphasis placed on it by the U.S. However, the Soviets can accomplish all of their current system objectives, as we understand them, by using Soviet state-of-the-art discrete transistor electronics.

F. (U) SPREAD SPECTRUM USAGE

(b)(1),1.4 (c)

[redacted]

G. (U) TACTICAL COMPUTERS

~~(S)~~ There are indicators that the Soviets now deploy a number of tactical

(b)(1),(b)(3),10 USC 424,1.4 (c)

[redacted]

H. (U) DEPENDENCY ON FOREIGN TECHNOLOGY IN TACTICAL APPLICATIONS

~~(S)~~ Although the panel heard a great deal about the Soviets' desire to obtain [redacted] microelectronics technology by both legal and illegal means, [redacted] It appears that the Soviets can accomplish everything required in their present tactical war fighting doctrine with MSI, LSI and discrete transistor electronics, perhaps because their present systems were limited in design and manufacture by the unavailability of more advanced electronics.

(b)(1),(b)(3),10 USC 424,1.4 (c)

I. (U) GENERAL COMMENTS AND RECOMMENDATIONS

1. ~~(S)~~ Based on the background gained by the panel during this study and the

presumed importance to the Soviets of fighting the "Radio Electronic Battle" we would expect that one of the first uses of more sophisticated microelectronics would be in their electronic warfare systems. Their dedication to the importance [redacted] in the "Radio Electronic Battle" indicates to the panel that there should be a highest priority for acquiring Western microelectronic technologies for EW applications.

(b)(1),(b)(3):10 USC 424.1.4 (c)

2. ~~(S)~~ [redacted]

(b)(1),(b)(3):50 USC 403 (g).1.4 (c)

3. ~~(S)~~ Finally, we would point out that insofar as tactical war fighting is concerned, the Soviets can do what they believe essential with their present electronic "know-how." [redacted] They already have an awesome tactical forces capability with "adequate" electronic equipment. This makes the upgrading of their present microelectronics capability of somewhat less importance to them than it would be to the U.S. if we were lagging in technology since we cannot match them in force levels or quantities of tactical war fighting equipment. We urge caution therefore, in comparing their military electronics hardware sophistication to ours and suggest we not lose sight of the fact that what we really need to compare are our two war fighting capabilities based on two quite different approaches.

(b)(1),(b)(3):10 USC 424,1.4 (c)

SECTION VII

SOVIET BATTLE MANAGEMENT AND C^3 SOFTWARE (U)

A. (U) COMPUTER OPERATING SYSTEMS AND REPLICAS OF U.S. COMPUTERS

1. (U) The sophistication of computer operating systems (OSs) is key to the sophistication of the application software that can be supported. The availability of OSs for any given computer is essential to the effective use of the computer system itself.

2. (U) [redacted]

(b)(3):10 USC 424

[redacted] The initial RYAD computer series were architectural replicas of the IBM 360 computers, [redacted]

(b)(3):10 USC 424

[redacted] in the Soviet Union greatly limited the number of these copies of U.S. computers which could be produced and supported. By also acquiring the IBM OS-360, which had caused unusually severe software development problems for IBM, the Soviets were able to capitalize on the vast amount of IBM software existing in the late 1970s.

3. (U) Later, the RYAD-2 computers replicated the IBM 370 computers and the IBM OS-370 operating systems were used to run all the IBM 370 software that could be obtained.

(b)(3):10 USC 424

4. (U) [redacted] the Soviets acquired a number of DEC VAX computers; and, since some of the acquisitions were officially sanctioned sales by U.S. vendors, the DEC operating system software is also obviously available within the country. It should be assumed that earlier DEC machines (i.e., the PDP series) are also available to Soviet workers.

5. ~~(S)~~ Hence, the Soviets never had to make the huge software investment that the U.S. government and industry did to produce OS software. At the same time, it is apparent that they never have been able to mount large-scale

software/system design, development and implementation program. At least, we have no evidence to indicate otherwise.

6. ~~(S)~~ [redacted]

(b)(1),(b)(3):10 USC 424,1:4 (c)

7. (U) As a consequence, we can assume that Soviet industry:

a. (U) Is familiar with our main computer software and OSs,

b. (U) Have had long-term experience in running our major OSs and software,

c. (U) Can design computers that are replicas or are plug-compatible with our major computer systems, and

d. (U) Can modify our widely-used commercial operating systems.

8. ~~(S)~~ The last point concerning Soviet ability to modify operating systems was apparent when they [redacted] Some software modification must usually be made to accommodate newer (than IBM 360/370) hardware designs or slight variations in hardware architecture. The Soviets likely had to make similar software changes and certainly would have had to study the OS-360/370 thoroughly in the course of designing machines that could run it. As a result, they must be thoroughly familiar with these IBM operating systems (OS-360 and OS-370).

(b)(1),(b)(3):10 USC 424,1:4 (c)

B. (U) PERSONAL COMPUTERS AND WORK STATIONS

1. (U) U.S. personal computers are widely produced and clones of the popular IBM PCs are manufactured off-shore by both U.S. and foreign industry. Components and sub-assemblies of all major personal computers are also made off-shore. Word-processing equipment is produced and sold worldwide by U.S. vendors; computer terminals (such as the Ambassador series widely used for

various mainframes) are likewise vended worldwide. It has therefore been assumed for some time that personal computer/word processing/computer terminal equipment in which the Soviets choose to be interested is available to them. This may not yet hold for 32-bit microprocessors.

2. (U) The availability of personal computers to the Soviets gives them for the first time in the 1980's, some real technological based networking and system architecture strengths. For example:

a. (U) A PC is generally an amalgamation of the best available devices at the relevant cost-levels from many vendors: the CPU from one, the keyboard from another, the floppies from a third, the hard disc from a fourth, internal supplementary cards (including memory) from others, and the display from yet another. The responsibility for the end product is diffused over many vendors. Owning a PC then, presumably, gives access into the best of available associated technologies,

b. (U) The personal computer is deliberately designed with an open architecture that allows supplementary cards to be readily plugged in. There is a whole new industry that supplies such cards and any required software (usually minimal) to go with them. Such open architecture allows the Soviets, knowledgeable about computers, to utilize PCs for the same military applications that we are making. It allows for rapid change and universal adaptability, and

c. ~~(S)~~ [redacted] The Soviets have the capability to so employ them also.

(b)(1),(b)(3) 10 USC 424;1:4 (c)

C. (U) SOFTWARE DEVELOPMENT

1. (U) Effective management of large-scale software development efforts is critical to achieving effective software for C^3 systems. Recognizing this, an

(b)(3):10
USC 424

[redacted] the panel's attention focused on Soviet capabilities in software development tools.

2. ~~(S)~~ Acquisition of Western technology has given the Soviets needed software development tools for modular software development and interaction with the programmer/developer. The best such resources acquired have been the software development tools [redacted]

(b)(1),(b)(3):10
USC 424,1.4(c)

[redacted] Again, their best resources are those acquired through direct purchases from the West (e.g., the Aeroflot reservation system and the MIS system for the 1980 Olympics). Perhaps, fortunately for us, continued acquisition of foreign software only exacerbates the lack of experience of Soviet software developers. The communications skills needed for software development, and the management skills required for large software projects are not easily taught or accepted in their culture and with the restrictions practiced in the work environment.

D. (U) <u>C^3I APPLICATIONS</u>

1. ~~(S)~~ There has been only one recent study (1985) prepared by the IC from analyses of Bloc software developed for C^3I applications; lack of data and analytical resources apparently preclude further study at present. To support Warsaw Pact C^3I, the Soviets [redacted]

(b)(1),(b)(3):10
USC 424,1.4(c)

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

2. ~~(S)~~ In non-military systems with technology development equivalent to C^3I systems, specific data is unavailable on the software used or on its effectiveness. [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

[redacted]

E. (U) A GENERAL OBSERVATION

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

~~(S)~~ [redacted]

SECTION VIII

POSSIBLE SOVIET "SURPRISES" (U)

1. ~~(S)~~ The Soviets are still several microelectronics technology generations behind the U.S.--some 3-7 years. However, it appears that the Soviets are increasingly able to compensate for their technology disadvantage. [redacted] (b)(1),(b)(3):10 USC 424,1.4(e) [redacted] their overall operational capabilities continue to be dominated more by quantity of weapons than by the technological sophistication made possible by the present state-of-the-art of U.S. microelectronics. Additionally, the Soviets concentrate [redacted]

(b)(1),(b)(3):10 USC 424,1.4(e) [redacted]

2. ~~(S)~~ Although, today, the U.S. is clearly capable of high degree of microelectronics sophisticated, the military leverage or advantage of the capability lead we now have is greatly mitigated because of the length of time it takes to incorporate present state-of-the-art in microelectronics into U.S. military electronics systems, thus causing us to fail to capitalize on the leverage our leading edge technology allow us.

3. ~~(S)~~ The Soviets will be able to capitalize on more sophisticated microelectronics capabilities as they become available to them since they emphasize an upgrading of systems without totally discarding existing systems. They accomplish this through technology insertion to achieve modestly improved replaceable models. (b)(1),(b)(3):10 USC 424,1.4(e) [redacted]

4. ~~(S)~~ Specifically, the panel is concerned that the U.S. will lose the

leverage it gains from its technology lead unless its defense acquisition process it modified to get technology into fielded weapons systems sooner and to make technology insertion easier.

5. (U) The analyses and judgments of panel members which went into preparation of this report has highlighted some surprises implicit in Soviet technology viewed from a military perspective. Some of the more notable are:

a. ~~(S)~~ The lack of any evidence that the Soviets [redacted] (b)(1),(b)(3) 10 USC 424,1.4 (c) [redacted] The U.S. has made really significant improvements in its military systems and its consumer appliance market in the last decade through (b)(1),(b)(3) 10 USC 424,1.4 (c) [redacted] We suggest that it may eventually come as a real surprise to the U.S. to find that the Soviets can really never catch up with the West (including the U.S.) because they lack the large consumer/industrial market for "high-tech" products such as microelectronics and microprocessors.

b. ~~(S)~~ The emphasis on (b)(1),(b)(3) 10 USC 424,1.4 (c) [redacted] in the Soviet Union vis-a-vis U.S. efforts. This leads the panel to conjecture that we may see in mid-and long-term Soviet military electronics systems, innovative and leapfrogging use of (b)(1),(b)(3) 10 USC 424,1.4 (c) [redacted] rather than taking the present U.S. approach focused on incremental improvements to its microelectronics-based digital processing.

c. ~~(S)~~ The hypothesized willingness of the Soviets to play "second" to the U.S. in microelectronics/computer technology and to concentrate even more on using the U.S. and Western industrial base as a source for critical, small quantity devices and as its largest "design bureau." This may require a change in emphasis in our technology export control processes and in our assessment of Soviet military capabilities. In particular, the Soviets'

continued efforts to copy our software application, systems, and CAD/CAM software should probably be reflected in our controls over military-related software development projects.

d. ~~(S)~~ The increasing technology "leaks" of US CAD/CAM and software design packages for ASICs creates a severe export control problem to the U.S. if the Soviets decide to make use of the increasingly available Western "silicon foundries" and micro-processor workstation networks.

SECTION IX

INTELLIGENCE COMMUNITY COLLECTION AND DIA'S ANALYTIC RESOURCES (U)

A. (U) COLLECTION REQUIREMENTS AND RESOURCES

1. (U) The primary requirement on defense intelligence analytic and collection resources from consumers outside the Community is the [redacted] This document is prepared in accordance with DIAM 75-1, and submitted to DIA for validation and acceptance. There are 18 [redacted] for microelectronics and computers. The 18 [redacted] all come from the U.S. Army. This does not necessarily imply that other consumers are not interested or have not submitted [redacted] It may mean that Army [redacted] were on the books first and implies that these [redacted] adequately satisfied all consumers' requirements, submitted later.

(b)(3):10 USC 424

2. (U) The oldest current [redacted] comes from TRADOC, and calls for a study on [redacted] The next two [redacted] and are revalidations of older [redacted] and 298. The first of these asks for a 10 year forecast of future electronic component device capabilities. These two [redacted] and the fourteen additional come from a single office, [redacted] The fourteen [redacted] on computers cover all aspects with a variety of foci, and some considerable overlaps. Capability forecasts, technology transfer, production capabilities, military applications, etc., appear in these requirements repeatedly. These fourteen IPRs are also revalidations of older [redacted] A final [redacted] comes from CECOM, and requests a vulnerability assessment of U.S. Army Battlefield Computers, exclusive of Radio Electronic Combat and Physical Security (i.e., vulnerability to on-line penetration, disruption, deception, and reprogramming).

(b)(3):10 USC 424

3. (U) The status of [redacted] is that microelectronics and computers are perhaps

documented too well and collected against "too little" and with too low a priority. That is, [redacted] exist to cover any and all possible topics, and some that may not be achievable, for lack of collection and analytic resources. (b)(3):10 USC 424 Improvement in the situation might be made by rewriting the existing [redacted] to focus them more sharply; but this would most likely result only in an elimination of overlaps in the wordings, with all requirements still remaining and providing a basic "license" to do any and everything in the field of microelectronics and computers.

B. (U) PRODUCTION TASKING

~~(C/NF)~~ DIA tasks the Service S&T Centers in accordance with DIA Manual 75-1. [redacted]

(b)(1),(b)(3):10 USC 424,1.4(c)

Again, the topic list is very all inclusive with one notable observation; there is a major orientation towards Warsaw Pact military capabilities, and not enough on industrialized free world developments, and parallel civil technology suitable for dual use. These latter items are of concern for their technology transfer potential (to the Soviet Union), and their possible utility in U.S./NATO systems. [redacted] but there is a strong indication that not much more can be done without an infusion of significant new resources.

