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**NATIONAL AIR & SPACE INTELLIGENCE CENTER**  
**WRIGHT-PATTERSON AFB OHIO**

NASIC/SCPD  
4180 Watson Way  
Wright-Patterson AFB OH 45433-5648

July 29, 2021

This letter is in reference to your Freedom of Information Act (FOIA) request dated 8 February 2020 our case number 2020-03815-F.

A line-by-line declassification review determined that portions of the records you seek are releasable under the Act. However, some information is exempt; listed below are the exemptions that apply to the requested documents:

**United States Code, Title 5, Section 552(b)(3), 10 U.S.C. 424.** This information is specifically exempted by a federal statute 10 U.S.C. 424, as organizational or personnel information of the Defense Intelligence Agency.

**United States Code, Title 5, Section 552(b)(6).** The unauthorized disclosure of such information would result in a clearly unwarranted invasion of personal privacy, by revealing the identity of personnel assigned to sensitive units.

Should you decide that an appeal to this decision is necessary, you must write to the Secretary of the Air Force within 90 calendar days from the date of this letter. Include in your appeal any reasons for reconsideration you wish to present and attach a copy of this letter. The appeal should be forwarded to:

Secretary of the Air Force  
Thru: NASIC/SCPD (FOIA)  
4180 Watson Way  
Wright-Patterson AFB OH 45433-5648



We have placed 984 pages of documents on a CD for your convenience, all fees have been waived.

Sincerely

A handwritten signature in purple ink, appearing to read "Teresa Elam". The signature is fluid and cursive, with the first name "Teresa" and last name "Elam" clearly distinguishable.

TERESA A ELAM  
NASIC FOIA Analyst

Attachments:  
Releasable Documents

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# HISTORY AIR TECHNICAL INTELLIGENCE CENTER

JUNE 1951 - 31 DECEMBER 1951

AIR TECHNICAL INTELLIGENCE CENTER  
WRIGHT-PATTERSON AIR FORCE BASE  
DAYTON, OHIO

Copy No. 6

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Chief, Air Technical Intelligence Center  
Wright-Patterson Air Force Base  
Dayton, Ohio

This in no way abrogates or alters responsibility for sending such information or any pertinent intelligence data through already established intelligence collection channels of the various services or agencies of the U. S. government.

2. WARNING: This document contains information affecting the national defense of the United States within the meaning of the Espionage Law, Title 18, U.S.C., Sections 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

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HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
FOR THE PERIOD  
1 June 1951\* -- 31 December 1951

Author ?

- \* Effective date of assignment to Headquarters <sup>Command</sup> United States Air Force  
per General Order <sup>NO.</sup> 31, Headquarters United States Air Force, dated  
1 June 1951. See Appendix 1.

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AUTH: CO, ATIC

BY: (b) (6), (b) (3) (B)

DATE: 20 February 1952

## SECURITY INFORMATION

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FOREWORD

TO THE HISTORY OF

AIR TECHNICAL INTELLIGENCE CENTER

FOR THE PERIOD

1 July 1951 - 31 December 1951

The Air Technical Intelligence Center was officially designated as such by General Order Number 31, Headquarters, United States Air Force, dated 1 June 1951<sup>1</sup>, which made the effective date of this designation retroactive to 21 May 1951, and defined the mission of the Center as follows:

"The mission of the Air Technical Intelligence Center is to produce Air Technical and Scientific Intelligence under the operational control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF."<sup>2</sup>

Prior to the date of the official designation cited above, responsibility for the production of air technical intelligence had been delegated to the Intelligence Department of the Air Materiel Command. Since this Department was providing air technical intelligence not

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1. See Appendix 1.

2. Ibid.

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only for AMC but also for the Air Research and Development Command and other components of the USAF, it was deemed advisable to place the Center directly under <sup>-the Directorate of Intelligence</sup> Headquarters, USAF, that it might better serve the United States Air Force as a whole.

To carry out its mission the Center focuses its efforts on these two objectives: (1) prevention of technological surprise from any foreign source; and (2) assisting the research and development agencies of the USAF in the development of countermeasures against such foreign technical development.

In the history to follow, the organization and functions of the Center and its subdivisions will be first described, and then the accomplishment of these various components during this reporting period will be summarized. For purposes of better organization of the information at hand, therefore, this history has been divided into the following two main subdivisions:

1. Organization and functions of the Center
2. Accomplishments for this reporting period

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ORGANIZATION AND FUNCTIONS

The Air Technical Intelligence Center's activities cover four principal functions:

1. The support functions of command and administration.
2. Collection of technical intelligence information, including foreign aeronautical and related equipment required for the production of technical intelligence.
3. The analysis and evaluation of technical intelligence information.
4. Provision of logistical-type services to support the Center's various activities. This includes the reception, processing and storage of documents; limited services for reproduction of documents; publication of intelligence reports and studies; and specialized training of selected personnel performing air technical intelligence duties.

To perform these functions, the Center has been organized as indicated on the Organizational Chart attached hereto.<sup>3</sup> It will be noted that, in addition to the various staff offices shown thereon, the following three main divisions have been established:

1. Technical Requirements Division,

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3. See Appendix 2.

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2. Technical Analysis Division,
3. Technical Services Division.

The three divisions and the staff offices of the Center were established to accomplish the specific functions assigned within the four areas of activity outlined above. A further breakdown of the functions has been made within the divisions and staff offices to accomplish special tasks. Particular attention was paid, during the planning of the organization, to the problem of avoiding duplication of effort.

Detailed functions of the various components of the Center are outlined below:

(b) (6), (b) (3) (B) Br. ATIC  
COMMANDING

MISSION: To accomplish the Air Technical Intelligence phases of the overall mission of the Directorate of Intelligence, Headquarters USAF, as follows:

1. Provide air technical and scientific intelligence services for the USAF as required to prevent technological surprise from any source.
2. Produce air technical and scientific intelligence studies and estimates of alien capabilities to conduct air warfare.
3. Provide basic data on foreign air weapons and related materiel necessary to the preparation of recognition manuals and per-

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formance handbooks.

4. Nominate, indoctrinate, train, and provide technical guidance for Air Technical Liaison Officers (ATLO's) as required for the Air Attache System.
5. Nominate, indoctrinate, train, and provide operational and technical guidance for ATLO's as required for various overseas commands.
6. Conduct technical orientation and specialized training of attache personnel prior to departure for foreign duty.
7. Indoctrinate selected Air Force personnel in the techniques necessary to conduct air technical and scientific intelligence operations in the field.
8. Investigate and analyze reports of unidentified aerial objects, or of phenomena of possible concern to the air defense of the United States.
9. Provide administrative services for the Wright Air Development Center and the Air Materiel Command for the foreign scientists' program.
10. Provide air intelligence for the Air Materiel Command, Wright Air Development Center, and certain components of the Air Research and Development Command. The Air Technical Intelligence Center operates the AMC Air Room, and furnishes the usual intelligence services needed by AMC. The Center also furnishes intelligence briefing



services to the Commanding General and staff of the Wright Air Development Center upon request.

11. Disseminate intelligence information concerning foreign air technological and scientific developments required by the USAF research and development program. ✓

12. Provide Directorate of Intelligence representation on Air Force and Joint boards and committees concerned with technical or scientific intelligence as required.

13. Establish requirements for air technical intelligence information, data and materiel; provide technical guidance to collection agencies. ✓

14. Participate in certain phases of the domestic exploitation program of other intelligence agencies as directed.

15. Provide limited translation services for the Directorate of Intelligence, Headquarters, USAF, Wright Air Development Center, the Central Air Documents Office, and Headquarters, AMC, upon request.

16. Effect necessary administration, logistics, funding and coordination with concerned agencies for accomplishment of the assigned mission of the Center.

There are six staff offices directly subordinate to the Office of the Commanding Officer, Air Technical Intelligence Center, which perform certain command, administrative and housekeeping functions for this

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organization. These are listed below, together with a resume of each staff office's function.

Air Inspector's Office - Chief, Lt Col (b) (6), (b) (3) (B)

Functions of this office are:

1. To keep the Commanding Officer informed of the tactical, logistical and administrative efficiency of the Center.
2. To advise the Commanding Officer on all matters pertaining to the efficiency and accomplishments of the Center.
3. To keep the Commanding Officer advised on the state of morale and welfare matters, as they pertain to the military and civilian personnel employed by the Center.
4. To conduct periodic inspections of the Center, and to make special investigations of matters when necessary.
5. To conduct personnel conferences for military and civilian personnel assigned to the Center.
6. To review and analyze inspection reports, board proceedings, policies, office instructions, and other miscellaneous correspondence and directives, and to keep the Commanding Officer advised concerning their implementation.