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

C. (U) PRODUCTION AND SCHEDULING

1. ~~(S)~~ The latest DIA (DST) reports on computers and microelectronics comprise over 40 items covering a variety of topics without significant overlap. These reports date from 1976 to 1986, which raises questions as to continued value of some of the older reports, and whether resources should be directed towards more frequent updatings. Table 1 lists these reports through

1985 for reference. It would seem that the reports address topics in a quasi-random fashion; however, this is not generally the case. The report topics are selected, and resources negotiated, based on current interests. That is, consumers express interests through various means (memo, oral, questions, etc.), and the DIA (and Intelligence Community) tries to respond within resource limitations, and somewhat subject to availability of pertinent data.

2. (U) (b)(3):10 USC 424 [redacted] Overlaps and inconsistencies are minimal because the number of analysts is so few. (b)(3):10 USC 424 [redacted] in maintaining inter-analyst interaction and data sharing. The DIA has sponsored joint meetings of these [redacted] (b)(3):10 USC 424 [redacted] at several sites around the U.S. (e.g., [redacted] providing government transportation to many analysts who otherwise would be unable to attend. This joint meeting arrangement has disintegrated with the transfer of (b)(3):10 USC 424 [redacted]

3. (U) The production of finished intelligence by DIA (using the Service S&T Centers), has been severely limited by resource availability.

D. (U) AD HOC TASKS (b)(3):10 USC 424

1. ~~(S/NF)~~ In addition to substantive review of DST products, DIA [redacted] staff are called upon to provide ad hoc support to many elements throughout the DoD (b)(1),(b)(3):10 USC 424.1.4(c) [redacted] The tasks include:

a. (U) Participation in [redacted] quite commonly as chairperson.

b. (U) Preparation of substantive material for and coordination review of NIE's, SNIE's, and JCS papers.

c. (U) Preparation and coordination of substantive collection requirements for SIGINT, PHOTINT and [redacted]

d. (U) Preparation and coordination of [redacted] (b)(3):10 USC 424 plans.

e. (U) Substantive briefings to Congressional Staff, OSD, and JCS on technologies, and threats.

f. (U) Substantive review of freedom of information requests, and preparation of appropriate responses within fixed deadlines.

g. (U) Substantive review of export license applications, and preparation of appropriate responses within fixed deadlines.

h. (U) Participation in many management budgeting exercises having to do with products, travel funds, ADP use and requirements, etc.--a seemingly never ending series of tasks.

i. (U) Serving as arbitrator among the Services on substantive differences in analyses, interpretations and conclusions.

j. ~~(S/NF)~~ Providing substantive support to [redacted]

(b)(1),(b)(3):10 USC 424,1.4 (c)

E. (U) COLLECTION PROBLEMS

~~(S/NF)~~ The tasking and reporting system are so diffused that one cannot identify or associate which [redacted] (b)(3):10 USC 424 and Production Center tasks are being supported by tasks in the Collection Community. That is, there is no audit trail relating specific collection tasks with specific production. Production tasks are assigned by [redacted] (b)(3):10 USC 424 to the various Service S&T Production Centers. These Centers generate collection requirements in an amalgamated form for each [redacted] [redacted] and [redacted].

(b)(1),(b)(3):10 USC 424,1.4 (c) (b)(1),(b)(3):50 USC 403 (g),1.4 (c) (b)(1),(b)(3):10 USC 424,1.4 (c)

The collection tasks are submitted in terms related to the collection media so the collectors can understand. Collectors are generally not experts in technology disciplines, and need to rely on the technical expertise of the trained and experienced analysts. This latter coordination occurs

(b)(1),(b)(3):10 USC 424,1.4 (e)

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

F. (U) PERSONNEL

1. ~~(C)~~ The personnel staffing for microelectronics and computers intelligence analyses is minimal at best, and so thin as to be nonexistent in supporting some (b)(1),(b)(3):10 USC 424 Note that Foreign Capabilities in Computer Technology, has had no

[redacted]

2. ~~(S/NF)~~ In December 1986, [redacted] added one new analyst/manager to bring the microelectronics/computer cadre up to three. A fourth was analyst addressing [redacted] as part of his broader [redacted] responsibilities. In January 1987, [redacted] was advised that its only [redacted] analyst was to be transferred (with personnel billet- i.e. no replacement authorized) to a new [redacted] thus, attempts to assess [redacted] technologies will be lost until a replacement billet and person can be obtained and trained. [redacted]

(b)(3):10 USC 424

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

(b)(1),(b)(3):10 USC 424,(b)(5),1.4 (c)

APPENDIX A

TERMS OF REFERENCE (U)

TERMS OF REFERENCE
SOVIET MICROELECTRONICS AND COMPUTERS PANEL (S)

16 Jan 85

SUBJECT: Microelectronics and Computer Technology (U)

PROBLEM: ~~(S)~~ [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

BACKGROUND: ~~(S)~~ Several critical technologies have been identified that, if pursued successfully into weapons, could conceivably provide a military advantage to the Soviets. [redacted]

(b)(1),(b)(3):50 USC 403 (g),1.4 (c)

[redacted] The fact that more sophisticated devices are appearing with alarming frequency in various applications in the Soviet military and in the Soviet private sector compounds the problem.

OBJECTIVES: ~~(S/NF)~~ The Panel will review the history and current capability of Soviet computer technology development and identify:

a. ~~(S)~~ Opportunities for intelligence collection and exploitation against this area: HUMINT, open literature, SIGINT, [redacted] (b)(1),(b)(3):50 USC 403 (g),1.4 (c)

b. ~~(S)~~ Soviet indigenous capability which includes their ability to manufacture semiconductors, work with new materials, and to match our Very High Speed Integrated Circuits program in both density and speed.

c. ~~(S)~~ Soviet abilities in developing system architectures and software, as well as associated technologies (e.g. networking, microminiaturization of power electronics).

d. (U) Soviet ability to acquire these technologies from the outside.

e. (U) Soviet potential to make breakthroughs and to develop a lead in the field.

The Panel will also critique current technical assessments and provide guidance for further analyses, especially on how to characterize technology leadership and military requirements.

LEVEL-OF-EFFORT: (U) The Panel will require about six meeting sessions. Status reports will be given at each Scientific Advisory Committee meeting, and a final report will be provided to the Director. The Panel will be chaired by [redacted] (b)(3):10 USC 424 and will have the following members: [redacted] (b)(3):10 USC 424

APPROVED BY:

(b)(6) [redacted]

[redacted] **JAMES A. WILLIAMS**
Lieutenant General, USA
Director, DIA

APPENDIX B

MEETING AGENDAS

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL MEETING
ROOM B7-213, THE DIAC, BOLLING AFB, D.C.
20 DECEMBER 1984

0800-0830 Executive Session

0830-0900 Assessment of Computer Technology

0900-0930 Assessment of Microelectronics Technology

0930-1000 Interfaces in the Community

1000-1005 Break

1005-1100 Comparative Analysis [redacted] Studies [redacted] and Related Reports

(b)(1),(b)(3):10 USC 424,1.4 (c)

1100-1145 Comparative Analysis - DoD Perspectives
- OUSD (P)
- OUSD (R&E)

1145-1230 Lunch: DIAC Cafeteria

1230-1315 Implications/Impact of T^2
- o Threat
- o Analysis

1315-1425 Overview of Collection Programs
- How are Requirements Levied
- Assessment of the Track Record

I. HUMINT (1315-1330)

[redacted]

III. IMINT (1350-1410)

IV. (b)(1),(b)(3):50 USC 403 (g),1.4 (c) (1410-1425)

(b)(1),(b)(3):10 USC 424,(b)(3):50 USC 403 (g),(b)(6),1.4 (c)

1425-1430 Break

1430-1530 Executive Session
- o Final Edit of Draft Terms of Reference
- o Future Activities

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
ROOM B7-213/413, THE DIAC, BOLLING AFB, D.C.
5 FEBRUARY 1985

0830-0900	Executive Session	
0900-0945	Characterization of the Soviet R&D Effort - Structure - Organizations - Functions - Personnel - Its Stimuli	(b)(3):10 USC 424
0945-1045	OSD/R&E Perspective and Needs: Comparative Analysis and Intelligence Support	(b)(3):10 USC 424
1045-1100	Break	
1100-1200	Intelligence Analysis on Microelectronics and Computers: The State of Affairs in the Community - Microelectronics - Computers	(b)(3):10 USC 424,(b)(6)
1200-1245	The MCTL	
1245-1330	Lunch - DIAC Cafeteria	
1330-1400	(b)(1),(b)(3):10 USC 424,1.4 (c)	
1400-1430		
1430-1445	Break	
1445-1530	Recent T^2 Cases	
1530-1600	Executive Session	

~~(FOR OFFICIAL USE ONLY)~~

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
ROOM B7-213/413, THE DIAC, BOLLING AFB, D.C.
28 MARCH 1985

0900-0945	Collection Management
0945-1015	HUMINT Collection Efforts
1015-1030	Break
1030-1100	(b)(1),(b)(3):50 USC 403 (g),1.4 (c)
1100-1130	
1130-1215	Perspective from a Collector
1215-1300	Lunch DIA Cafeteria
1300-1330	Foreign Broadcast Information Service
1330-1600	Executive Session

(b)(3):10 USC 424,(b)(3):50 USC 403 (g),(b)(6)

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL MEETING
LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM
4-5 JUNE 1985

4 JUNE 1985

0830-0845	Visitors Escorted from Los Alamos Inn to Director's Conference Room	Protocol Office Staff
0845-0930	Welcome and Laboratory Overview	(b)(3):10 USC 424
0930-0945	Break	
0930-1145	(b)(1),(b)(3):10 USC 424,1.4 (c) [redacted]	
	(0945-1015) Overview	
(b)(1),(b)(3):10 USC 424,1.4 (c)	(1015-1045) Technology Trends in [redacted]	
	(1045-1115) Parallel Processing and Benchmarking	
	(1115-1145) Computer Security	
1145-1245	Technology Transfer	
1245-1300	Walk to Otowi Cafeteria, Sideroom C	
1300-1345	Lunch	
1345-1400	Walk to Central Computing Facility (CCF)	
1400-1445	Tour CCF	
1445-1700	Executive Session for Panel Members	
1700-1715	Walk to University House	
1715-1830	Reception	
1830-1845	Walk to Otowi Cafeteria, Sideroom C	
1845	Dinner	

5 JUNE 1985

0815-0830	Visitors Met at Los Alamos Inn and escorted to Turquoise Room
0830-0945	HUMINT Collection

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL MEETING
LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM
4-5 JUNE 1985

5 JUNE 1985 (Continued)

0915-1000	LITINT	(b)(3):10 USC 424
1000-1030	(b)(1),(b)(3):50 USC 403 (g),1.4 (c)	
1030-1045	Break	
1045-1115	Militarily Critical Technology List (MCTL) Analysis	
1115-1145	Red and Blue Technology Assessments	
1145-1200	Visitors Returned to Los Alamos Inn	Protocol Office Staff

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
ROOM B7-213/413, THE DIAC, BOLLING AFB, D.C.
12 NOVEMBER 1985

0900-1000	(b)(1),(b)(3):10 USC 424,1.4 (c)	(b)(3):10 USC 424,(b)(6)
1000-1100	Soviet Spacecraft Computers	
1100-1200	DoD VHSIC Program	
1200-1300	Working Lunch: Panel Chairman to give status relative to Terms of Reference	
1300-1430	Technology Assessment Analyses: CAD/CAM Avionics Software	
1430-1600	Executive Session	

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
ROOM B7-213/413, DIAC, BOLLING AFB, D.C.
11 DECEMBER 1985

0900-1100	(b)(1),(b)(6),1.4 (c)
1100-1110	Break
1110-1200	Navigation Systems: Overall Assessment
1200-1300	Navigation Systems: U.S. Private Sector
1300-1330	Lunch
1330-1500	Executive Session
1500-1600	Optional Briefing from DIA/DT Subject: Data Automation at the S&T Centers

(b)(3):10 USC 424

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
ROOM B7-213/413, THE DIAC, BOLLING AFB, D.C.
15 JANUARY 1986

0900-1000	Soviet Software Capabilities (1949-1985)
1000-1015	Break
1015-1125	S&T Data Base Integration System/ Proposal
1125-1200	Soviet Software Capabilities (Continued)
1200-1245	Lunch
1245-1400	Local Area Networks and Software in Support of Battle Management
1400-1430	Manufacturing Techniques
1430-1500	Reverse Engineering, Application Specific Integrated Circuits (ASIC), and Silicon Foundries
1500-1530	Executive Session

(b)(3):10 USC 424,(b)(6)

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
ROOM B7-213/413, THE DIAC, BOLLING AFB, D.C.
19 FEBRUARY 1986

0900-1000	DARPA Tactical Technology
1000-1030	(b)(1),(b)(3):50 USC 403 (g),1.4 (c)
1030-1045	Break
1045-1130	Cruise Missiles & Space Systems
1130-1215	Lunch
1215-1245	LSI Design Tools
1245-1530	Executive Session

(b)(3):10 USC 424,(b)(3):50 USC 403 (g),(b)(6)

(UNCLASSIFIED)

AGENDA
DIA SCIENTIFIC ADVISORY COMMITTEE
MICROELECTRONICS AND COMPUTERS PANEL
FOREIGN TECHNOLOGY DIVISION, WRIGHT-PATTERSON AFB, OH
3 APRIL 1986

0800-0805	Welcome by FTD Chief Scientist
0805-0905	Microelectronics
0905-0935	(b)(1),(b)(3):10 USC 424,1.4 (c)
0935-1005	Avionics
1005-1020	Break
1020-1110	Computer Production
1110-1140	Highlights of Communiction Technology
1140-1155	Break -- Working Lunch
1155-1225	(b)(1),(b)(3):50 USC 403 (g),1.4 (c)
1225-1255	Military Software
1255-1325	Airborne Computers
1325-1340	Break
1340-1410	Future Avionics
1410-1430	(b)(1),(b)(3):10 USC 424,1.4 (c)
1430-1445	
1445-1500	ABM Radar
1500-1600	Executive Session
1600	Discussion with Dr. Davis, Panel Chairman

(b)(3):10 USC 424,(b)(6)

(UNCLASSIFIED)

DIA Advisory Board
June 2002 Plenary Meeting Summary

The Advisory Board held its quarterly plenary meeting on 25 & 26 June 2002 at the DIAC, Bolling AFB.

Attendees:

(b)(3):10 USC 424

(b)(3):10 USC 424

On day one, the board received seven briefings. The first was a current intelligence briefing presented by [redacted] Four other briefings outlined focus areas selected by the agency for the board's attention:

- Transition of MASINT R&D Technology to Acquisition [redacted] outlined the issues surrounding the transition of MASINT R&D technology to acquisition. He was interested in help from the board in improving the rate of transition.
- Performance Metrics [redacted] discussed the need for better performance metrics and was particularly interested in the board's help in applying e-business metrics to DIA.
- Defense Intelligence Transformation [redacted] presented his view on the need for transformation within defense intelligence. He also identified some problems that he thinks need to be addressed to help defense intelligence.
- Work Force Planning [redacted] outlined tasks DIA is facing in attempting to plan for its future work force. He discussed the issues surrounding the planning and the factors that need to be considered.

(b)(3):10 USC 424,.

(b)(3):10
USC 424

A sixth briefing entitled A Clearer Construct of MASINT and IMINT by [redacted] presented some issues surrounding the division of responsibilities between agencies with respect to various technical collection means. Finally, [redacted], concluded the first day of briefings with an update of the agency's S&T initiative in response to defense planning guidance.

On day two, the board divided into four groups to examine ways the board might help the agency resolve issues pertinent to the focus areas. Proposed focus areas and group members are:

- **MASINT** - [redacted]
  - Stewardship of hyper spectral technology
  - Transition of R&D technology to acquisition
- **Performance Metrics** - [redacted]
  - Appropriate use of performance metrics
- **Transformation** - [redacted]
  - Creating decision dominance in defense intelligence
- **Work force planning** - [redacted]
  - Human resource planning within the context of defense intelligence transformation

After conferring, each team presented its proposed strategy to the DIA Director (DR), who informally concurred with strategies.

The second day's meeting activities concluded with a tour of and briefing on the Joint Intelligence Task Force-Combating Terrorism.

Decisions

- Board will draft for the DR's approval a letter outlining its proposed strategy for addressing focus areas.
- Upon DR's approval, board will (a) create focus panels, (b) set appropriate agendas, (c) meet with substantive experts, and (d) produce recommendations. (Timelines for recommendations were not established.)
- Board tentatively scheduled the following 2002-2003 meetings:

06-07	November	2002
11-12	February	2003
21-22	May	2003
29-30	July	2003

Agenda Enclosed

[redacted]

(b)(3):10
USC 424

Executive Secretary
DIA Advisory Board

DIA Science and Technology Advisory Board
March 2002 Plenary Meeting Summary

The Science and Technology Advisory Board held its quarterly plenary meeting on 5, 6 March 2002 at the DIAC, Bolling AFB.

Attendees:

(b)(3):10 USC 424

March 5, 2002

(b)(3):10 USC 424

[redacted] opened the meeting by discussing the changes in the Board's mission, the new direction and the new membership. [redacted] discussed the new format for this meeting, which was to consist of the Board being briefed on Knowledge Management and Information Technology at DIA, The next day at the working lunch, the Board would then brief the Director on their impressions. There was some discussion on the topic among the Board members.

[redacted] gave a Current Intelligence presentation. The briefing reviewed the hot spots in the, including the war in Afghanistan, and activities in other regions. The Board members asked numerous questions and since [redacted] was not able to finish his briefing, he graciously agreed to come back at 4:15 and finish his briefing.

[redacted] gave the presentation on Knowledge Creation in which he discussed the current environment and how DIA was attempting to evolve into a collaborative Digital Environment. He discussed the importance of Joint Vision 2010 and handed out two documents, Strategic Intent and Strategic Capabilities. He stated that while the Strategic Intent was 3 years old, it was still accurate.

The Director joined the meeting for a working lunch. He discussed the changes he made in the Board, its membership and its direction, why he made the changes and how he hoped DIA

would benefit from the Board in the future. He then went on to discuss the attacks of September 11th, describing the impact that DIA faced as a result of the attack on the Pentagon and specifically DIA offices. He went on to discuss DIA's challenges in supporting the campaign and how DIA is meeting those challenges.

(b)(3):10 USC 424

[redacted] gave a presentation on The Way Ahead for Knowledge Management. He showed the delineation of the responsibilities between DI and DS. DI is responsible for Knowledge Management, DS for Information Technology. He discussed the Knowledge process improvement model and the Tacit Knowledge system.

[redacted] discussed the newly formed Joint Intelligence Task Force – Combating Terrorism (JITF-CT). He outlined the history of the organization, and stated there was a great deal left to do to establish the JITF-CT, including hiring many new employees. One of his challenges is identifying where all the information is, and that tracking down information was vital.

March 6, 2002

[redacted] presented Transforming Technology Infrastructure. He discussed JWICs and its interoperability with other agencies such as [redacted]. He noted that DIA now has a Capital Equipment Replacement Program. He emphasized that the community needs a common IT architecture in the embassies among [redacted] for interoperability, maintenance, and more efficient use of band width.

(b)(3):10 USC 424

(b)(3):10 USC 424

[redacted] presented Information Management. He discussed the trends in information management, and outlined the delineation of Information management vs. knowledge management. He discussed JIVA, the vision and some of the advances that had been made. During the discussion, the problem of other agencies willingness to provide access to all the data came up.

During the working lunch with the Director the board members presented their thoughts on the presentations they had heard. [redacted] attended the lunch, and took part in the discussions. Following the Board presentations, the Director talked about the upcoming SMIOC and the progress gained in addressing his priorities for intelligence, [redacted]

(b)(3):10 USC 424

After the working lunch, the Board received the annual Defensive Travel Briefing by [redacted]

The final briefing was from [redacted] who provided an analysis of preliminary data done by MITRE Corp.

Agenda Enclosed

[redacted]
Dir/Executive Secretary
Science and Technology Advisory Board

[redacted]
Chairman
Science and Technology Advisory Board

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DIA Science and Technology Advisory Board
June 2001 Plenary Meeting Summary

The Science and Technology Advisory Board held its quarterly plenary meeting on 26 June 2001 at the DIAC, B7915, Bolling AFB, and on 27 June at the National Imagery and Mapping Agency, (NIMA), Bethesda, Md.

Attendees

(b)(3):10 USC 424,(b)(6)

[redacted]

(b)(3):10 USC 424

The Board meeting began with a current intelligence briefing from [redacted] (b)(3):10 USC 424 [redacted] of the General Counsel's office briefed on Conflict of Interest and Contracts. [redacted] discussed the following:

- Taking official action does not have to mean dealing with money
- A senior DIA official cannot make any contact with DIA for one year after leaving.
- Can own diversified mutual funds, can be a problem with sector mutual finds. Need to know about what is in the sector. Diminimus - less that $5,000,
- If there is a conflict, can divest or it is sufficient to recuse yourself

- May not represent your company before DIA on a matter that involves the board, even for free
- May not use the board for own private gain, including spouse and business
- Need to keep the appearance of propriety
- Can ask for a ruling by GC.

(b)(6) [redacted], Administrator, Agricultural Research Service, US Dept of Agriculture briefed on the Bio Terrorist Threat to Crops & Livestock, specifically on British experiences with Foot and Mouth disease. British experience was significant enough to delay their elections. The US has a much greater reliance on agriculture than UK; so the effect would be greater.

(b)(3):10 USC 424 During the working lunch with [redacted] chair of the [redacted] (b)(3):10 USC 424 Panel gave a very positive briefing on the recent WMD 1st Demo held at Dugway Proving Ground. WMD 1st is being renamed [redacted] (b)(3):10 USC 424 [redacted] attended the demo and evaluated it as Chair of the [redacted] panel: (b)(3):10 USC 424

- Highly effective team
- One deep - inadequately staffed
- Suitable technologies
- Database interoperability needs a systems level assessment
- Multiple opportunities for SYT evaluation
- Team's capability is substantial in nature
- High pay off.

Need to redirect panel; look at Asymmetric Threat, refocus on WMD

Determine if we want to help DHS.

[redacted] briefed on the Academic Committee of Experts, specifically the current production, people, and background. The ACE has a new person to evaluate the feasibility of weaponization in the areas reviewed.

[redacted] briefed on the review of the [redacted] production (b)(3):10 USC 424 responsibilities the [redacted] conducted earlier this year. (b)(3):10 USC 424

[redacted] presented the Director's Award to [redacted] retirement from the STAB.

After [redacted] left, the Board was given a presentation by [redacted] DS on DIA's Information Management program,

- Trying to change how DIA does things ie has web sites that are based on office vs function
- Data stores need to be more widely available
- Concern over not knowing what you don't know
- Problem with off line, closed networks
- Security - what is the analyst's role and need to know
- Cost to control information, ie card IC solution
- [redacted] is GDIP funded (b)(3):10 USC 424
- Too many passwords - should have one sign on for what you have a need to know
- Enabling the Intelligence Cycle
- Planning, Direction
- Collection
- Processing, Exploitation
- Production

- Dissemination, evaluation

(b)(3):10 USC 424 [redacted] provided an update on [redacted] The day concluded with a provocative presentation from TA on Emerging Technologies.

Summary

The Board received a current intelligence briefing from J2, a briefing from the General Counsel's office on Conflict of Interest and Contracts and a briefing from Dept of Agriculture on the Bio Terrorist Threat to Crops & Livestock. During the working lunch with [redacted] (b)(3):10 USC 424 the [redacted] briefed on the review they conducted earlier this year, the chair of the Humint Panel briefed on the recent WMD 1st Demo and [redacted] briefed on the Academic Committee of Experts. The Board was then given presentations on DIA's Information (b)(3):10 USC 424 Management program and an update on [redacted] The day concluded with a presentation from TA on Emerging Technologies.

27 June 2001, NIMA

The Board went to NIMA on 27 June, and received several briefings on NIMA's (b)(3):10 USC 424 operations and was shown a [redacted] The Board also received a briefing on NIMA Research and Technology, which included information on the National Technology Alliance, a partnership to bring in commercial technology to address the problems of government users.

Agenda Enclosed

[redacted]
Dir/Executive Secretary
Science and Technology Advisory Board

[redacted]
Chairman
Science and Technology Advisory Board

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DIA Science and Technology Advisory Board
April 2001 Plenary Meeting Summary

The Science and Technology Board held its quarterly plenary meeting on April 24 & 25 at the National Ground Intelligence Center (NGIC) in Charlottesville, Va.

Attendees

(b)(3):10 USC 424

(b)(6)

(b)(3):10 USC 424

In addition to board members, several senior DIA members attended the meeting and will continue to be invited in order to ensure the Board is addressing the needs of DIA. The Board received overview briefings on NGIC and its production activities. The briefings were very well received; the board members were very impressed with NGIC's analytical capabilities.

(b)(6) provided an overview briefing on NGIC. discussed NGIC's (b)(6) intelligence production and analysis.

(b)(6) presented a briefing on the Threat to Army

(b)(6) Transformation. discussed future demographics and the future world view using

the examples of the world being divided into three zones. [redacted] discussed the future technology threats. (b)(6)

(b)(6) [redacted] gave a positive view of how the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted] is successfully engaged in collaborative activities using the [redacted] Communities of Interest. (b)(3):10 USC 424

(b)(6) [redacted] provided an in depth view and discussion on the lessons learned of the Russian experiences in their two wars in Chechnya.

The Board was given the opportunity to examine some foreign material and received and presentation on the value of foreign material exploitation.

Several computer tools that NGIC is successfully using were presented.

- A demonstration of the [redacted] search tool was done and an update on [redacted] was given. (b)(3):10 USC 424 (b)(3):10 USC 424
- A discussion and a demonstration on digital production was done.
- [redacted] (b)(3):10 USC 424
- [redacted] (b)(3):10 USC 424

Briefing on a new kind of propellant and a new type of innovative ammunition were presented.

A briefing on a potential for a new capability [redacted] was presented. (b)(3):10 USC 424

(b)(6) [redacted] presented a briefing on NGIC's professionalization program. NGIC is creating a program to encourage follow on training and development as a tool to help recruit and retain qualified individuals. NGIC is doing this in concert with the DR's Workforce Thrust.

(b)(3):10 USC 424 [redacted] gave an overview of the activities presented at the latest SMIOC, including a report on the discussion of the [redacted] Senior Steering Groups & discussed the STAB Support to Asymmetric Threat SSG. (b)(3):10 USC 424

Agenda Enclosed

(b)(3):10 USC 424 [redacted]
Dir/Executive Secretary
Science and Technology Advisory Board

[redacted] (b)(3):10 USC 424
Chairman
Science and Technology Advisory Board

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DIA Science and Technology Advisory Board
January 2001 Plenary Meeting Summary

The Science and Technology Advisory Board held its quarterly plenary meeting on 30 January at the DIAC, Bolling AFB, and on 31 January at the National Reconnaissance Office (NRO), Chantilly, Va.

Attendees -

(b)(3):10 USC 424,(b)(6)

The meeting at the DIAC started with an overview current intelligence briefing from [redacted] followed by presentations on three intelligence community outreach programs created to answer some of the science and technology deficiencies in the intelligence community.