Scientific Advisor's Office - Chief, (b) (6), (b) (3) (B)

Functions of this office are:

1. To advise and counsel the Commanding Officer relative to the scientific aspects and technical competence of the Air Technical Intelligence Program.

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2. To insure complete coordination and integration of Air Technical Intelligence Center activities with other USAF programs related to the offensive and defensive capabilities of the Air potential of the United States.

3. To assure the Commanding Officer that Air Technical Intelligence production meets the requirements of all using agencies.

4. To coordinate and recommend disposition action in connection with produced Air Technical Intelligence studies and reports.

Air Intelligence Office - Chief, (b) (6), (b) (3) (B)

Functions of this office are:

1. To perform normal A-2 functions, conducting oral briefings and preparing written reports on strategic, tactical and technical intelligence for Commanding Generals and Staff Officers of the Air Materiel Command and the Wright Air Development Center.

2. To prepare all visual aids essential to the oral briefings.

3. To prepare special intelligence reports for components of AMC, WADC, and for other major Commands of the USAF.

Comptroller's Office - Comptroller, Lt (b) (6), (b) (3) (B)

The functions of this office are:

1. To advise and assist the Commanding Officer, and operating staff in developing and executing plans and programs to insure accomplishment of Air Technical Intelligence Center objectives, uniformity of operations, and effective utilization of manpower, funds and materials.

2. To supervise budget and fiscal matters with respect to

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fiscal policies, procedures, records, and reports to insure compliance with AF regulations and instructions.

3. To advise the Commanding Officer of the current status of funds, the effectiveness and administration of financial programs, and other budget and fiscal matters.

4. To direct and conduct continuing studies within the Air Technical Intelligence Center in order to recommend policy governing organization, manning methods, and procedures.

Subordinate to the Comptroller's Office are the following sections:

- a. Management Analysis Section - makes continuing studies of Air Technical Intelligence Center's Functional organization, operational methods and procedures, and utilization of manpower and resources.
- b. Budget and Fiscal Section - exercises technical control, programming and administration of all funds allotted to the Air Technical Intelligence Center.

Personnel and Administration Office - Chief, (b) (6), (b) (3) (B)

The functions of this office are:

1. To advise the Commanding Officer of the Air Technical Intelligence Center on matters concerning the current status of the personnel and administrative practices and policies of the Center.

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2. To supervise and allocate the work requirements of the Personnel and Administration Office and its subordinate units.

Subordinate to the Personnel and Administration Office are the following Sections:

- a. Air Adjutant General Section - performs the AG functions for the Center, including publication of official directives, authentication of travel requests and other official documents, establishment and implementation of the Center's security policy, monitoring of correspondence control procedures, and advising the Commanding Officer on matters of protocol.
- b. Military Personnel Section - supervises the administration of matters involving military personnel, and maintains all military personnel records for the Center.
- c. Civilian Personnel Section - performs the functions necessary for the employment and administration of civilian personnel.

1126th Air Intelligence Service Squadron - Capt (b) (6), (b) (3) (B)

Commanding

The functions of this organization are:

- 1. To provide air technical intelligence training for

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selected personnel to meet the requirements of certain overseas and Zone of Interior commands for field collection teams.

2. To perform all administrative functions normal to a squadron with the exception of maintaining personnel records.

TECHNICAL REQUIREMENTS DIVISION

Chief, (b) (6), (b) (3) (B)

The functions of this division are:

1. To organize and operate the Collection Control Section and the Air Technical Liaison Program Section for the purpose of producing air technical intelligence.
2. To monitor and to operate the Air Technical Liaison Officer Program.
3. To establish and monitor air technical collection requirements with all Air Force and associated collection activities, United States and allied.
4. To monitor and operate the foreign scientist program.
5. To participate in certain phases of the domestic exploitation program.
6. To maintain direct liaison with Air Force activities and other governmental agencies in matters pertaining to air technical intelligence.

Sections charged with the performance of the functions under the supervision of the Technical Requirements Division are as follows:

- a. Collection Planning Office - analyzes existing

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processes for the collection of intelligence information. To accomplish this analysis, the office interviews intelligence analysts to determine if they are receiving the types and quantities of information in which they are interested. This office also surveys both foreign and domestic intelligence documents for the purpose of collecting such information as the Center requires.

- b. Collection Control Section - receives, analyzes, implements and monitors plans generated by the Collection Planning Office of Technical Requirements Division. This section also directs and supervises collection requests through specific "Requests for Information" to authorized collection agencies.

These branches support the Collection Control Section:

- (1) Requirements Branch - receives, reviews and acts upon all specific requests for air technical intelligence information and materiel. These requests are reviewed for duplication or similarity to previous or currently active requirements, coordinated with the initiator, and cancelled when the requirement has been satisfied.

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(2) Operations Branch - receives collection plans from Collection Planning Office, and reviews such plans to determine participating agencies, areas of collection activity, personnel requirements, and funds required. By coordinating with participating agencies, this branch develops the collection plans into an operable collection program.

c. Air Technical Liaison Program Section - receives, processes and acts upon application for Air Technical Liaison duty, in accordance with AF Regulation 36-43. This processing entails the monitoring of overseas movement of all individuals assigned to the Air Technical Liaison Officer program and determination of locality and specialty requirements for Air Technical Liaison personnel, including Air Technical Liaison Officers, selected stenographic personnel, qualified airmen linguists, technical intelligence technicians, administrative supervisors and senior clerks.

These branches support the Air Technical Liaison Program

Section:

(1) Processing Branch - locates, selects, trains, assigns, moves and monitors qualified military personnel, civilian scientists, civilian specialists and secretarial personnel for Air Technical Intelligence service overseas.

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(2) Foreign Activities Branch - promotes free exchange of information and assistance between the Air Technical Liaison Offices overseas, Air Attache Offices which have ATL personnel assigned, and the Air Technical Intelligence Center, through the interchange of correspondence, reports and periodic journals.

d. Foreign Scientists Section - administers the program of foreign nationals participating in Project "Paperclip".<sup>4</sup> These duties include proper security control and the surveillance of these individuals, as well as implementation of all Joint Intelligence Objectives Agency directives pertaining to the project.

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4. A project providing for the employment of German scientists and technicians on a contract basis.

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TECHNICAL SERVICES DIVISION

Chief, Colonel (b) (6), (b) (3) (B)

The functions of this division are:

1. To provide plans for the development and implementation of the Center's document processing program.
2. To develop and implement plans which provide for the indoctrination of selected military personnel in the administration of Air Technical Intelligence Center field activities.
3. To administer a special document research program.
4. To receive, store, classify, catalog and ship certain foreign equipment.
5. To provide special-purpose equipment and supplies to authorized claimant-agencies participating in Air Technical Intelligence Center activities, either within the United States or in foreign areas.
6. To provide office equipment and supplies for Air Technical Intelligence Center personnel.

Sections and offices charged with performance and support of the Technical Services Division are as follows:

- a. Special Document Project Office - provides facilities whereby supplemental research documents and informational material requiring special security precautions can be made available to authorized persons. This involves provision for reproduction and dissemination of Top Secret material as directed,

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processing, and storage of Top Secret, Registered or other highly classified material, and the proper destruction of all waste incident to the preparation of Top Secret and other highly classified matter.

- b. Documents Services Section - receives, screens, catalogues, and routes documents to proper agencies. This section also accomplishes the preliminary evaluation of intelligence information contained in these incoming documents, maintains a biographic register of foreign scientific and technical personalities, performs technical photo-interpretation in support of the technical analysis program, and provides translation services when required. Reproduction and graphic services are also furnished by this section, including visual aids, for the preparation of ATIC studies, reports, and administrative publications.

The following branches support this section:

- (1) Documents Processing Branch - provides a controlled document processing system and repository for the Center. This involves maintenance of adequate records and proper routing controls, and the provision of a circulating facility for air technical intelligence information. In addition, this branch catalogues and indexes all air technical in-

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telligence information received at the Center from collection and dissemination sources.