(b)(3):10 USC 424

(b)(6) (b)(3):10 USC 424

- [redacted] talked about the [redacted] (b)(3):10 USC 424
- [redacted] discussed the [redacted] (b)(3):10 USC 424
- [redacted] presented an overview of the efforts underway at [redacted] (b)(3):10 USC 424

(b)(3):10 USC 424

The Director and Deputy Director spent two hours with the Board and were presented briefings and engaged in discussions on the Board's support to the Four Thrusts.

- [redacted] presented an overview of the work done to support the [redacted] (b)(3):10 USC 424
- [redacted] was joined by [redacted] in outlining the activities of the [redacted] panel. (b)(3):10 USC 424 (b)(6) (b)(3):10 USC 424
- [redacted] presented the work of the Information Technology for I&W panel.
- Under the support for the Workforce Thrust, [redacted] briefly discussed the new Federal Laboratory panel being formed. [redacted] presented some initial thoughts on the Teaming with Academia tenet, for which he was recently named Tenet Manager. (b)(3):10 USC 424
- [redacted] provided a summary opinion of the [redacted] (b)(3):10 USC 424
- [redacted] provided a briefing on the STAB involvement with Intelligence Integration/ Interoperability for the [redacted] (b)(3):10 USC 424
- [redacted] arranged for the members to be read into the [redacted] (b)(3):10 USC 424

(b)(3):10 USC 424

The plenary meeting adjourned and divided into panel meetings.

31 January 2001, 0900-1600, NRO

On 31 January the Board visited NRO where [redacted] presented an overview of NRO. [redacted] was followed by several presentations of technical activities at NRO. (b)(6) (b)(6)

Agenda Enclosed

(b)(3):10 USC 424 [redacted]

Dir/Executive Secretary
Science and Technology Advisory Board

Chairman
Science and Technology Advisory Board

DIA Science and Technology Advisory Board
November 2000 Plenary Meeting Summary

The Science and Technology Advisory Board held its quarterly plenary meeting on 1 November 2000 at Clarendon, Arlington Va, and on 2 November, 2000 at the DIAC B7915, Bolling AFB.

Attendees

(b)(3):10 USC 424

(b)(3):10 USC 424

1 November 2000

[redacted] the meeting with a brief discussion on STAB business. [redacted] presented a Current Intelligence overview briefing that included a section on scientific and technical issues and a discussion of the attack on the USS Cole, as specifically requested by one of the Board members.

(b)(6)

(b)(3):10 USC 424

[redacted] briefed on future technical systems. [redacted] briefed on the Joint Service Advisory group, a subcommittee that was sponsored by the Army Science Board to provide technical advice to the ASD (C^3I).

During the working lunch with the newly appoint Deputy Director of DIA, Mr. Mark Ewing, [redacted] introduced the Board and provided an overview discussion including the history, membership, purpose, mission, goals and objective of the STAB. Following [redacted] was an Open Forum with the STAB during which [redacted] discussed collection issues. The Deputy Director gave his impressions thus far of DIA and the challenges it faces.

The Director was scheduled to be on travel during the meeting, but his travel plans changed and so was able to attend for an hour. He spent time with the board discussing his top priorities for the DIA intelligence mission known as the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted] Revitalizing and Reshaping the Workforce.

[redacted] presented the required annual Overseas Travel briefing to the STAB members. (b)(6)

[redacted] Chief, Central MASINT Office (CMO) briefed on Measurement & Signature Intelligence, what it entails, and future challenges for the MASINT community. At the end of the day, [redacted] met with the Standing Committee on Science and Technology panel.

2 November

[redacted] opened the second day of the meeting. [redacted] provided an S&T overview of the [redacted] (b)(3):10 USC 424

[redacted] gave a presentation on the activities of the Advisory Committee of Experts, which is a standing committee on [redacted] (b)(3):10 USC 424 and a sub committee of the STAB.

The Board received an update on two of the Senior Steering Groups (SSG) that are tackling the Directors top priorities. [redacted] chair of the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted] and [redacted] chair of the Revitalize/Reshape the Work Force SSG presented briefings on the progress being made in each of their groups. The STAB representatives to each of the SSGs presented an update on their activities. [redacted] discussed the work of the Information Technology for I&W panel; [redacted] briefed on the activities of the [redacted] (b)(3):10 USC 424 panel, [redacted] briefed on the new panel looking at DIA's interaction with Federal Laboratories. [redacted] discussed the Workforce SSG, [redacted] [redacted] discussed the STAB activities in support of the [redacted] [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 (ret) briefed work done for the [redacted] (b)(3):10 USC 424 [redacted]

The DIA Deputy Director attended the working lunch again for the second day, and [redacted] [redacted] briefed on the findings of the [redacted] (b)(3):10 USC 424 and discussed follow-on work for the panel. [redacted] briefed on a community group that was reviewing S&T Intelligence analysis capability.

Agenda Enclosed

[redacted]
Dir/Executive Secretary
Science and Technology Advisory Board

(b)(3):10 USC 424

[redacted]
Chairman
Science and Technology Advisory Board

January 2000 Full Board Meeting Notes

The first day of the 26-27 January 2000 STAB Full Board meeting at DIA was cancelled due to the closure of the federal government, brought about by a winter snowstorm on the east coast. However, there were sufficient Board members that were either local or able to fly into Washington to allow the second day to commence as planned.

The day began and ended with computer demonstrations. In the morning, the Board visited the [redacted] In the afternoon, the Board was briefed on the [redacted] text visualization software.

(b)(3):10 USC 424
(b)(3):10 USC 424

The focus of the discussions on 27 January was the [redacted] for defense intelligence. The STAB representatives on each of the Senior Steering Groups had the Board briefed on the activities and initial action plans for each of the thrusts. The actions plans had all been recently approved at Military Intelligence Board meetings. [redacted] briefed the [redacted] plan and [redacted] briefed the [redacted] plan. [redacted] briefed the [redacted] plan. [redacted] (DIA Director for Administration) presented the "Revitalize the Workforce" plan. She asked for aid in identifying strategies to recruit mid and senior level personnel from industry, providing speakers for the Joint Military Intelligence College, and advertising the Virtual University initiative.

(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424

The Board out-briefed Mr. Jeremy Clark, DIA Deputy Director, on how the STAB sees itself supporting each thrust. In summary, the STAB will serve as a vehicle to bring additional outside experience and expertise to bear on the problems and issues within the thrust areas. This will particularly be true in the case of the [redacted] and the [redacted] thrusts, where commercial programs, technologies, and experiences can be directly relevant. This approach also precludes the Board from becoming caught up in the short-term detail-driven work under way in these two thrust areas. On the other hand, the STAB members supporting the [redacted] thrust will be participating in the six working groups formed to examine elements of the problem set, such as the nature of the threat, the Indications and Warning process, and collection issues.

(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424

The STAB representatives on each of the Senior Steering Groups will continue to have the lead in defining the approach to the Board support and involvement in thrust activities. The STAB Office will continue to try to keep Board members informed of meeting dates or other relevant information. Board members are welcome to "switch" their assignments to another thrust or to help on additional thrust efforts. If so, please contact the STAB Office.

Notes from STAB April 2000 Plenary

The STAB met at the Pentagon on 26 April and at the National Reconnaissance Office on 27 April.

(b)(3):10 USC 424

At the Pentagon, the Board met with [redacted] for lunch and informal discussions regarding the [redacted] as well as his recent trip to NATO. [redacted] recognized the difficulties in making progress on the thrust challenges, but feels that the federated approach with intelligence consumers offers the best opportunity. That morning, the STAB was briefed by [redacted], on where he wants to take the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted]. The Board was also briefed by Dennis Clift, President of the JMIC, on his efforts to boost the intelligence college's research program. After lunch, the STAB visited the CJCS J2 spaces. After a current intelligence briefing, the STAB received a presentation on J2 support to targeting and battle damage assessment, and then toured the alert center.

At the NRO, the STAB received numerous briefings on the varied studies and RDT&E underway in order to be familiar with emerging reconnaissance capabilities and technologies. One day was insufficient to cover them all, so NRO proposed that the STAB come back again at some point in the future, perhaps to convene at one of their "off-site" areas.

Below is a summary of the key decisions and action items from the April 2000 plenary.

a. Under the guidance of [redacted] and in support of the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted] the STAB will restart its [redacted] (b)(3):10 USC 424 panel from last year. The STAB will also initiate a separate effort to look at expert tools for I&W. [redacted] expects these efforts to brief out to the Director at the 1-2 November Full Board meeting.
b. In support of the "Reshape the Workforce" thrust, the STAB will restart its "DIA-Laboratory" panel but with an extended scope to examine all opportunities to leverage external skills and resources (laboratory, academia, industry) for defense intelligence. The title of this panel will likely be changed to reflect this broader scope. Again, the target completion is November.
c. [redacted] will brief the STAB again on the progress made towards organizing a Defense Intelligence Producers Council meeting on scientific and technical intelligence issues. The STAB is to consider what role/actions it can take in support of DIA efforts. For example, a white paper on S&T component to Information Warfare/Operations, which was a subject of interest to a couple of STAB members.
d. The STAB is to provide feedback to [redacted] on his proposal that the Board think through the impact and usefulness of DIA going to a model-basis versus the traditional discrete data element basis for its databases of the future. [redacted] spoke about related efforts underway along these lines. Should the STAB form a study?
e. The STAB is to consider its response to [redacted] regarding his call for Board assistance in boosting the JMIC research program. [redacted] proposes that the STAB assign a three person group to work with JMIC to help enhance research and

(b)(3):10 USC 424

expand JMIC support for DIA. The STAB invited the JMIC to have representation at all future plenary meetings. [redacted] also invited the STAB to visit the JMIC at one of its future plenary meetings.

June 2000 Full Board Meeting
Report to the Director

(b)(3):10 USC 424 The 26-27 June 2000 meeting of the STAB at the [redacted] the [redacted] (b)(3):10 USC 424 [redacted] was both useful and informative. Several items are worth noting.

(b)(3):10 USC 424 1. The [redacted] is an energetic group. Those who spoke with us are making use of COTS and GOTS software in developing intelligence tools which are both useful to the warfighter and replace more cumbersome, complicated tools. The ACTD's reported on seem to be progressing well. The folks involved deserve to be commended for their contributions.

(b)(3):10 USC 424 2. The [redacted] presentation on their training program was impressive. Flexible training packages are being developed there that can be tailored to meet any CINC or JTF-level readiness need. Their focus on levels (e.g. component interoperability, US Joint, etc.) is on target. The accomplishments of the training unit are laudable.

3. Less impressive, perhaps because results were not presented well, were the presentations on (b)(3):10 USC 424 the [redacted] Formed in [redacted] the role for the [redacted] is to provide assessments of C3- (b)(3):10 USC 424 [redacted] technologies for "rapid" insertion to meet near term CINC or JTF-level needs. Past work at (b)(3):10 USC 424 the [redacted] has had little [redacted] content, and the [redacted] is aggressively pursuing intelligence-related projects from the Commands and linkages with DIA. In addition, the [redacted] is (b)(3):10 USC 424 (b)(3):10 USC 424 planning to incorporate the [redacted] in its longer-term solutions under the "Interoperability" thrust.

(b)(3):10 USC 424 While the [redacted] operations are funding limited, they were able to show few results after having been working on several scenarios for more than one year. The STAB questions the effectiveness and depth of capabilities behind the presentations. However, this situation need not be considered in a negative light. Instead, it may be an opportunity for DIA, which could use the services of an external test bed for many of its IT systems and tools prior to implementation. DIA should consider the cost and benefits of a concerted effort to help shape the [redacted] to better serve (b)(3):10 USC 424 the agency.

4. In general, defense intelligence has every right to be proud of the work of the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 [redacted]

Notes from June 1998 Plenary Meeting

The Full Board Meeting on 3-4 June 1998 was held at the Missile and Space Intelligence Center (MSIC) in Huntsville, Alabama. Discussions were classified, but the agenda included briefings on MSIC programs and capabilities, [redacted] and customer support innovations. The Board toured [redacted]

(b)(3):10 USC 424
(b)(3):10 USC 424
(b)(3):10 USC 424

Board members felt that the visit to MSIC was quite worthwhile. The [redacted] capabilities at MSIC are impressive. MSIC is a valuable asset to the DIA S&TI program.

(b)(3):10 USC 424
(b)(3):10 USC 424

STAB business included establishing dates for Full Board Meetings next fiscal year, with the proposal to hold four meetings per year and alternating locations between the DIA and community organizations and agencies. In addition, Panel Chairs briefed the Board on the status of their activity and interim findings. No recommendations were made to senior DIA leadership as the Director was unable to attend.

(b)(3):10 USC 424

[redacted] attended the Board Meeting and discussed the role of ST in DIA. The STAB should look forward to close cooperation with the ST staff in the future.

Minutes from the 18-19 November 1998 Plenary

Day One

The first day of meetings was held in the Clarendon offices of DIA. The STAB Chairman, [redacted], called the meeting to order and Major Culp covered administrative items in support of the meeting. Dr. Wartell and [redacted] then introduced topics of STAB business. Departing STAB members this year were [redacted] DIA had also just received the resignation of [redacted] The newest STAB member, [redacted] was introduced. Other new members will include [redacted] and [redacted]. The STAB also agreed to move the dates for the **next plenary meeting to 2-3 February 1999**, which will be held at [redacted]

(b)(3):10 USC 424

The Vice Director of the Directorate of Intelligence Operations (DO), welcomed the STAB and highlighted the DO mission. The Deputy Director for Defense HUMINT Services (DHS), then briefed the DHS mission and recent organizational changes. [redacted] from J2 briefed current intelligence threats. [redacted] from the Office of Operations briefed S&T collection in DHS. The last briefing before lunch was from [redacted] who briefed the [redacted] effort to apply available technologies promising real-time collaboration in mission planning and knowledge integration. During the working lunch, the STAB witnessed a demonstration of the new automated reporting and feedback system. After the lunch, [redacted] from the DIA [redacted] which is aimed at enhancing the analytic support to [redacted] The [redacted] then updated the STAB on recent mission area changes in his organization. The last briefings of the day were on DIA [redacted] and on DIA [redacted]

(b)(3):10 USC 424

The STAB concluded the day with discussions on potential future projects, using as a basis the list of nominated ideas from across DIA. The STAB highlighted the nominations from [redacted] and other laboratory support to DIA), [redacted]. The STAB also proposed topics on [redacted] amongst others. There was consensus that the DHS nomination would be pursued by the Board. Also discussed was the concept of starting a standing committee that would concentrate on S&T issues.

(b)(3):10 USC 424

Day Two

The second day of meetings was held at the DIAC. [redacted] briefed the STAB on current intelligence issues as a follow up to the previous day. Then [redacted] briefed the STAB on the new ST organization. LTG Hughes, DIA Director, arrived as scheduled. The Director led discussions with the STAB on a topic of high current intelligence interest. The remaining time before lunch was used by [redacted] to brief the Director on the findings of his panel study on Intelligence Integration and Dissemination.

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During the luncheon, the Director presented [redacted] with the Director's Award for his service on the STAB. Also handed out were the updated certificates of good standing to the STAB members. LTG Hughes also asserted his desire for the STAB to tour the [redacted] at its next Open House. During the lunch, the Director was informed of the potential future STAB projects. No decisions were made.

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After lunch and the departure of the Director, the STAB was briefed on the [redacted] The last briefing of the day was by [redacted] on the status of the DIA [redacted]

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Action Items: 1. The STAB Office will take the lead on scheduling the [redacted]

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2. The STAB Office will schedule time in January with the Director for additional panel briefings.

3. STAB members should identify potential new members, with emphasis on S&T expertise.

4. [redacted] will convene a subset of his S&T panel to meet with ST Staff - this may be a precursor to the formation of a standing committee.

(b)(3):10 USC 424

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Notes from the 2-3 February 1999 Plenary Meeting
At [redacted]

The STAB plenary at [redacted] was an unqualified success. [redacted] to be a wonderful host to the Board. Over a day and a half, [redacted]

The STAB conducted some Board business on the first day.

⇒ A status review of on-going panel projects was accomplished. Many are in the report writing stage. The STAB Office will attempt to schedule final briefings to the Director in March or April for both the [redacted]

(b)(3):10 USC 424

⇒ [redacted] handed out the draft Terms of Reference for the [redacted] (b)(3):10 USC 424 [redacted] volunteered to serve as the panel chair. A kick-off meeting with DO will be held at Clarendon on 17 March to finalize the TOR.

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(b)(3):10 USC 424

⇒ [redacted] handed out a very draft TOR for the Standing Committee on Science and Technology. He noted that this project should start this Spring and asked for comments on the TOR from the STAB.

⇒ The STAB has expended approximately two-thirds of its annual travel budget already. Due to the relative expense of "off-site" plenary meetings, it was agreed that the STAB will convene only one of its quarterly meetings away from the Washington area. However, one of the three Washington meetings can be held away from the DIAC. It was proposed that the June 1999 plenary be held at the Armed Forces Medical Intelligence Center in Maryland. [redacted] also called for multiple day panel meetings as much as possible.

(b)(3):10 USC 424

⇒ The dates for the Fall 1999 plenary will be 9-10 November, held at the DIAC. This will likely be the first plenary with the new DIA Director.

⇒ The STAB reviewed the list of nominees for new STAB members/consultants. Biographies are still needed on many of them. [redacted] had nominated many, and since he was unable to attend, little progress was made.

(b)(3):10 USC 424

April 1999 Full Board Meeting Notes

The Spring 1999 STAB Full Board Meeting was held at the DIAC from 20-21 April. LTG Hughes attended from 1000-1300 on 20 April and 1225-1325 on 21 April. The STAB was briefed by J2 on current intelligence, LTG Hughes on future global threats and the Kosovo situation, technical operations in DHS, current MASINT projects, Information Operations, the community [redacted] and a R&D project in the NRO.

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HIGHLIGHTS

The Director was briefed on the findings of the STAB's [redacted] on 20 April and a short interim report on the Science & Technology Threats panel on 21 April.

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(b)(3):10 USC 424 [redacted] was welcomed to the STAB as the new NIMA Liaison. Copies of the recently printed final report of the Science & Technology Intelligence panel were handed out. Also disseminated to the attendees was the new Board Membership Guide.

(b)(3):10 USC 424 [redacted] presented LTG Hughes with a "Bobby Knight" basketball in recognition of his support to the Board during his tenure at DIA. LTG Hughes invited all members to attend the DIA Change of Command Ceremony on 26 July and his retirement ceremony at Fort Myers on 27 July.

ACTION ITEMS

The STAB Office will investigate the possibility of establishing a password protected home page for the STAB members on the OSIS Internet.

(b)(3):10 USC 424 The STAB Office will arrange for [redacted] to meet with RADM Wilson to discuss the STAB.

STAB members are to review the draft Terms of Reference for the proposed panel to study "Laboratory Support to DIA" and provide comments to the STAB Office.

The STAB Office will initiate the DIA review of the first draft of the final report from the [redacted]

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The STAB Office will continue to work with the DIA [redacted] on the inclusion of their Advisory Committee of Experts under the STAB charter.

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The STAB Office will begin planning for the next full board meeting at the DIAC on 23 June. On the agenda will be a follow-up on Information Operations at the request of the STAB.

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Results of STAB 9-10 1999 November Full Board Meeting

The Board held its Autumn Quarterly Full Board meeting at the DIAC on 9-10 November. The STAB was briefed by DIA Director VADM Thomas Wilson regarding the new priority "thrusts" for defense intelligence. VADM Wilson wants a STAB member to serve on each of the [redacted] which are to set priorities and guide each thrust in concert with articulated goals. Each Senior Steering Group reports to the [redacted] The STAB discussed how to best support the planning efforts, and members offered their preferences on which of the [redacted] they are willing to work.

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The Director spoke about the STAB assisting in the strategic planning efforts, in particular by applying its experience and outside perspective to further definition of the specific objectives and scope of the thrust areas, as well as cross-cutting issues across all the thrust areas. One of the challenging tasks is in the development of the conceptual framework or construct for defining the defense intelligence approach in shaping to meet the asymmetric threat. In response to Board comments, the Director recognized that the STAB can also serve to ensure that technical honesty is preserved in the development of action plans, and that the STAB can help through "out reach" to industry and academia. He asked that the [redacted] and SMIOC be briefed on STAB efforts in support of the [redacted]

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The STAB members that will serve on the Steering Groups will be:

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[redacted]

[redacted]

Reshape/Revitalize the Workforce

[redacted]

Steering Group members will serve as de facto chairs of the corresponding STAB teams and will provide them with insight on the progress and issues related to their assigned thrust area, as well as direction on how the STAB team can contribute. As the STAB has diffuse expertise on personnel or workforce related issues, there will be no Workforce Team per se. Instead, that Steering Group member will solicit any necessary support from across the STAB.

Database | Interoperability | Asymmetric Threat

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[redacted]

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(b)(3):10 USC 424 Reporting to the [redacted] are Working Groups, responsible for instituting the action plans and developing metrics. The interface of the STAB with the Working Groups is of secondary importance to Board support to the Steering Groups, but it is possible that the Board can serve these efforts in some capacity as well.

(b)(3):10 USC 424 The [redacted] has been formed from the [redacted] (b)(3):10 USC 424 (b)(3):10 USC 424 (b)(3):10 USC 424 (b)(3):10 USC 424 (b)(3):10 USC 424 The [redacted] is being formed from the [redacted] (b)(3):10 USC 424 [redacted] have not yet been formed. The [redacted] have not yet been formed.

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UNITED STATES GOVERNMENT

memorandum

DATE: 15 Oct 99

U-2371-99/STAB

REPLY TO
ATTN OF: STAB

SUBJECT: Intelligence Products Panel Report

TO: DI DP DO DS ST J2 MC DA

1. Enclosed is the final report of the Science and Technology Advisory Board (STAB) panel on Intelligence Products. LTG Hughes directed the STAB to examine the quality and effectiveness of DIA intelligence products. The panel findings were briefed to LTG Hughes on 7 April 1999. The report includes some recommendations from the STAB panel for DIA consideration.

2. If you have any questions regarding the report, or if the STAB can be of any further assistance, please contact the STAB Office, located [redacted] (b)(3):10 USC 424

(b)(3):10 USC 424 [redacted]

(b)(3):10 USC 424,(b)(6) [redacted]

1 Enclosure a/s

Director, DIA Science and Technology Advisory Board

(b)(3):10 USC 424 cc: [redacted]

Science and Technology Advisory Board

DIA INTELLIGENCE PRODUCTS PANEL

REPORT

Science and Technology Advisory Board: Report of the Intelligence Products Panel

Foreword

The Director of the Defense Intelligence Agency (DIA) commissioned a panel of the DIA Science and Technology Advisory Board in 1998 to assess the quality and effectiveness of DIA intelligence products. In general, the panel found that the quality, content, and timeliness of scheduled intelligence products are good. The panel recommended that DIA improve the ad hoc production process and consider adding a new class of production tools that allow customers to personalize intelligence information to their needs. The panel conducted its review from February - November 1998 and reported its findings to LTG Hughes in April 1999.

This document is [redacted] in its entirety.

Information Cutoff Date: 7 April 1999

Science and Technology Advisory Board:
Report of the Intelligence Products Panel

Background

In accordance with the attached Terms of Reference (Attachment A), the Science and Technology Advisory Board formed a panel to review all forms of DIA products – to include hard copy, soft copy, and other electronic products. The review assessed the quality, value added, and timeliness of daily, scheduled, and ad hoc products.

Membership

The following people served on the Products Panel:

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Findings

Style and Format

DIA formal reports are categorized into 5 areas and total approximately [redacted] reports per year, not including the daily *Executive Highlights* and *Military Intelligence Digest (MID)*. (b)(3):10 USC 424

1. Defense Intelligence Assessment (Short form)	**Time Sensitive Single Subject**	**Executive Level**	
2. Defense Intelligence Assessment (Regular form)	**Comprehensive Situation Analysis**	**Planning and Policy Staff**	
3. Defense Intelligence Report	**Indepth Analysis**	**Military Plans and Operations**	
4. Defense Intelligence Special Products	**Unique Format Specialized**	**Various Consumers**	
5. Defense Intelligence Management Document	**Procedures and Methodology**	**Production Managers**	

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In general, the panel found the quality and style of the products to be very good. Most reports were polished and professionally produced. Highlighting and inserts were quite helpful for a quick synopsis. The writing style was generally good. The quality of photographs, maps, and graphics was excellent. "So what" assessments found in most products were a good addition. Longer in-depth technical reports need more attention in these areas – but then, they are written for audiences who generally can spend more time with the documents.

Content of Products

Topic selection and content in the daily products was also quite good. For example, the [redacted] October 1998 *MID*, selected at random, covered analysis of:

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- [redacted]

These are four noteworthy, complex, and timely issues that were well presented with insightful commentary and analysis. To produce material like this on a daily basis is a very demanding assignment.

The panel did not find any content metrics tracked by DIA on the publications – for example, how many articles this quarter covered foreign air defenses, or [redacted] naval forces, or laser technology, and how does that compare to the previous quarter or previous year? Such metrics can remind production managers to question the reasonableness of coverage on various topics. For an example, the panel searched all DIA products for articles on a country-by-country basis for the 15 April - 15 July 1998 quarter and derived the following statistics:

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Observations on DIA Products – Metrics

All Products **15 April – 15 July 1998**

(b)(3):10 USC 424

Tier 0

Tier 1A

[redacted]

Tier 1B

These metrics show whether selected areas are receiving adequate coverage. They were available in computer format and readily accessible.

Ad Hoc Products

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The timeliness and quality of ad hoc products received mixed reviews by the panel. By accessing [redacted] we could see each user's requests, DIA's taskings, subsequent clarifications, and the resulting products. In reading through selected topics, the panel found "good" and "not-so-good" examples.

Good Examples

8 May 98 – Threats to helicopters [redacted] (b)(3):10 USC 424

17 Jun 98 – Background questions [redacted] (b)(3):10 USC 424

Not-So-Good Examples

(b)(3):10 USC 424

2 Feb 98 – [redacted]

15 May 98 – [redacted]

In many cases, the users were quite satisfied and said so. In others, the response was not timely, did not answer the right question, or, in a few cases, asked for so much clarification that the user withdrew the request.

(b)(3):10 USC 424

[redacted] But in reading the flow, production managers can also gain excellent insights into the quality, value added, and user satisfaction with ad hoc production. With simple modifications, [redacted] could sort assessments by user, responding DIA branch, subject, etc., which allows managers to determine patterns of superior or inferior performance. (b)(3):10 USC 424

Electronic Products

DIA is rapidly expanding its use of web pages to present information on various subjects. Examples reviewed include the [redacted] The panel was particularly impressed with the [redacted] effort. (b)(3):10 USC 424

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When [redacted] fully deploys collaborative tools, they will change the entire ad hoc production/response model. DIA is planning for this, as shown by the vision portrayed in *Defense Intelligence Production – A New Direction for the 21st Century.* [redacted] (b)(3):10 USC 424

could have a similar huge impact, although the panel did not find evidence that DIA is aggressively pursuing them.

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[redacted]

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An [redacted] product line would be a most useful addition to Intelink. Commercial push engines such as [redacted] could provide high-level consumers with focused reports on topics of their choice.