- (2) Preliminary Research Branch - accomplishes the preliminary screening of air technical intelligence information, furnishes translation services and assists in the biographical register program. This screening aids in the routing of documents to interested agencies, divisions, sections and branches.
- (3) Graphic Services and Reproduction Branch - provides for all reproduction and graphic services requirements of the Center. This branch produces graphic portrayals of items needed in the production of intelligence, in lieu of adequate photographs or physical evidence of the equipment, and originates and develops drawings, graphs, illustrations and other visual media. The graphic services and reproduction branch also accomplishes technical analyses of photography and maintains liaison with other agencies for the development and processing of photographic material, such as microfilm, photographs and moving pictures.

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c. Air Technical Intelligence Indoctrination Section -

indoctrinates personnel newly assigned to the Center. This indoctrination includes training and instruction in photography, orientation of newly assigned personnel in the activities of the Center, and conduct of the Air Technical Intelligence Investigator course.

These branches support the Air Technical Intelligence Indoctrination section:

- (1) Photographic Branch - which plans and implements photographic services (other than reproduction) and provides specialized instruction in photography to selected personnel.
- (2) Military and Civilian Training Branch - is responsible for orientation of personnel newly assigned to the Center. This branch also maintains a work pool of employees awaiting clearance, and schedules attendance at clerical classes conducted by Headquarters, Air Materiel Command. In addition, this branch plans and administers the Center's reserve program, including training and correspondence.
- (3) Air Technical Intelligence Training Branch - formulates and conducts the Air Technical Intelligence Investigator and the Air Technical Liaison Officer courses, insures the adequacy of instruction in Air Technical Intelligence field techniques, and maintains a cadre of Air Technical Intelligence field personnel.

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- d. Matériel Services Section - provides certain logistical services necessary to the operation of the Center.

The following branches support this section:

- (1) Foreign Equipment Branch - is devoted to the processing of special items of foreign equipment received at the Center from the time such equipment arrives in the Zone of Interior to final disposition. Such processing includes receipt, disassembly, cleaning, inspection, reassembly cataloguing, display and distribution.
- (2) Air Technical Intelligence Equipment Branch - provides photographic and other special equipment, both domestic and foreign, to personnel participating in, or training for, air technical intelligence duties. This service is extended to personnel in ATIAA, ATLO, and the Air Intelligence Service Squadron.
- (3) Office Equipment Branch - provides office equipment and supplies necessary to the operation of the Center. It is also charged with providing janitorial services for the Center, the physical maintenance of janitorial facilities and repairs.

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TECHNICAL ANALYSIS DIVISION

Chief, Colonel (b) (6), (b) (3) (B)

The functions of this division are:

1. <sup>To</sup> Produce finished air intelligence.
2. To assemble and maintain working files of technical and scientific data, essential to an accurate continuing appraisal of foreign aeronautical equipment.
3. To provide basic data on foreign air weapons and related material necessary in the preparation of recognition manuals and performance handbooks.
4. To produce technical reports of observations of unconventional aircraft, missiles, or of such other airborne objects as might indicate an advance in technological knowledge by a foreign power.

The following offices and sections of Technical Analysis Division implement the Division's broad objectives stated above:

- a. Office of the Technical Advisor - administers the preparation of air technical and scientific intelligence and of estimates of alien accomplishments and capabilities to conduct aerial warfare.
- b. Plans and Operations Office - monitors the division's operational effectiveness in the production of air technical intelligence. This office establishes project target dates, recommends project priorities and

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reviews objectives with a view towards providing policy direction for air technical intelligence analysis projects.

- c. Aircraft and Propulsion Section - performs air technical intelligence analysis and related duties, as described in detail in the functions of the Performance and Characteristics, Propulsion and Equipment Branches. This section also plans and develops air intelligence objectives relating to aircraft and guided missiles.

The three branches which further break down the analysis performed by this section are:

- (1) Performance and Characteristics Branch - performs air technical intelligence production functions as they relate to aerodynamic and general characteristics analyses, and performance estimates of aircraft and guided missiles.
- (2) Propulsion Branch - performs air technical intelligence functions as they relate to turbojet, turboprop, ramjet, pulse-jet and rocket engines; reciprocating and compound engines, propellers, accessories and component parts; fuels, lubricants, hydraulic fluids, coolants and related chemicals.

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- (3) Equipment Branch - performs air technical intelligence functions as they relate to instruments, navigation systems, hydraulic and pneumatic systems, electrical systems, and miscellaneous mechanical equipment in aircraft and guided missiles; aircrew equipment (including those aspects of aviation medicine affecting the development of aircrew equipment), photographic and meteorological equipment and systems.

d. Electronics Section - performs analyses of foreign accomplishments in electronics, including those in radiation, equipment development, and countermeasures.

The following Branches support this Section:

- (1) Radiation Branch - researches and analyzes intelligence pertaining to ground and airborne radar, electronic navigation, electronic communications, and electronic guided missile control.
- (2) Countermeasures Branch - researches and analyzes air intelligence information pertaining to electronic countermeasures to determine foreign capabilities in these fields.
- (3) Science and Components Branch - researches and analyzes intelligence information pertaining to

electronic sciences and techniques, infrared, vacuum tubes, electronic test equipment, and electronic components. This section also operates an equipment test laboratory.

- e. Associated Equipment Section - exercises general supervision over the functions of the Armament, Materials and Methods, and Nuclear Energy Branches. This Section researches, analyzes and evaluates intelligence pertaining to foreign accomplishments in the fields of aircraft armament, antiaircraft artillery effectiveness, aircraft materials, production methods and techniques, special weapons in the atomic, chemical and biological warfare fields.

These branches support the Associated Equipment Section:

- (1) Armament Branch - researches and analyzes intelligence information pertaining to foreign capabilities in such subjects as aircraft weapons, weapons control, bombing systems, antiaircraft artillery effectiveness, and aircraft vulnerability.
- (2) Materials and Methods Branch - researches and analyzes intelligence information pertaining to foreign capabilities in the production of aircraft, guided missiles and related components.
- (3) Nuclear Energy Branch - researches and analyzes intelligence information pertaining to alien capabilities in the fields of atomic energy, and in biological and chemical warfare.

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ACCOMPLISHMENTS

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ACCOMPLISHMENTS

This section of the history describes the various accomplishments of the Center for the period covered by the report. Inasmuch as the activities of the various staff sections of the Office of the Commanding Officer were largely confined to matters of a routine administrative nature, emphasis has here been placed on reporting the accomplishments of the three technical divisions and their subordinate sections and branches.

An attempt has been made to maintain a simple informal narrative form throughout this portion of the history. It was found necessary, however, to document and <sup>to</sup> sub-divide certain passages for clarification.

Technical Requirements Division

At the beginning of the period covered by this history (1 July 1951), the Technical Requirements Division was undergoing a complete reorganization.

The framework for the organization had been determined, position descriptions had been written for the Office of the Chief, the Administrative Office, the Foreign Scientists Section, and the Collection Planning Office; but the task of writing specific job descriptions for the Collection Control Section and the ATL Program Section was still to be accomplished. As of 31 December 1951, two positions remained to be written for the Office of the Chief, ATL Program Section.

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Prior to the reorganization, some confusion had been evident, regarding clearly defined functions and responsibilities. In some instances, the functions of one component overlapped those of another. Upon completion of the planning phase of the new organization and the publication of official position descriptions, this situation was mainly corrected.

The next problem of major importance was that of staffing the organization with qualified personnel. After effecting reassignments from within the Center, in those cases where qualified personnel were available, an intensive recruiting program was launched in an effort to secure incumbents for the remaining vacancies.

In addition to the vacancies within the Technical Requirements Division, proper, there was an acute shortage of personnel, both military and civilian, in the overseas ATIL Offices. During the past six months, the ATLO Program has been widely publicized domestically through the means of AF Regulation 36-43, by notices to major Air Commands, and by various other programs carried on by the Air Technical Intelligence Center. This publicity has done much to ease the critical personnel shortage in the overseas theaters.

It is believed that with the gaining recognition of the ATLO Program, the vacancies which exist at present will be filled within the next six months. This supposition is based on the rate of assignment of personnel to the program within the reporting period. As of 1 July 1951, there were 67 persons assigned to overseas theaters, as compared with 83 on 31 December 1951. Although several vacancies still exist within the division,

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it is also believed that these can be satisfactorily filled within the next few months.