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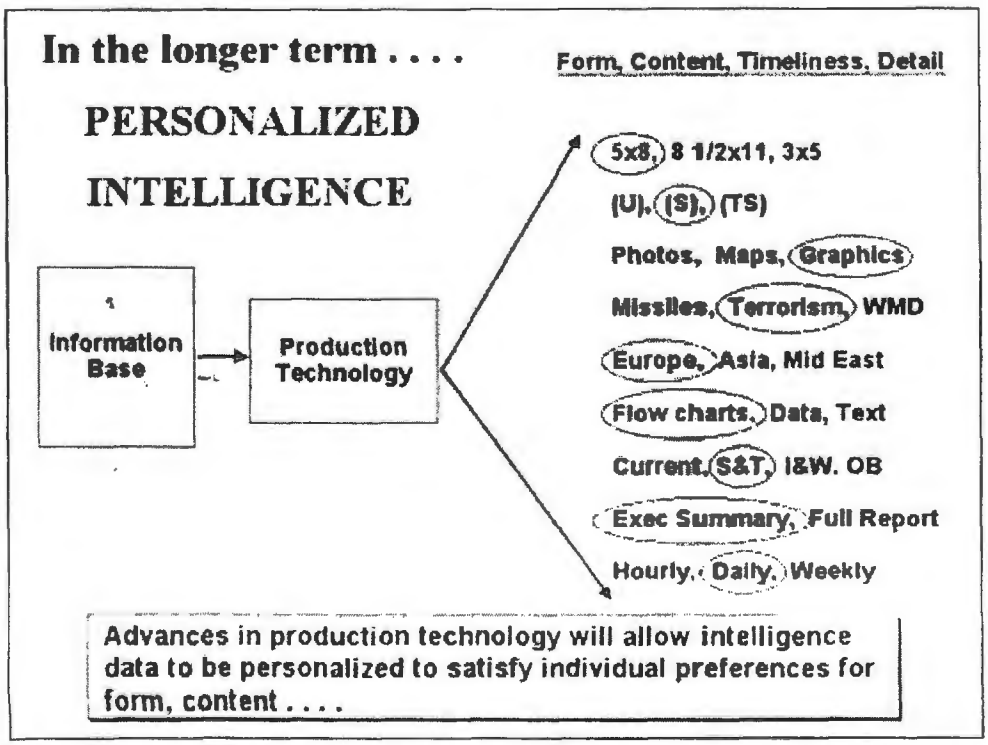
Push products would supplement the [redacted] models already used in Intelink for more indepth analytic efforts.

Advances in production technology in the not too distant future should allow users to select the form, content, update rate, and detail of the material they desire. In the long term, DIA ought to think about moving to such a model.



User Perspectives

The panel spoke with different users of DIA's products -- in the acquisition business, at the Pentagon, and at the CINCs (in Europe). The following were typical of their suggestions for improvement:

1. DIA products are too highly classified for Congress and Congressional staffs. (DIA provides SECRET, but the staffs desire UNCLASSIFED.)

   DIA products are too highly classified for the JCS staff. (DIA provides SCI, but the staff desires SECRET.)

   DIA products are too highly classified for policy support staffs. (Staffs desire SI/TK but find it difficult to handle SI/TK/G or other restrictions.)

2. Need to reference sources for assertions made in the *MID*.

3. May be better to hire more analysts who can write than to hire more editors. Take writing samples in the hiring process.

4. Younger analysts need more training and mentoring on how to write for government decisionmakers.

5. Analysts have to deal with lots of overhead – it reduces their thinking time.

6. Intelligence is increasingly a substitute for security assistance.

7. Face-to-face, senior-level DIA contact on the Hill is very helpful.

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8. [redacted] Couldn't get Beltway attention until July 1998. Once we got targeting packages, they were great. CINCs always see problems before the national intelligence community.

9. Need to review investment balance between analysts and automation. Need more analysts who are "closer to the flame." Reconsider sanctuary (JAC) concept for analytic support.

10. Get a lot of what we need via Intelink. DIA probably doesn't know when we're happy. Support on special topics is good, particularly when dealing through theater DIA representatives.

Recommendations

The quality and style of most DIA publications are very good. The content and timeliness of scheduled policy and military support products also appear very good.

> **Recommend that DIA create and use some simple metrics to track the content of its products over time.**

Ad hoc DIA products received more mixed reviews – by the panel and the users.

> **Recommend that production managers use [redacted] to monitor user satisfaction with ad hoc production and to pinpoint problem areas or problem topics.**

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Electronic products are growing rapidly, and the deployment of collaborative tools will change the current ad hoc model.

> **DIA should consider the addition of a [redacted]**

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> **DIA should develop tools [redacted] and the production of more personalized intelligence products.**

Appendix A

Science and Technology Advisory Board
Terms of Reference
Intelligence Products Panel

Abstract

This panel will examine Defense Intelligence Agency (DIA) intelligence products. Products will include daily, scheduled, long-term, and, particularly, ad hoc production items. The intent is to assess the products in terms of quality, value added, timeliness and cost/benefit.

Terms of Reference

This panel will review and assess DIA intelligence products in all forms – hardcopy, softcopy and electronic media.

1. Quality: How does the product meet customer needs/requirements? Does the product meet or exceed needs/requirements? Is there a feedback mechanism in place between the customer and producer? Are customer needs/requirements clear and concise? Is the product being improved or has it remained the same? What metrics are in place to measure effectiveness?
2. Value Added: Are products being used that are not being used extensively? Are there products that should be eliminated or combined with existing/new products or are obsolete? Is the product clear and concise? Is the product user friendly? How much time is spent on the product versus the return in customer satisfaction or customer use? What long-term production is/is not completed? Are there products that can be better presented or provided in a better format?
3. Timeliness: How much time is being spent on ad hoc production and how is it impacting standing production? How much time does it take analysts to meet standing production requirements? Are the products delivered in the proper format and in time for the customer? What products are being produced on time and what products are late? How much time is being saved (or could be saved) by using electronic methods of production?

Approach

The panel will conduct a top-level review of all types of DIA products and sample selected products in depth. Panel members will survey users, both policymakers and warfighters, to obtain their inputs and assessments. The panel will begin in February 1998.

Preliminary findings and recommendations will be presented for review and feedback prior to completion of the study. The panel will deliver a final report of findings and recommendations on or about 1 October 1998.

Administration

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The DIA action officer will be [redacted] hereby appointed by the Director, who will serve as the executive secretary for the panel and be the primary point of contact for scheduling briefings, demonstrations, interviews, surveys, or any specific actions as determined by Panel Chair [redacted] The DIA Science and Technology Board (D-STAB) office will be responsible for all logistic and administrative support of this panel. All panel activities will be coordinated through the Director D-STAB, who is also a member of this panel study.

(b)(3):10 USC 424

APPROVED February 12 1998

DISAPPROVED_____

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TRIBAL WARFARE

A Study conducted for the Defense Intelligence

Agency by the Defense Intelligence

Agency Scientific Advisory Committee

Submitted on July 4, 1996

Study Committee:

(b)(3):10 USC 424

TRIBAL WARFARE

July 4, 1996

I. Introduction

More than thirty years ago, the Canadian journalist, Marshall McLuhan predicted that the new means of rapid communications and rapid transportation would turn the world into what he called the "global village." From our viewpoint today, it is clear that his prophesy was accurate. What he foresaw has happened, and with the additional technology of computer networks, international business and other relations have become so tightly intertwined that there really exists today a "global village." While this is true, it is also true that only a fraction of the world's people benefit from the existence of the "global village." Only those who can afford the technology, the television sets, the personal computers, and the airline fares actually experience it. While these things are all relatively cheap, there are still a great many people in the world who do not have access to them. Therefore, they feel that they do not belong to the "global village." Those who exploit these feelings have used the same technologies that make the "global village" possible to sponsor terrorism and social conflict all over the world. In short, while McLuhan's prediction of the benign "global village" has come true, he did not foresee the darker consequences that have also accompanied the application of the technology that he was probably the first to truly understand.

The existence of the "global village" has, without doubt, had a unifying effect on the human race, or at least that part of it that populates this new entity in cyberspace. At the same time, however, another trend has developed which has resulted in much suffering and which seems to be caused by a reversion to what can only be called "tribal warfare" in many areas of the world. This trend is almost diametrically opposed to the development of the "global village" in that it tends to fragment the world rather than unify it. Paradoxically

then, we have two movements that seem to be in opposition, occurring simultaneously around the world. If the human race is, indeed, to reap the benefits of the "global village", then it must also learn how to control the "tribal warfare" which afflicts us.

II. Different Kinds of Warfare

What is meant by a "tribal war"? It is important to try to and distinguish between tribal wars, civil wars, wars between nations and guerrilla wars which may also be occurring. Such distinctions may not be very clear, and there will be considerable overlap in the definitions. Nevertheless, the attempt to draw such distinctions is important because the responses - political, economic and military that the United States and other nations may be called upon to make - depend upon the clarity of the objectives and the precision of our thinking. Here are some distinctions that might be useful:

1. Wars Between Nations: These wars are defined as "conventional" ones between nation states with established governments. The governments can usually control the situation. They can make alliances with other nation states, that may or may not share common ethnic or religious heritages. Usually, they can make armistices and also stop wars when that is deemed to be in their respective interests. A recent example of a war, or at least an incident between two nations, was the border clash between Peru and Ecuador in 1995. The dispute over some territory near the headwaters of the Amazon did lead to a short conflict, which was then suspended when the two countries declared an armistice. In short, both governments were in control and could stop the conflict when policy dictated. Wars between nations can be large or small, and the great world wars of this century were, of course, the most destructive examples of this kind of conflict.

2. Civil Wars: These can be defined as armed struggle between citizens of roughly the same background for the control of the government of a nation. Civil wars are often rebellions or revolutions against existing regimes by a regional or a political group within the same nation, and they are fought using regular military organizations. An example of a straightforward civil war was the conflict in Spain from 1937 to 1939 in which regular armed forces were used on both sides. The brutal conflict between the Khmer Rouge and the constituted government in Cambodia during the 1970's and early 1980's is another more recent case in point. Very often in civil wars, each side makes alliances with other nations around the world that sympathize with their respective causes. This was, of course, the case in both Spain and Cambodia.

3. Guerrilla Wars: Guerrilla wars are closely related to civil wars, and the distinction made here is mostly one of means. In the case of a guerrilla war, the rebels are often of the same ethnic and religious background as the people in power, but they do not use regular military means to conduct the conflict. In contrast to a civil war where the two sides may occupy well defined regions of the nation, in a guerrilla war, there is not the same tendency to be "territorial." Good examples of guerrilla wars were the conflict between the Sandinistas and the government in Nicaragua, the conflict between the Russians and the Mujahadeen in Afghanistan, Fidel Castro's conquest of Cuba in 1959, and the "dirty war" in Argentina during the decade of the 1970's. Guerrilla wars may have similar political objectives to the "civil wars" defined earlier, but they differ in the military tactics used.

4. Tribal Wars: A "tribal war" is a war within a nation or a group of nations based on ethnic, cultural, religious, or racial differences. Recent examples of these are the conflicts in Northern Ireland, Rwanda, Kurdistan, the Caucasus region of the former Soviet Union, Cambodia, the former Yugoslavia, and possibly Mexico. Note that the term "tribe"

has been applied broadly here to identify any group having clearly distinct religious, ethnic racial, or cultural characteristics. A good case can be made that the situation that developed in Los Angeles some years ago, following the acquittal of the police officers responsible for the beating of Rodney King, was also really a "tribal war" between the different racial factions living in that city. "Tribal wars" may be conducted by "regular" military forces under the usual discipline, as is, for example, the case in the former Yugoslavia, or by guerrillas, or by street mobs that are not controlled by anyone. Many "tribal wars" are particularly bitter such as, for example, the conflict in the Middle East between the Arabs and the Israelis and also between different religious groups among the Moslems and the ethnic Arabs. The latter is exemplified by the vicious war between Iran and Iraq in the 1980's. In these cases, the differences that cause the conflict are, essentially, irreconcilable and that, in turn leads to the extremely violent and hateful nature of these conflicts. It is, of course, this point that makes the understanding of "tribal" conflicts particularly important.

III. Tribal Warfare.

It is true that the world has been afflicted with "tribal warfare" since the beginning of recorded history, and somehow, mankind has both survived and prospered. What is new and what makes tribal wars particularly dangerous, aside from their generally vicious and intrasingent nature, is the spread of high technology weapons, including nuclear weapons, and other weapons of mass destruction around the world. A century ago, it was possible for the world at large to ignore most tribal conflicts. Many were localized in regions of the world that were, so to speak, off the beaten track as far as the "mainstream" of civilization was concerned. This is no longer true, and it is for this reason that means must be sought to deal with tribal wars wherever they occur. The very same technologies that made the "global village" possible also make tribal wars more dangerous. The perceived increase in

the incidents of tribal warfare recently is certainly a consequence of better communications with organizations such as CNN now distributing "instant news" on a worldwide scale. Although data are scanty, there may really be more tribal wars today than there have been in the past, and that this may actually be a consequence of the globalization of much of the world's culture and economy. People who feel excluded from this culture and the benefits of the global economy may look inward toward their "tribal" groups for identification and self-fulfillment. In an increasingly homogenous cultural and economic world, this may be the psychological response of many people who feel that they not part of this new world.

Tribal wars, also because of modern means of travel, may spread around the world, primarily through acts of terrorism. Such acts are extremely difficult to predict, and measures to deal with them, unfortunately, may often infringe upon the freedoms enjoyed by people not involved in the tribal conflict. The attack on the World Trade Center in New York some years ago was a "spill over" of tribal wars being conducted in the Middle East in which the United States has occasionally intervened.