During the month of August, 1951, the division chief, Colonel (b) (6), (b) (3) (8) ordered a complete review and rewrite of all division projects. A definite line of demarcation was drawn between those projects to be monitored by the Collection Control Section and the ATL Program Section. Consequently, several projects which <sup>had been</sup> ~~were~~ assigned to the Collection Control Section were transferred to the ATL Program Section.

All organizational references contained in the projects were changed to correspond with the new organizational structure. Prior to this, certain operations had been conducted without the benefit of specific projects. The time expended on these operations had been charged to a general "Collection" project which served as a "catchall" in these instances. To correct this situation, new projects were written to cover all current operations, and a policy was established whereby all future work assignments would be covered by a project which would be initiated immediately following the assignment.

This revision of projects within the division has served two purposes:

1. The collection control Section and the ATL Program Section are charged with only those projects which are homogeneous to their respective organizations.

2. Operational costs are now <sup>more</sup> accurately reflected.

Changes have been made in the project for hiring scientific personnel for air technical liaison duty overseas. Experience has shown that under

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the previous arrangements for employing such personnel, the time in which they were under contract was not of sufficient duration to afford the Air Technical Intelligence Center maximum benefit from their employment. X

Under the old arrangement, scientists were hired under contract for 90 days. After their arrival overseas, the majority of this period was spent in becoming familiar with their assignment, and in making contacts. There was little time left in which they could collect intelligence information and material for the Center. At present, scientists are hired for a minimum of one year to accomplish a job in a specific field. This allows for three months in which contacts can be made, and the remaining nine months <sup>then</sup> can be devoted to the collection of intelligence information. ✓

The Domestic Collection Program, which involves the exploitation of American and foreign nationals in the United States, who have returned from overseas or who have obtained information through correspondence, has been greatly expanded. Intelligence information is also being received from contractors who have offices in foreign countries, or who send highly qualified technical personnel to Europe or Asia for various jobs. It is anticipated that this program will be in full operation by April 1952. ✓

Quite a bit of emphasis has been placed on the exploitation of the so-called "summer scientists" who have returned from overseas and also A

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5. "Summer scientists" refers to a group of American scientists, mainly college or university professors, who are being sent overseas, on a contract basis, for the purpose of collecting technical intelligence information in their individual fields. The term "summer" was applied, inasmuch as these scientists were usually available for this purpose only during the summer months.

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upon those scientists who were selected for "one shot" projects and are now residing permanently in the United States. These individuals have been encouraged to correspond with the contacts they made during their overseas tour of duty, with the idea of obtaining intelligence material from people who are now located in that particular theater. This phase of collection has grown to the extent that it now requires the full-time attention of one officer.

Dossiers have been completed and are being kept current on a group of special scientific personnel within the United States, whose services might be desired by ATIC in future collection programs. These scientific personnel are specialists in various technical fields, who have indicated that they would be available for assignment with ATIC, in the event their services were needed.

As of 1 July 1951, this division was responsible for complete administration of 670 foreign scientists and <sup>their</sup> dependents, including both immigrated and non-immigrated personnel. This responsibility covers specialists who are under Air Force contracts and their dependents, as well as non-immigrated dependents of released personnel. Immigration of dependents has accelerated somewhat, 78 having come to the United States in the period covered by this report. Immigration of specialists has not increased greatly since June, inasmuch as most of them are either inadmissible under provisions of the McCarran Act or are recent arrivals. Seven specialists have immigrated to the United States in the six month period covered by this report.

Although the specialists were given substantial pay increases, effective 1 July 1951, to correspond with equivalent Civil Service positions, there is still a certain amount of discord because of the recent Civil Service pay in-

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crease. This increase does not apply to "Paperclip" personnel because they are contract employees, regardless of contractual provisions based on Civil Service regulations.

The main problem confronting the Technical Requirements Division in connection with these specialists continues to be the obstacle presented by the Internal Security Act of 1950, as amended. As of 31 December 1951, the division is responsible for 694 specialists and dependents, of whom 32 specialists and 288 dependents are yet to be immigrated.

#### TECHNICAL SERVICES DIVISION

The Technical Services Division, as of this reporting period, was responsible for those logistical services required to support all ATIC operations. These included receiving, processing, storage of documents and foreign aeronautical equipment, limited reproduction services for duplication of documents, and publishing intelligence reports and studies, translation services, and specialized training and indoctrination of personnel performing air technical intelligence duties.

On 1 October 1951, Colonel (b) (6), (b) (3) (B) was assigned as Chief, Technical Services Division, vice Lt Colonel (b) (6), (b) (3) (B). Lt Colonel (b) (6), (b) (3) (B) was assigned as Deputy Chief on 13 June 1951, then relieved and reassigned from this Division on 19 October 1951. Captain (b) (6), (b) (3) (B) was assigned as Plans and Operations Officer on 30 October 1951.

At the beginning of this period, authorized civilian strength was 131. This authorization has now been increased to 155, for planning

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purposes, but actual assignment still remains at the original 131. Military strength authorization of 35 officers and 49 airmen has not changed. Since the accomplishments of this division consisted, in the main, of the achievements of its various components, this portion of the History has been broken down into the accomplishments of the various offices, sections, and branches.

#### Special Documents Project Office

This office initiated and implemented a project to cover the receipt, storage, and accountability for a group of Top Secret documents in a special technical field, which were received from Hq USAF for analysis and microfilming. This office accomplished destruction of the original material, as directed. At the end of this reporting period, this action had been completed on 107 documents.

Policies were also established which it is hoped will contribute to more expeditious and efficient handling of highly classified material.<sup>6</sup> Changes were also effected in the indexing system so that reference material could be more expeditiously obtained.

#### Document Services Section

Several changes in the staff of the Document Services Section occurred during this reporting period. Major (b) (6), (b) (3) (B) was assigned as Chief, Document Services Section, on 3 December 1951. (b) (6), (b) (3) (B) was assigned as Chief, Document Processing Branch, in July 1951;

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6. Reply to letter from ATIS-2, 23 Apr 51, to Directorate of Intelligence, Hq USAF, was received 26 Dec 51.

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Major (b) (6), (b) (3) (B) was appointed Chief, Preliminary Research Branch, 3 December 1951; Captain (b) (6), (b) (3) (B) was assigned Chief, Reproduction and Graphic Services Branch, 4 December 1951.

Action was also taken to "sell" the services of the Document Processing Branch to the other components of the Air Technical Intelligence Center. This was done in various ways, as follows:

1. Approximately 17 form letters and disposition forms were originated as a means of expediting requests for known documents. These forms have helped eliminate many hours of dictation and original typing, and have thus resulted in faster action in fulfilling requests.
2. Distribution of ATIC Intelligence Studies was increased from approximately 130 copies to 300 copies. In addition to the ATIC Intelligence Studies, distribution is being made of five other publications which originate in the Center. A record system of these ATIC products, as well as of some 30 other miscellaneous intelligence publications has been established. Distribution of these various publications includes not only dissemination to ATIC components, but to Headquarters USAF, major Air Force Commands and their components, and to components of the Department of Defense, and private industry. Approximately 3,000 items are recorded and distributed monthly.
3. As of the 1st of July 1951, a standard control number (ATIC No.) is being assigned to every incoming document and a processing form (Form 75) prepared therefor. Except for approximately three months, a record of en-routed documents and final disposition has been maintained in the master ATIC Locator Card File.

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4. The program for retention, retirement, and destruction of documents has been further implemented for the ATI Repository. A simplified record system for documents borrowed from the ATI Repository has been installed. Further changes in the ATI Repository consist of a bulletin board on which the retirement and destruction program is posted, as well as an accession list of Reading Room material received daily, and other pertinent information concerning the ATI Repository. A Russian Language Library has been established but has not been completed. Seven four-drawer file cabinets have been added to the ATI Repository, providing additional storage space.

5. A publication entitled "Did You Know This About the Document Processing Branch?" was prepared during November and approximately 200 copies were distributed throughout the Center. This publication was the first of a series designed informally to outline the services available within the Document Processing Branch.

6. A study was initiated to determine the need for a Maps and Visual Aids Unit. To date, the study reveals that such a unit is desirable and necessary, but no action has as yet been completed to actually establish such a unit.

7. Expansion of the locator card files to provide adequate research facilities and the use of the new 5 X 8 form 75 has necessitated the procurement of twelve new card files, and has resulted in a complete reorganization of all files.

As originally conceived, the Screening Group of the Preliminary Research Branch was to have been charged with the responsibility for selecting, examining, evaluating, and abstracting pertinent information

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from all documents received by the Air Technical Intelligence Center, and for providing the analysts in the Technical Analysis Division with information for necessary final analysis.

This responsibility would have required the services of qualified engineers and experts in technical fields who were also qualified as multilingual translators to act as members of the screening panel. An intense and comprehensive recruiting program was conducted, therefore, over a period of months, in an attempt to secure properly qualified personnel.

The original concept then had to be modified for a number of reasons, among them, the inability to obtain technically qualified personnel with language competence who were willing to accept employment at the salary the Center could offer, and the difficulties encountered in obtaining security clearances for those who would accept employment. The Preliminary Research Branch has had to revert, therefore, to operating as it did previously, accomplishing only the preliminary selection and examination of documents.

The growing demand for intelligence information on foreign technological research and development has necessitated the addition of a facilities section to the existing biographic registry, which is maintained by the Biographic and Facilities Group of the Preliminary Research Branch.

The Translation Group of the Preliminary Research Branch, during this reporting period, furnished an individual as Air Force representative for a project devoted to compiling and publishing a Russian-English scientific and technical dictionary.

When it became apparent that the original plan of selecting, examining, evaluating, and abstracting documents could not be implemented, action was

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taken to assemble a staff of technically trained officers and airmen to perform the screening functions from within the Preliminary Research Branch. It also became necessary to utilize members of other groups within the branch, as well as analysts <sup>lent</sup> ~~loaned~~ from the Technical Analysis Division. Despite the fluctuation in the number of screeners available to the group for the work, <sup>despite</sup> and the changes inherent in any new operation or re-organization, the group processed 56,634 documents during this reporting period.

A training program was also established whereby officer-students from the USAF Institute of Technology and technically trained officers awaiting entrance into Air Technical Intelligence Investigator's School would receive instruction in proper screening procedures with the possibility of later securing their services. As a result of this program, considerable aid was given to the Preliminary Research Branch in its screening functions, and two officers who participated in this training were assigned to the branch and later became group leaders.

The same staffing problem was encountered by the branch in filling the positions in the Translation Group with qualified civilians. A number of academically qualified linguists indicated their willingness to accept employment as translators, but it was found that language competence alone, without technical knowledge, precluded quality technical translations.

Attention was then turned toward obtaining officers and airmen with linguistic ability. This action resulted in the assignment of three officers and four airmen to the branch during this period. This staff enabled the group to accomplish translations in Russian, Polish, Czechoslovakian, Serbo-Croatian, Ukrainian, German, French, Italian, Spanish, and Roumanian.

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Translations that could not be made by the members of this group are being accomplished per contract with (b) (6), (b) (3) (B) and Company, Inc. (Contract AF 33 (600)-5969), negotiated on approximately 1 July 1951. On 10 December 1951, a change order (Change Order No. 1), amended the (b) (6), (b) (3) (B) and Company, Inc., contract to provide for additional translation services, including identification translations with oral translations to be accomplished by the contractor's resident representatives. The Change Order also provided for the transposition of an English-Russian Technical dictionary to Russian-English.

The staff screened 5,634 foreign language documents, translating the title and/or the gist of these documents for presentation to the technical analysts. A total of 696 documents containing 2,433,599 words were translated in the period covered by this history. The Translation Group also acted as an information bureau for the staff of the Preliminary Research Branch and for other offices within the Center.

The Translation Group publishes a monthly list of documents translated or in the process of translation, in accordance with a previous agreement with Central Intelligence Agency. During this reporting period, the National Advisory Committee of Aeronautics and the Central Air Documents Office has been added to the distribution list.

It is hoped that this free and rapid interchange of translation information will lead to elimination of duplication of effort among the various translation agencies. The interchange between the Air Technical Intelligence Center and the Central Intelligence Agency has proved beneficial for both agencies.

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Early in the period covered by this history, action was taken to implement plans for contracting with Battelle Memorial Institute in Columbus, Ohio, for the reorganization and expansion of the existing Biographic Register, and for the addition of a facilities section to that register. Battelle's comprehensive, currently-maintained file of information extracted from foreign technical publications added weight to the decision to contract with the Institute for these services.

Therefore the project was approved on 10 August 1951, as a part of "Project Stork", entitled "Biographic Register on Foreign Personalities and Facilities Significant from the Standpoint of Technical Intelligence". On 2 October 1951 the safes containing the existing Biographic Register were transported to Battelle. A staff member of the Biographic and Facilities Unit spent approximately two weeks at the Institute in order to acquaint the staff there with the contents of the Register. There was a lull in activity on this project ~~for a period of time~~ while Battelle assembled a staff, obtained security clearances, and determined their <sup>own</sup> method of operations. On 27 November 1951 Captain (b) (6), (b) (3) (B) Unit Chief of the Biographic and Facilities Unit, was appointed project monitor for the Technical Services Division on this project.

The activities of the Biographic and Facilities Unit were stepped up with the employment of three additional Intelligence Information Analysts. Prior to and following the removal of the Biographic Register to Columbus, group staff members were engaged in fulfilling their regularly scheduled requests and <sup>in</sup> the preparation of reports and biographies, in compliance with

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special requests from the Technical Analysis Division and other user agencies. During this period a study was prepared to determine the capability of the USSR to develop new and effective atomic weapons. This special report required months of intensive research.<sup>7</sup> In August 1951 the Unit was charged with the responsibility of producing the quarterly summary entitled "Known and Suspected Soviet Research Centers". During the period of this history the Unit has been able to add information on an additional seventy research and development centers to this report.<sup>8</sup> Staff members, through research of documents, have added 200 biographies to the Register and have collected, assembled, and analyzed information contained in 260 reference documents and publications. Approximately 150 biographical sketches have been provided analysts within the Center on oral requests. A comprehensive report of the German scientists engaged in fuel and lubricant research for the Soviets required two months of research and preparation.<sup>9</sup>

Administrative procedures and systems have been planned and put into effect to facilitate the operation of the Unit. Continuous efforts have been made by the group leader and its staff to determine the services required by the Technical Analysis Division of ATIC and the Register's other

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7. USSR Atomic Personality Study, an interview with (b) (6), (b) (3) (B)  
Staff member of Biographic and Facilities Unit.
8. Known and Suspected Soviet Research Centers, September 1951, December 1951 issues.
9. Biographies of German Scientists engaged in fuels and lubricants research for the USSR.

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users and exchange agencies.

To improve the quality of the reproduction of all material disseminated outside the Air Technical Intelligence Center, the following action has been taken by the Reproduction and Graphic Services Branch:

1. New covers have been designed and printed for all Air Technical Intelligence Center publications.

2. All clerical personnel engaged in the typing of ATIC publications have been thoroughly briefed on such procedures as the preparation of master <sup>copies</sup> with reference to format, pagination, and set-up for reverse side printing.

3. The security classifications have been pre-printed on all paper used in final copies of ATIC publications.

Although the requirements for reproduction of the number of copies of ATIC publications has increased during this period from approximately 115 to 300, the time required to reproduce ATIC studies was reduced from an average of three weeks to an approximate average of seven days.

The Foreign Equipment Branch has received material continually from overseas theaters. The volume of this material averages approximately 25 items per week.

No doubt the most important arrival was that of the MIG-15, procured through the joint efforts of the Army, Navy, Air Force and British forces in Korea. During the three-day period which this material remained at Building 89, more than 250 visitors were admitted to the storage area for the purpose of examining the equipment. Among the visitors were representatives of the Navy, SAC, AFOIN-V/TC, ARDC, WCB, WSEG, and selected

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members of industry. The work of preliminary examination and evaluation was carried out 24 hours a day, and preliminary evaluation reports were disseminated within a 72-hour period after arrival of the materiel. ✓

Another arrival was a late model of a complete Soviet YAK-11, from the European Theater. Examination of this airplane and its equipment proved fruitful, particularly the examination of the communications and gun-sighting systems, which were for the most part of 1950 manufacture.

The Foreign Equipment Branch was responsible for the preparation of a display area for the purpose of showing authorized visitors a selection of foreign equipment which would readily demonstrate the range of equipment now undergoing evaluation at the Center. This display serves also to suggest potential evaluation activities and to provide instructional material for personnel undergoing training for intelligence assignments.

The extraction of name-plate data has been accelerated by increased requirements of Headquarters USAF, the Air Ministry, CIA, and other interested agencies.