Another feature of tribal wars is that they may be very difficult to stop. Since the wars are based on religious, racial, ethnic, or cultural differences, these cannot be easily changed, and therefore, an end to the conflicts cannot be easily negotiated. It is important here to distinguish between the various factors that might motivate "tribes" in such wars. If the purpose of the war is extermination of the other "tribe" (ethnic cleansing) in a certain region, then the war is probably impossible to stop by non-violet means. This is the case in Palestine and also probably the former Yugoslavia. On the other hand, if the objective of the "tribe" is to be included in the general society, then an accommodation may be possible. An argument can be made that this is the situation in the Mexican province of Chiapas. If one takes the Zapatistas at their word, then what they want is inclusion in the larger Mexican society. Thus reaching an accommodation in this case may be easier than

in those tribal wars in which one side or the other wants to fight to the bitter end. In those instances where a fight to exterminate the enemy occurs, "containment" should be the objective. It is the containment of such "bitter end" tribal conflicts that becomes extremely important, especially in view of the availability of extremely destructive, high technology weapons.

The central thesis of this paper is that tribal wars of the kind described are the most important single threat to world peace. Therefore, developing the diplomatic and military means for dealing with such situations becomes critical if, indeed, we are to build the peaceful "global village" that Marshall McLuhan foresaw.

IV. Intervention in Tribal Wars

There are, essentially, two reasons why the world community might wish to develop means for intervening in tribal wars. The first is that the tribal war could spread and become a larger regional or worldwide conflict. The second is that one side or another might acquire nuclear weapons, and, therefore, create destruction that would be unacceptable. In certain, rather unique cases, there may also be economic developments that dictate intervention because of the impact these could have on the United States and its allies. This was the case, for instance, in the Persian Gulf in 1987 and 1988 when the United States intervened in the "tribal war" between Iran and Iraq by deploying naval forces to keep the oil tankers moving through the Persian Gulf. A good case can be made that the Iraqi invasion of Kuwait in 1990 was an extension of this tribal war. It was, of course, this invasion that triggered the massive intervention of the United States in the conflict.

The most benign kinds of intervention in a tribal conflict are political and economic sanctions. In the case of a political "intervention", this may mean voting with one side or the other in the United Nations or other international bodies. It may be providing aid to refugees from one side preferentially to the other. And finally, it may simply mean making political speeches that support one side or the other.

Economic "intervention" generally means imposing various sanctions on one side or the other. In a relatively open economic world, it is not clear how effective economic "intervention" really is, but there are probably cases where it is at least worthwhile to try that before other steps are taken. For example, the economic isolation of Serbia was an important factor in bringing the fighting to an end in that region in 1995.

It is most important, when discussing economic intervention, to develop and use regional alliances such as the European Community, the NAFTA and others or to use the United Nations to impose the non-military measures that have been described. Any intervention is likely to be much more effective if it is imposed by a large fraction of the community of nations or by the community of nations at large rather than by the United States alone. This may be difficult to do, but it is most important to develop the appropriate diplomatic means for peaceful intervention that may prevent or stop a conflict before military measures are applied.

Regional alliances and the United Nations also can be used to some effect to prevent the spread of nuclear weapons and other weapons of mass destruction. This is important, and even though the results are not perfect, treaties such as the Nuclear Non-Proliferation Treaty (NPT) should be maintained. There are some changes warranted in that particular agreement. It is possible that making a distinction between "rogue" nations and those that have legitimate reasons for creating nuclear weapons could and should be

made. For example, it is generally conceded that both [redacted]

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

It is not clear whether this suggestion can be implemented given the current situation that we face. There are some who will argue that the NPT agreement does not permit the expansion of the nuclear club. On the other hand, it is extremely important to propose creative ideas at this point to prevent catastrophes that are waiting to happen in future tribal wars.

In the case of military intervention, it is important to have military alliances and other diplomatic arrangements that can be used to strengthen the will to take military action when the political decision is reached that it is necessary. One might be indirect military intervention, which means providing weapons and other kinds of military assistance to one side or the other in a tribal war. The opposite side of that coin is the

imposition of arms embargoes on one side or the other. Stationing military advisors in the conflict zone is another choice. Supplying weapons and advisors is the lowest level of military intervention.

A second kind of military intervention is the establishment of a "peace keeping" mission in the territories where the conflict is occurring. This means sending troops to the area. In that connection, it is extremely important to make a distinction between "peace keeping" and "peace making." A "peace keeping" operation is one where both sides have decided to have an armistice, and where keeping the peace is, in fact, a real possibility. In this case, the intervening troops may not have to fight, but must just keep the parties in the conflict apart. The United Nations has, in fact, conducted a number of successful peace keeping missions around the world in regions such as Cyprus, and possibly even in the Middle East. Even in the former Yugoslavia the United Nations forces have had some positive effect.

The problem of "peace making" is, of course, much more difficult because that involves engaging in direct combat with one or both sides in a tribal war and separating them so that peace is made by force. This normally would require the insertion of a much larger military force, and once again, alliances and international organizations become extremely important in successfully carrying out a "peace making" mission.

V. The Role of the United States

For better or for worse, the United States is now the world's only military superpower. It is, therefore, impossible or very difficult for the United States to opt out and to say nothing in the tribal conflicts that are going on around the world. A decision not to intervene in such a conflict is as positive a decision for the world's only superpower as a

decision to intervene. The political factors that would lead to non-intervention must, therefore, be as carefully thought out as those that would lead to a decision to intervene.

Neither option (intervention or non-intervention) should be automatic. Rather, the United States must develop clear guidelines for making the necessary judgments. In addition, there may very well be triggering events which cause intervention by the United States that are based on domestic policies and other considerations, possibly beyond the control of the political authorities. There is, for example, the "CNN Factor" which, perhaps, caused the intervention in Somalia. There is the "Randall Robinson Factor" — that was the fast by Mr. Randall Robinson who is a lobbyist for African Affairs in Washington — that led to American intervention in Haiti. The evacuation of American citizens from dangerous situations as in Grenada or in Liberia is sometimes a reason for military intervention. There is the abuse of U.S. citizens around the world which was a factor in the intervention in Panama, and there may be treaties and other commitments that would be a cause for intervention. Finally, there is the matter of humanitarian assistance. In all cases, as a general principle, it is better to intervene as a member of a coalition or as part of a United Nations force than to do so unilaterally. However, it should be recognized that the United States cannot, also as a matter of principle, give up the idea that unilateral military intervention in a tribal war might be justified in terms of our national interest.

Direct military intervention by the United States in a tribal war means the insertion of American combat aircraft, ships, and ultimately, ground forces in the conflict region. Direct military intervention may be executed, either unilaterally, or as a member of an alliance such as NATO, or as part of a United Nations peacekeeping force. Because of the status of the United States as the "last" superpower, the responsibility to build these coalitions has devolved on the United States. It is not clear how well prepared the American people are to accept this role at the present time. There has been much rhetoric

about not becoming the "world's policeman." This is an open issue that will eventually be settled by the outcome of the debate now going on in this country on this matter.

What must be done to organize this debate in such a way that the outcome will be positive. Probably the first point to recognize is that we have absolutely no choice at all with respect to participating (and in most circumstances playing a leadership role) in world affairs. The second point is to recognize that it is not possible to assume a leadership role in world affairs without resolving some of our domestic problems, particularly as they relate to the ability of the United States Government to have some "discretionary" spending authority. People have begun to recognize that the current size and, more important, the growth of "entitlement" programs severely limit the power of the federal government to act. The chart on page 12 shows the actual expenditures by the federal government for FY 1993 and it shows that transfer payments to individuals under entitlement programs of various kinds account for almost half the federal spending. Today, it is actually more than half. The third and most important point is that we - all of us - need to learn much more about the rest of the world and how it works. The U. S. Military and our intelligence agencies are probably the most important resources we have to accomplish this objective. The fact is that there are hundreds of thousands of Americans who now have relevant experience in many foreign countries. The Defense Intelligence Agency should make a strong and conscious effort to draw on this unique resource to perform its functions. Finally, there are military forces that were designed for use during the cold war that could now be dismantled. The dollar savings realized should be applied to forces intended to deal with new contingencies.

FEDERAL BUDGET
FY 1993 Actuals
(Major Items)

Item	Dollars	Percent	
Federal Transfer Payments to Individuals*	$675B	48%	
National Defense	$280B	20%	
Interest on the National Debt	$200B	14%	
All Other "Discretionary" Spending **	$253B	18%	
Total Federal Spending	$1,408B	100%	
Total Federal Receipts	$1,153B		
Deficit	($255B)	(18%)	Cummulative Deficit in FY1993 was about $4,000B

*Details of the Federal Transfer Payments to Individuals

"Middle Class" Retirement Benefits:		
Social Security	$302 B	
Medicare	$144B	
Total	$446B	32%
Federal Employees and Military Benefits:		
Civilian Retirements	$39B	
Military Retirements	$26B	
Veterans Benefits	$17B	
Total	$82B	6%
Income Supplements for the "Poor":		
Unemployment Benefits	$35B	
Food Stamps	$25B	
Welfare (poor, elderly and disabled)	$21B	
Welfare (Young - Aid to Families with Dependent Children)	$16B	
Medicaid (poor people)	$76B	
Total	$148B	10%
Grand Total:	$675B	

** "Discretionary" Items Greater than $10B

Health & Human Services (Other than mandatory items listed above)	$32B
Housing and Urban Development	$25B
Education	$23B
Energy	$19B
Agriculture	$16B
Transportation	$14B
NASA	$14B
Labor	$10B
All Other Federal Agencies	$100B
Total	$253B

Note: In FY 1993, the Gross Domestic Product was $6,400. The Federal Budget was 22% of the Gross Domestic Product.

VI. The Criteria for Military Intervention

Given the kinds of military intervention that might be contemplated in a tribal conflict, it is important to develop a calibrated set of criteria that can be used to help in reaching a decision as to whether intervention is desirable in a particular instance. While the United States is very likely to find itself in a leadership position during any discussion of international intervention, the criteria outlined here apply primarily to political decisions that need to be made within the United States when military intervention is contemplated. The following three criteria might be helpful in determining a need for military intervention by the United States in a tribal war:

1. When the War Directly Threatens the Vital Interests of the United States: This was the case in the Persian Gulf War of 1991 because of the oil resources controlled by Kuwait, Iraq, Iran, and Saudi Arabia. Not only were the vital interests of the United States affected, but also the vital interests of our major allies around the world since they all depend on middle eastern oil. In the case of the intervention in Panama, the vital interests of the United States were connected to the security of the Panama Canal. In a number of cases, there are treaty commitments, for instance, that could be regarded as vital national interests where the United States might intervene. Our commitment to the State of Israel might be an example. Any threat to a member of the NATO alliance could also lead to direct intervention in a tribal war by the United States. The direct invasion of one nation by another (the Iraqi invasion of Kuwait, for example) could also lead to intervention. Actually, the invasion of Kuwait by Saddam Hussein had strong "tribal" elements between Iraq and the family that rules Kuwait. The Iraqis do consider Kuwait to be their "19th Province."

2. When There is a Real Threat That the Tribal War Could Expand: Military intervention may be necessary, even if the vital interests of the United States are not directly threatened. If a tribal war threatens to expand to become a world war, then it is in the vital interests, not only of the United States, but of other nations in the world, to take the necessary steps, including military ones, to stop that from occurring. If, for example, collective action fails to prevent the spread of a tribal war of this kind, then the United States may have to intervene unilaterally. The conflict in the former Yugoslavia clearly fell in this category. The United States made a unilateral deployment of a small unit in Macedonia, for example, to help prevent the spread of the conflict southward to Greece. The participants have thus been put on notice that they will have to kill Americans if they expand the conflict into Macedonia. Hopefully, this will raise the threshold of risk for them to the point where they will not expand the conflict. Subsequently, the use of the NATO alliance to implement massive military intervention was justified by the consideration that the stability of Europe depended on developing a peaceful solution of the conflict in the former Yugoslavia.

3. When a "Rogue" Nation Threatens to Acquire Nuclear Weapons or Other Weapons of Mass Destruction: This is the real problem in places such as North Korea, Iran, Libya or possibly Algeria. If such nations develop or acquire nuclear weapons capabilities, then they could interfere decisively in tribal wars around the world. Such threats could clearly become very serious and justify military intervention before the "rogue" nations acquire these capabilities. Once again, unilateral intervention by the United States may be necessary if collective action fails.

The importance of "triggering events" that might precipitate military intervention, even if the military intervention criteria that are established are not met, has already been mentioned. Such triggering events are inherently unexpected and unpredictable and this

must be clearly understood. That being the case, they must still be anticipated. Intervention with military force is ultimately a political decision. Such a decision, therefore, is shaped to some extent by how the public media influence public opinion. Understanding this process thus becomes much more important than it has been in the past. There must be members of the Defense Intelligence Agency who have some experience and expertise in this area and who can provide the necessary advice to the Director in specific cases. Having said this, it is important to remember that the most important function of the Defense Intelligence Agency is still to provide an evaluation of the military capabilities of the intervening coalition or nation and the capability of the United States to support the coalition or nation and, if necessary, to intervene unilaterally. The military capability of potential opponents must also be carefully evaluated. All of this is necessary to judge whether military intervention can lead to something useful and decisive.