The ATI Equipment Branch was consolidated and located in Building 278, Area A, at the beginning of this reporting period. Complete storage facilities were rearranged and bins were obtained or built by branch personnel to provide satisfactory storage of approximately 600 items.

The following shipping documents were processed and completed on air shipments:

Continental Air Force Depots	3 each
Overseas---FEAF-ATIL Office	51 each

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USAFE-ATIL Office	50 each
USFA-ATIL Office	24 each
A/A System	50 each
ALASKA-5004th AISS	17 each
FEAF 6004th AISS	15 each

All combat vehicles were turned in, pursuant to USAF regulations. Since the branch had established an auxiliary motor pool in accordance with USAF Motor Vehicle Manual 77-1, it was possible to obtain three new one-half ton Ford pick-up trucks for ATI transportation. These trucks covered a total of 7,500 miles, including 7,000 miles for non-routine trips. One tractor and a closed van were obtained on loan from the Base Motor Pool (MR 151) to accomplish five non-routine trips relative to handling of foreign equipment. Two 2½ ton GMC 6X6 trucks were obtained for a two-month loan in anticipation of the needs of the ATIG for participation in a winter maneuver "Project Snowfall".

In the Photographic Branch of the ATI Indoctrination Section, the following training and indoctrination was performed:

Attaches-Designate (Officer)	19 received	48 hrs Photo Training
Attaches-Designate (Airmen)	4 received	65 " "
ATLO	18 received	65 " "
ATI Investigator (Officer)	21 received	65 " "
ATI Investigator (Airmen)	3 received	65 " "

In the period from 1 August 1951 to 31 December 1951, 539 rolls of 35mm films were processed, and 8,076 prints were produced.

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Plans for expansion of the Photographic Laboratory were completed and approved in July 1951, but to date alterations have not been started.

In the Military and Civilian Training Branch, 61 military and 62 civilian personnel were received and processed. A total of 59 personnel were entered in training classes (clerical, personnel, drivers training, etc.) conducted by the base. A special orientation was conducted for 46 students of the Senior Intelligence Course, AUCSIS, Maxwell AFB in October. Also during October, Col (b) (6), (b) (3) (B), MATS-URAFR, was in the Center for two weeks to study the operation of the Center and Air Technical Intelligence in general.

The Military and Civilian Training Branch was charged with responsibility for the Security Consciousness program on 27 July 1951. To date, 61 man-hours have been devoted to briefing of newly assigned personnel. Distribution of security material received from the base has included 200 Security Indoctrination Pamphlets (to all divisions), 150 Unit Security Officer Newsletters (to all divisions) and 100 Security Posters.

Two classes of the ATI Investigator School were graduated during the period of this history. The first class was graduated on 27 July<sup>1951</sup>; the second, 5 October<sup>1951</sup>. Of the 18 officers and two airmen completing the course, seven officers were assigned to PRAF, five officers to ATIA, two officers and one airman to ATIRL, two officers and one airman to ATIST, and one officer to ATISD. The remaining officer, who attended the course on TDY from Air Defense Command, has returned to his home station.

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Responsibility for ATLO training was assumed on 28 November 1951, and on 31 December 1951 a total of nine officers were in training. Upon request of ATIRL, a special intelligence course of 17 hours was prepared, and is being presented, on a strict need-to-know basis, to specified personnel destined for overseas.

Responsibility for Berlitz language training was assumed also on 28 November 1951. At that time, six ATLO's were receiving German instruction.

1126TH AIR INTELLIGENCE SERVICES SQUADRON

The 1126th Air Intelligence Services Squadron (ATIC) has operated under the direction of the Commander, 1125th USAF Field Activities Group (ATIC) for the entire reporting period. There have been no major changes except in strength, as indicated:

<u>1 Jul 51</u>	<u>31 Dec 51</u>
1-Lt Col	1-Lt Col
1-Major	1-M/Sgt
1-M/Sgt	2-S/Sgt
1-T/Sgt	1-Sgt
2-S/Sgt	2-Cpl
1-Sgt	
1-Cpl	
2-Pfc or Pvt	

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TECHNICAL ANALYSIS DIVISION

Continued concentrated effort has been exerted by this division to obtain the competent technical skills necessary to perform its mission. Recruitment from educational and industrial institutions, so far, has not produced satisfactory results, but this program will continue with all possible effort.

Thirty-eight military personnel -- 37 technical and one non-technical -- were assigned to the division as of 31 December 1951. Forty-three military positions were authorized the division during the reporting period.

Quantitatively, the figures below reveal the status of project activity in this division's various technical fields:

	<u>Active as of 1 Jul 51</u>	<u>Initiated between 1 Jul and 31 Dec 51</u>	<u>Completed between 1 Jul and 31 Dec 51</u>	<u>Active as of 1 Jan 52</u>
Aircraft & Propulsion	31	25	8	48
Electronics	19	8	12	15
Associated Equipment	7	13	2	18
	<u>57</u>	<u>46</u>	<u>22</u>	<u>81</u>

The page following lists ATIC publications and other intelligence end products issued in technical fields during the reporting period:

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	<u>Aircraft &amp; Propulsion</u>	<u>Electronics</u>	<u>Associated Equipment</u>	<u>Total</u>
Air Technical Intelligence Studies	10	11	2	23
Technical Reports	4	4	0	8
Preliminary Rpts on Foreign Equipment	4	34	0	38
Air Intelligence Digest Articles	13	11	14	38
Tech Briefs	67	51	109	227
AF Forms 112, Air Intelligence Rpts	4	0	4	8

Additionally, 16 ATI, six Electronic and three Associated Equipment studies are awaiting final coordination or reproduction.

Developments which contributed significantly to the mission of this division are:

1. Formation of the Air Technical Intelligence Center Propulsion Panel

On 17 and 18 September 1951, the Aircraft and Propulsion Section, assisted by the Associated Equipment Section, conducted a conference with representatives from aircraft engine industries to discuss the possible formation of a Propulsion Panel.

The conference indicated that such a panel would be mutually advantageous to industry, ATIC and other government agencies, and a permanent panel was recommended. One regular and two alternate ATIC

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analysts will participate actively in future meetings. Reports will be forwarded to aircraft engine manufacturers, NACA Flight Propulsion Lab, the Bureau of Aeronautics, the Wright Air Development Center and other interested organizations.

The Panel has established industrial participation in the analysis and evaluation of foreign aircraft power plant material; provided industry with a channel through which it may be informed of Soviet aerial warfare capabilities insofar as propulsion systems are concerned; and established close liaison between industry and ATIC on technical intelligence pertaining to foreign aircraft propulsion systems.

2. Joint Anglo-American Study on Soviet Aircraft Jet Propulsion Development (Project No. 10124)

The second joint Anglo-American study of USSR aircraft power-plant development was made in London, England, between 31 Oct and 14 Dec 51. (b) (6), (b) (3) (B) of the Propulsion Branch, Aircraft and Propulsion Section, ATIC, represented the USAF.

A rough draft on the study was completed on 14 Dec 51 with the complete agreement of the Study Group. About 400 copies of the study will be reproduced by the British (DDI/Tech) of which 250 will be sent to ATIC for distribution within the U.S.

The British are urging a similar joint study by aircraft specialists in the very near future and have recommended that joint studies be undertaken frequently to insure the dissemination of coordinated intelligence estimates to the agencies concerned, particularly SHAPE.

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### 3. Formation of the Air Technical Intelligence Center Aircraft

#### Panel

On 11 and 12 December 1951, the Aircraft and Propulsion Section, assisted by the Associated Equipment and Electronic Sections, conducted a conference with representatives from the aircraft industry and other government agencies. This conference was called to brief representatives on foreign developments in aircraft and aircraft equipment and to discuss the formation of an Aircraft Panel.

The discussion with the industrial representatives indicated that such a panel would be mutually advantageous, and a permanent panel was recommended. When organized, the panel will establish industrial participation in the analysis and evaluation of foreign aircraft and aircraft equipment; provide industry with a channel through which it may be informed of the Soviet capabilities to conduct aerial warfare insofar as aircraft and aircraft equipment are concerned; and provide close liaison between industry and AFIC on technical intelligence pertaining to foreign aircraft and aircraft systems.

### 4. Pulsejet and Rocket Power Plant and Rocket Propellents Developments (Projects 10100, 10113 and 10096)

For the first time in the history of technical intelligence, information is being collated on foreign and domestic pulsejet power plant developments and on rocket power plant and rocket propellant developments. Studies are in final coordination which, for the first time, will present

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an evaluation of all the data known regarding the pulsejet, rocket power plant and rocket propellant development of the USSR.

5. The Type-27 Soviet Multi-Purpose Bomber (Project 10102)

Air Technical Intelligence Study No. 102-AC51/27-34 was published on the Type-27 airplane to replace a previous study on this aircraft.

An important development during the progress of this project was the acquisition of aerial photographs which enabled the intelligence specialists of the Aircraft and Propulsion Section, ATIC, to determine the size of the Type-27 airplane with greater accuracy than before. Furthermore, this confirmed the theory that a centrifugal type engine is installed in this airplane. It was also determined that a modified version of the Type-27 exists which has been designated the Type 31.

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6. Preliminary Analysis of the MIG-15 Airplane (Report No. 10115)

A Soviet MIG-15 airplane, badly damaged but with most major components in recognizable condition, was received in the Air Technical Intelligence Center in July 1951. A Flash Report No. ATIAA-59 was published immediately and an interim ATIC Study No. 102-AC51/28-34 prepared, and distributed in August 1951.

The most outstanding and immediately recognizable fact was that the engine installed in the MIG-15 is a Soviet-built copy of the original Rolls-Royce Nene engine, a finding verifying the use of two engine types in the MIG-15. The second is a more powerful engine based on the Nene design.

The engine was forwarded to the Pratt-Whitney Division of the United Aircraft Corporation for detail<sup>ed</sup> evaluation. This analysis, conducted in cooperation with specialists of the Propulsion Branch, ATIC, permitted the release of an ATIC Study (No. 102-AC51/3134) of considerable importance to the USAF.

The airframe was sent to Cornell Aeronautical Laboratory for detailed evaluation under contract. Based on the contractor's evaluation and report, a final ATIC Study will be published.

7. The Yak-11 Aircraft (Project No. 10098)

A Hungarian-operated Soviet Yak-11 trainer which crash-landed in Siegenburg, Germany, was received in the Air Technical Intelligence Center in November 1951. A Flash Report (No. ATIAA-61) was

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published immediately.

The Yak-11 is the Soviet Counterpart of the USAF T-6 airplane. This Yak-11 was evidently built in early 1951 and, except for damage incurred in the crash, was in excellent condition. The aircraft was not restored to flight condition.

8. Evaluation of Reports on Unidentified Aerial Objects  
(Project No. 10073)

This project involves the collection of reports of unidentified aerial objects; the evaluation, as to source and content, of reports of visual or electronic sightings of unidentified aerial objects submitted by military or civilian sources; the investigation of reports of such sightings through field work when deemed necessary; and the preparation of periodic status reports for the information of the D/I, Hq USAF. This investigation has been in progress for approximately four years and a new increase in activity has been initiated in studying and indexing project records to enable a statistical survey of incidents to be accomplished.

It is contemplated that all of the sightings of unconventional flying objects will be cross-indexed according to size, color, location, etc., so that as much statistical data as possible will be available. It is believed that possibly several general characteristics of the sightings will be determined from the mass of data on file in ATIC.

This project concentrated on those incidents that appear to

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have originated from high grade sources, such as pilots, technically trained people, etc. The exception to this was where a number of sightings occur in a certain area at about the same time.

9. Development of the Soviet EF-150 Prototype Aircraft

(Project No. 10118)

Information was received and evaluated which reflects the development of the EF-150 aircraft and includes background information on several Soviet-developed aircraft which preceded the EF-150, <sup>this study further provided</sup> ~~and served as~~ working experience for the particular group of engineers currently associated with the EF-150 project.

Several experimental aircraft have been developed by the former Junkers group of Germany, under the direction of the Soviets. These aircraft include two modified versions of the German Ju-287, swept-forward wing bomber, the EF-131 and EF-140. The EF-150 is a swept-back prototype designed and under construction by this group, which had its design initially inspired by the USAF XB-47 aircraft.

10. The Soviet 468 Airplane

Information was received and evaluated on a delta-wing supersonic rocket-powered aircraft design, designated the 468, which according to a reliable report, was scheduled for prototype construction as of the spring of 1951. Two glider versions of the 468, intended

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for pilot training in delta-wing aircraft characteristics, have been in <sup>preparation</sup> ~~work~~ and, possibly, may now be complete.

Reported performance anticipated of the 468 aircraft is 860 knots high speed at a 49,000 ft altitude, a ceiling of 70,000 ft., and a total endurance of 30 minutes. A project encompassing the estimates of the ATIC regarding the performance, characteristics, and capabilities of this aircraft is intended for initiation upon completion of the EF-150 study.

11. The Type 31 Long-Range Bomber (Project No. 10094)

Based on rather low quality photographic coverage of the July 1951 airshow at Tushino, together with an airshow photograph released by the Soviet publication "Pravda," a preliminary analysis of the Type 31 airplane, a new Soviet heavy bomber, was made within two weeks after receipt of the intelligence material. The result of the analysis was published as an ATIC study, "Preliminary Analysis of Soviet Long-Range Bomber" (Study No. 102-AC51/29-34)

Subsequent to publication of the preliminary report, a detailed analysis of available photographs was undertaken for the purpose of determining more accurately the physical characteristics of the aircraft. This work has resulted in elimination of the Ju-224 Diesel

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engine from further consideration as a possible engine installation in the Type 31. A re-evaluation of performance has been made, based on provisional installation of ASh-90 engines in the aircraft flown in the airshow, and the probable installation of Jumo 022 turboprops in the production version. Results of the additional analysis will be made available shortly as a new ATIC study.

12. Analysis and Evaluation of Foreign Aircraft Fuels and Lubricant Samples (Project No. 10095)

This project arranged for the analysis of foreign aircraft fuel and lubricant samples by qualified independent laboratories, as and when the samples are received by the Air Technical Intelligence Center. It also provides for the evaluation of the laboratory analysis data on these materials from the standpoint of foreign capabilities in quality, performance, method of manufacture and over-all practice in the application of these materials.

It has been determined desirable to prepare a study which compiles the laboratory analysis data of all fuel, lubricants and other samples investigated during the past <sup>two</sup> 2 years. These data will be useful in supplying information to the CRC Group in their development of adequate test procedures for evaluating future samples.

The CRC (Coordinating Research Council, Inc.) has been

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selected to work in conjunction with the ATIC in establishing analysis test procedures to cope with unknown compositions of foreign petroleum materials identified only as to usage. The tests are designed to obtain the maximum of intelligence data from samples limited in quantity. The CRC will meet three to four times annually to discuss and summarize individual petroleum analysis reports on data which will be submitted to them during the intervening period.

13. Soviet Aircraft Equipment Received from FEAF

Several items of captured equipment have been received by ATIC. This equipment has been in a continual state of analysis to gather significant information regarding Soviet aircraft equipment.

The YAK-11 aircraft equipment, most of which is 1950 vintage, is being explored to establish progress trends in designs and developments of Soviet equipment.

Of the equipment received in the ATIC, many items have been submitted to other agencies for test and analysis for possible new design features. The Wright Air Development Center laboratories and organizations have such items as an Artificial Horizon (newly designed) which will be installed in an aircraft for flight testing; electro-mechanical actuators from both the previously acquired equipment and the MIG-15; and hydraulic actuators and struts. The generator from the MIG-15, captured in July 1951, has been sent to Westinghouse for analysis to determine high-altitude capabilities.

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14. Foreign Development in Computation Machinery(Project 20036)

Project 20036, dealing with Soviet computer activity, gained considerable momentum during the second half of 1951. Due to fortuitous circumstances, an excellent source of both information and ideas is available for this project. Since the field of computer utilization shows promise of being almost limitless, particularly in industrial application, this project is considered of prime importance.

15. Air Aspects of Decimeter Communications Systems

Project 20045 will condense known information on Soviet decimeter communications equipments and activities. An upsurge of interest in this field by the Soviets may explain the seeming lack of improvements in other more common communication areas.

16. Critical Materials Usage in the Soviet Nene Engine(Project 30027)

The purpose of this project was to estimate the quantity of critical materials found in the Soviet Nene engine. Critical materials considered were nickel, chromium, cobalt, tungsten, molybdenum, and columbium. This project was initiated as the result of a request from the Chairman of the Munitions Board and, presumably, will be used as a guide for possible conservation of critical materials in US jet engines. The quantities of critical materials determined were based on known Soviet Nene critical materials usage, similarity of Soviet Nene to a US engine, and

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known Soviet metallurgical practices.