VII. Preparations for Military Intervention.

If military action is to be a credible option in either deterring or actually intervening directly in tribal wars, then careful preparations must be made. Without extensive prior planning, military intervention is likely to fail. Furthermore, many preparations can and should be made publicly so that the threat of military intervention, either by a coalition of nations, the United Nations, or unilaterally by the United States, is actually credible. In preparing for military actions of this kind, here are some important considerations:

1. Politics: Interventions cannot be undertaken without some political support. Public opinion polls will almost always be against intervention, at least in the United States. Therefore, an effort must be made to persuade the public that it is wise to intervene and essentially, a persuasive argument must be made that, in the long term, the cost of not intervening is higher than that incurred by intervention. The most important political

consideration that affects military action is to minimize casualties. There are promising technical means that permit us to do that, and this will be considered shortly. Latent opposition to intervention could lead to riots in the streets if casualties are large. (Remember that President Clinton decided to withdraw U.S. troops from Somalia after 18 U.S. soldiers were killed in a fire fight with Somalis.) This is a very critical point in developing the political support necessary for intervention in tribal wars.

2. Weapons: What kind of weapons are especially suited for intervention in tribal wars? Non-lethal weapons may be very important in this instance. Many people who have participated in such actions say that it is often hard to identify who is the opposition. There is often no visible difference that permits telling the "good guys" from the "bad guys." Non-lethal weapons have the peculiar advantage of not requiring blood-letting. Hopefully, this will help to keep casualty rates down and make the intervention more politically acceptable. There are a number of effective non-lethal weapons in the inventory today, including things such as rubber bullets and non-lethal chemical weapons that have been successfully employed. Weapon delivery systems are also important, and this means advanced missiles of all kinds. If one side in a tribal war can threaten another or even third parties with missiles, then this is an important factor in deciding on intervention. Nuclear weapons are even more important. It is critically important to determine whether one side or another in a tribal war may have access to nuclear weapons. Conventional high-tech weapons can be decisive, as well, which was the case with the "Stinger" missiles that the Mujahadeen in Afghanistan deployed against the Soviet forces.

3. Personnel: It is critically important to make certain that a cadre of trained people is available for assessing the need for military actions of this kind. Military attachés around the world are most important in evaluating a potential trouble spot. Much more attention needs to be paid to training military attachés by nations likely to be

involved in interventions in tribal wars. Special forces are also important. Such units may very well have decisive effects in tribal wars, much beyond their actual numerical strength. Special forces equipped with unique weapons should be part of the military inventory available. The motivation of the troops used in military interventions is particularly critical. How do soldiers react to taking risks in a cause that may not be directly related to the interests of the nation that provides the troops? Motivations that will cause soldiers to take high risks need to be carefully considered. Interventions in tribal wars, therefore, might effectively be treated more like police rather than military actions. How can this be handled in an realistic manner? These are some unanswered questions that need to be dealt with in training military personnel for peace making and peace keeping missions. International training is particularly important, and international relationships must be properly taken into account by the people participating in collective military interventions in tribal wars. All of the items listed must be worked into the training routines for troops to be sent on such missions.

Careful preparation for military action and military intervention is probably the single most important item that needs to be understood, not only by people in the United States, but elsewhere in the world. Executing these preparations will require political understanding in such a way that popular support for intervention in tribal wars can be sustained. Without such an understanding and without sustained public support, military interventions in tribal wars are likely to fail.

The single most important factor in preparing for intervention is intelligence and this is why the Defense Intelligence Agency should have a central role in the effort to prepare for military intervention if that should become necessary. What is critical here is to make accurate estimates of the military capabilities of potential adversaries around the world. This is, of course, the central function of the corps of defense and military attachés

that we have stationed in most nations. Unfortunately, service of this kind has not generally been recognized as being on a "fast" promotion track by the military personnel system. A strong argument can be made that the end of the "cold war" has put a much higher priority on very substantially upgrading our defense attaché system. The Defense Intelligence Agency should be the principal advocate to bring this about.

The educational system must also play an important role in preparing for this new era in which the role of the United States will be both essential and difficult for a democracy to execute. We must pay much more attention to programs that deal with the cultures and histories of many peoples around the world. At the same time we have to do a much better job of teaching American history with a special emphasis on our political values. The best among our young people must once again be persuaded that careers in the foreign service and in our intelligence services is a way of making major contributions to national and to world security.

VII. Military Action

In making the decision to intervene with military force in a tribal war, the political and military judgments that have been outlined must be combined. The most valuable commodity in these circumstances is hard knowledge. The President of the United States or the leadership of a coalition of nations must have the very best possible military intelligence to judge how best to use the military if a decision to intervene in a tribal war is made. The following considerations are important if a decision is reached to execute a military intervention:

1. The Military Objectives Need to Be Clearly Defined: This is necessary to judge the size and composition of the force that would be deployed in order to achieve the

military objectives. Obviously, extensive and accurate knowledge of military opposition in such a case is critically important.

2. Criteria for a Success Must Be Established: What would be considered as a successful outcome of a military intervention? What is the definition of victory? In doing this, a clear distinction must be made between peace making and peace keeping, which has already been mentioned. Without clear criteria for success, military interventions are likely to bog down in endless attrition which is politically unacceptable.

3. An Accurate Estimate of the Capability of Opposing Forces Must Be Made: This is probably the single most important function that must be carried out by intelligence agencies of various nations involved in an intervention or by the intelligence agencies of the United States. What kind of weapons does the opposition have? Are there allies for the opposition that might lead to an expansion of the conflict? What are the logistics considerations? Can a potential opponent sustain a long conflict? These are all questions that need to be posed and answered in developing the strategy for peace making or peace keeping in a tribal war by military means. Answering these questions is, of course, the central function of the Defense Intelligence Agency.

4. An Exit Strategy Must Be Developed: Having intervened, how does a coalition or how does the United States get out of the situation? The example of Somalia is perhaps a good one here when contrasted with what happened in the Persian Gulf. In the case of the Persian Gulf, the defeat of the Iraqi military and its destruction was the first objective. Once that was achieved, Kuwait could be liberated. These objectives were both achieved. In the case of Somalia, the initial objective was clear, to get food to people who were starving. Once this was achieved, the objective then escalated into taking sides in the "tribal war" going on between the various factions in Somalia. It was at this point that

things became complicated. The United States finally had to withdraw its forces unilaterally because it was felt that, the position had become politically untenable. The withdrawal of troops was probably not a good thing to do in the longer run. There will be more trouble in Somalia and other interventions may be necessary.

There are a number of other important considerations that might be added to this list. Many of them hinge on logistics and the ability to sustain an intervening force. Once military action is initiated, then the most important thing is to make sure that the military commanders have good relationships and information channels to the political leadership. This is a particularly vital point if intervention is made by a multi-national force under the United Nations or NATO sponsorship. The sharing of intelligence is, probably in that case, the most sensitive matter since nations have a tendency to closely hold and protect their intelligence operations. Obviously, there must be sharing of intelligence in combat situations, and this is a new area for many military intelligence people. On the other hand, it may be necessary to develop intelligence products in such a way, that unique sources, such as American intelligence satellite assets are not compromised. There are complex questions here for which some operational doctrine needs to be developed, probably on an international basis.

IX. Long Term Preparations by the United States.

Given the leadership role that is likely to be played by the United States in the situations described in this paper, it is important to list those things that the United States needs to do in order to be the effective leader in the effort to keep the peace after the end of the Cold War. Therefore, it might be useful to conclude this paper by listing unilateral steps that the United States needs to take in the coming years.

1. The Enhancement of American Intelligence Capabilities: This is very definitely the single most important factor in developing the means to successfully intervene in tribal wars around the world. It is most important to have an accurate and deep knowledge of the politics, history and culture of the region in which intervention is contemplated. A thorough understanding of these subjects may be the difference between failure and success. Knowing local languages is also critically important if the United States is to intervene successfully in tribal wars in the future or act as a coalition leader. We must multiply by a large factor the number of people in this country who understand and who are comfortable with foreign languages. Knowledge about both sides in a tribal war is also important. In that sense, the intelligence operations in Somalia were a failure. Such wars, from the viewpoint of the United States, may not have any logical "good guys" or "bad guys." The fact is that most tribal wars are those in which both sides have a case that can be reasonable to an outside person who has not been involved directly in the conflict. Thus, human intelligence, including a sophisticated analysis of open source information, is the first priority. Technological intelligence retains its importance. This means that earth orbiting satellites and air based and ground based surveillance systems must continue to be developed using the most advanced technical means. Finally, the problem of sharing intelligence with allies and coalition partners has already been mentioned. It is important to develop means of doing this if interventions in tribal wars by coalitions are to succeed.

2. The Enhancement of Military Transportation: In order to be first at a trouble spot, military transport must be greatly expanded. This means building, perhaps, 200 or more of the new McDonnell-Douglas C-17 aircraft. This is very definitely the most capable military air transportation system ever created. (The team that developed the C-17 recently won the Collier Trophy for its technical excellence.) In addition to the development of military transports, making it easier to convert large Boeing-747 type civil transport aircraft for military missions is also extremely important. Air transport is only

part of the problem. Bulk cargo and the people necessary to sustain a military force must ultimately be carried in ships and then deployed in trucks. Sealift will require the conversion of civilian ships to military purposes. The British did that very successfully in the Falkland Islands War in 1982 and it is important for the United States to make it possible to do the same thing quickly. In addition, as the Navy considers the development of new ships such as the "arsenal ship", the enhancement of sealift should be part of the planning process.

3. The Development of Defenses Against Ballistic Missiles and Better Defenses Against Aircraft That Might Be Carrying Nuclear Weapons Or Other Weapons Of Mass Destruction: Because of the spread of nuclear weapons and their delivery systems, all nations and regions of the world will eventually be under threat of attack by nuclear weapons carried on missiles or aircraft. Much technical progress has been made in the past few years in developing defenses against ballistic missiles. It should soon be feasible to build a space based anti-ballistic missile system that could shoot down ballistic missiles launched anywhere in the world. The technology already exists to build a space based air traffic control system that will not only enhance the safety of civil air travel, but will also make it possible to control worldwide air traffic to deal with any suspicious or clandestine flights. Ballistic missile defenses against a small number of tactical missiles could be deployed at the present time. A particularly promising approach is the proposal to convert a number of Aegis System equipped cruisers and destroyers to anti-missile ships. It is technically feasible to do this by making some relatively minor changes to the fire control and the missile systems of these ships. Making such systems available to allied nations across the world might be an appropriate step in making the world safer against possible nuclear attacks by "rogue" nations or terrorists groups. For example the Aegis System equipped ships could be deployed in the Mediterranean Sea to defend Europe against missile threats that might be mounted by Libya. The development of such defensive

systems on an international basis would be very desirable since that would make it easier to modify the various arms control treaties that now limit the development of such defensive systems.

(b)(3):10 USC 424,(b)(3):50 USC 403-1(i)

These are the measures that the United States should take to prepare for a world in which tribal wars are the most important threat to world peace. In addition to preparing for military intervention, it is also important for the United States to prepare for attacks against our own borders. By adopting a policy to lead the peace keeping efforts, the United States will inevitably create enemies around the world. Thus, the protection of the borders of the United States becomes more important. In this case, also, the measures that are proposed in this paper are relevant. Terrorist acts of one kind or another must be added to the list.

Implementing them will make the post Cold War world safer for all of us so that the global village that Marshall McLuhan dreamed about can be fully implemented.

X. Recommendations

This section lists some specific recommendations that should be considered by the Defense Intelligence Agency in view of the threats outlined in this paper:

1. The Defense Intelligence Agency should sponsor a detailed study of potential trouble spots around the world in order to identify the most likely places where tribal warfare is likely to occur. Social, cultural, religious, economic, political and military factors should be considered. In performing this work, we recommend that the Agency avail itself of experts from other government agencies, the National Academy of Sciences, and private organizations such as the Council on Foreign Relations, the Hudson Institute, the Carnegie Foundation for World Peace and the Center for Strategic and International Studies.

2. The Defense Intelligence Agency should initiate a detailed study of the role that information provided to the American public by television, the press, and various government agencies plays in triggering political, economic or military intervention by the United States in a tribal war. It is clear from past events that interest by the public media has sometimes been a major factor in the decision to intervene, the case of Somalia being the best recent example. The objective of this study should be to understand how the information provided for the public shapes public attitudes toward intervention. Knowledge of the famine in Somalia clearly sharpened the humanitarian instincts of the American people that was then translated into political support for intervention. The same instincts were at play when stories of "ethnic cleansing" in Bosnia appeared but in this case, these did not generate the public or political support that was present in the case of Somalia. It is important to understand this difference. In performing this study, we would recommend that the Defense Intelligence Agency turn to high quality academic journalism schools such as the ones at Columbia University, the University of Missouri or the Annenberg School at the University of Pennsylvania. It might also be of value to consult some distinguished retired journalists such as Benjamin Bradlee, Walter Cronkite and Liz Carpenter.

3. The Defense Intelligence Agency should develop a set of clear principles that govern the sharing of military intelligence in multi-national operations. This is particularly important in cases where the operation is carried out under the auspices of the United Nations since some of the participants in such an operation may not always be friendly toward the United States. In the United Nations operation in Somalia for instance, Pakistani troops were involved. While current relations between Pakistan and the United States are good this may not always be the case given the strong Islamic movements in that region friendly to Iran. It is therefore important to make certain that American military intelligence capabilities are used in such a way that they are effective but that they are not comprised.

4. The Defense Intelligence Agency should maintain readiness to deploy intelligence assets - both human and technical - in tribal wars that may occur around the world. We recommend that Agency designate the military and defense attaches that the United States maintains in many nations as the individuals to be responsible for maintaining that readiness.

5. The Defense Intelligence Agency should try to identify common factors in tribal wars that might be useful in developing doctrines that would govern the deployment of military intelligence assets in such conflicts. This is a broad recommendation that may be difficult to implement but we believe that the situation we face today will last long enough - say toward the middle of the next century - that the existence of such doctrines would be useful.

The study committee is grateful for the assistance of the staff of the Director of the Defense Intelligence Agency for their very competent assistance. We also much appreciate the many constructive comments that we received from members of the Defense Intelligence Agency Scientific Advisory Committee. Many of these have been incorporated in this report.