The project was initiated 25 June 1951, and the ATIC Study resulting therefrom (No. 102-AE-51/5-34) was given standard distribution 11 September 1951. Advance copies were sent to the Chairman of the Munitions Board 2 July 1951. The project was terminated 20 September 1951.

17. Defensive Fire Control Diagrams (Project 30032)

The purpose of this project was to prepare defensive fire control diagrams for the following Soviet aircraft: TU-2, PE-2, Type 27, IL-4 and IL-10. These diagrams were to be used for briefing and training USAF combat crews.

Diagrams were originally completed with a classification of Confidential and Secret (Type 27). Each diagram contained the field of fire and type of fire control for each gun installation, passive protective armament of each aircraft, and type and characteristics of each gun.

This project was initiated at the request of AFOIN-V/TC (Director of Intelligence, Tech Capabilities Branch, Hq USAF) on 30 August 1951. Diagrams were hand-carried to Tech Capabilities Branch by project monitor 1 November 1951. Discussion with Lt (b) (6), (b) (3) (B) of that Branch led to the conclusion that maximum utilization of the diagrams could be made only if their classification were Restricted or lower. Certain changes were made in the original diagrams to meet this requirement.

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18. Project Stork (Project No. 9974)

This project is operated under Air Force Contract No. AF-33 (038)-4044 and has progressed satisfactorily since the publication of the semi-annual history of Technical Analysis Division in June 1951. During the period covered by this report, 83 separate projects had been initiated under the provisions of the contract. Of these projects, 20 have been completed. Sixteen technical and three special reports have been published in final form and distributed.

Seven technical reports are being printed, at present, and four studies have been submitted to ATIC for coordination prior to publication. Seven of the initial 83 projects have been cancelled or have been integrated with other projects. All of the others are progressing to the satisfaction of the Project Monitor.

The contractor has expended considerable time and effort in training qualified personnel to be utilized on the project. Currently, 104 of the contractor's employees are working full or part-time on the project.

Close coordination between the contractor's engineers and ATIC engineers has been established. Now that the initial ground work has been laid, and the necessary training of the outside personnel accomplished, a firmer system of control is being set up and implemented by the Project Monitor.

By 31 December 1951, the request for further extension of the basic contract had been submitted, through channels, to the Procurement



Officer responsible for the contract. It is felt that this contractor is doing much to aid the ATIC mission, and that the relationship will grow to the greater benefit of both organizations.

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A P P E N D I X

TAB A - General Order 31, Headquarters

United States Air Force, dated 1 June 1951

TAB B - Organizational Chart, Air Technical Intelligence  
Center

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AIR TECHNICAL INTELLIGENCE CENTER  
HEADQUARTERS U.S. AIR FORCE  
1 JULY 1951

COMMANDING OFFICER

COLON [REDACTED]

6-7

AIR INSPECTORS OFFICE

LT COL [REDACTED]

SCIENTIFIC ADVISORS OFFICE

MAJ [REDACTED]

1126th AIR INTELLIGENCE SERVICES SQUADRON

CAPT [REDACTED]

AIR INTELLIGENCE OFFICE

MAJ [REDACTED]

COMPTROLLERS OFFICE

LT COL [REDACTED]

MANAGEMENTAL SECTION

BUDGET & FISCAL SECTION

PERSONNEL & ADMIN. OFFICE

AIR ADJ. GEN. SECTION

MIL. PERSONNEL SECTION

CIV. PERSONNEL SECTION

TECHNICAL REQUIREMENTS DIVISION

COL [REDACTED]

ADMINISTRATIVE OFFICE

COLLECTION PLANNING OFF.

COLL. CONTROL SECTION

REQUIREMENTS BRANCH

OPERATIONS BRANCH

OPERATIONS BRANCH

ATL PROGRAM SECTION

PROCESSING BRANCH

FOREIGN ACT. BRANCH

FOREIGN SCI. SECTION

TECHNICAL ANALYSIS DIVISION

COL [REDACTED]

ADMINISTRATIVE OFFICE

PLANS & OP'S. OFFICE

TECH ADVISORY OFFICE

A/C & PROPULS. SECTION

PERF. & CHAR. BRANCH

PROPULSION BRANCH

EQUIPMENT BRANCH

ELECTRONICS SECTION

RADIATION BRANCH

CO. MEASURES BRANCH

SCI & COMP. BRANCH

ASSOC. EQUIP. SECTION

ARMAMENT BRANCH

MATLS & METH. BRANCH

NUCLEAR ENERGY BR.

TECHNICAL SERVICES DIVISION

CO [REDACTED]

ADMINISTRATIVE OFFICE

SPEC. DOC. PROC. SECTION

DOC. SERVICES SECTION

DOC. PROC. BRANCH

PRELIM. RES. BRANCH

GRAPH. SERV. & REPRO. BRANCH

ATI INDOCT'R SECTION

PHOTO BRANCH

MIL. & CIV. TRAINING BR.

ATI TRAINING BRANCH

MAT'L SERVICES SECTION

FOREIGN EQUIP. BRANCH

ATI EQUIP. BRANCH

OFFICE EQUIP. BRANCH

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TAB-B

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**SECURITY  
INFORMATION**

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TJ-K2  
Office of Record

# HISTORY OF AIR TECHNICAL INTELLIGENCE CENTER

1 JANUARY 1952 - 30 JUNE 1952



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Classification cancelled  
change 1 to

AUTH  
By -

(b) (6)

Date May 55

AIR TECHNICAL INTELLIGENCE CENTER  
WRIGHT-PATTERSON AIR FORCE BASE  
DAYTON, OHIO

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1. Information conflicting with or pertinently affecting that contained in this publication should be forwarded by the recipient directly to:

Chief, Air Technical Intelligence Center  
Wright-Patterson Air Force Base, Ohio

This in no way abrogates or alters responsibility for sending such information or any pertinent intelligence data through already established intelligence collection channels of the various services or agencies of the U. S. government.

~~2. WARNING: This document contains information affecting the national defense of the United States within the meaning of the Espionage Law, Title 18, U.S.C., Sections 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.~~

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Auth: [REDACTED]  
Initials: (b) (6)  
Date: (b) (6)  
8/7/52 COL 4341

Classified by HCPSCG 2 APR 75  
EXEMPT FROM GENERAL DECLASSIFICATION  
SCHEDULE OF EXECUTIVE ORDER 11652  
EXEMPTION CATEGORY 2  
DECLASSIFY ON 31 DEC 1982

HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
1 JANUARY 1952 -- 30 JUNE 1952

Prepared by A/3c (b) (6)

Air Intelligence Office  
AIR TECHNICAL INTELLIGENCE CENTER  
7 August 1952

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FORWARD  
TO THE HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
FOR THE UNITED

1 JANUARY 1952 - 30 JUNE 1952

The Air Technical Intelligence Center was officially designated as such by General (b) (6) Headquarters Command, United States Air Force, dated 1 June 1951, which made the effective date of this designation retroactive to 21 May 1951, and defined the mission of the Center as follows:

"The mission of the Air Technical Intelligence Center is to produce Air Technical and Scientific Intelligence under the operational control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF."<sup>2</sup>

Prior to 1 June 1951, responsibility for the production of Air Technical Intelligence had been delegated to the Intelligence Department of the Air Materiel Command. Since the Intelligence Department, AMC, was providing Air Technical Intelligence to other components of the United States Air Force as well as AFM and the Air Research and Development Command, it was deemed advisable to place the former Intelligence Department, AMC, directly under the Directorate of Intelligence, Headquarters, USAF, that it might better serve the United States Air Force.

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1. See Appendix, TAB A.

2. Ibid.

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as a whole.

The Air Technical Intelligence Center, in carrying out its mission, focuses its efforts on these two objectives: (1) prevention of technological surprise from any foreign source; and (2) assisting the research and development agencies of the United States Air Force in the development of countermeasures against such foreign technical development.

The principal functions delegated to the Air Technical Intelligence Center are as follows:

1. The support functions of command and administration.
2. Collection of technical intelligence information, including foreign aeronautical and related equipment required for the production of technical intelligence.
3. The analysis and evaluation of technical intelligence information.
4. Provision of logistical-type services to support the Center's various activities. This includes reception, processing, and storage of documents; limited services for reproduction of documents; publication of intelligence reports and studies; and specialized training of selected personnel performing Air Technical Intelligence duties.

In order to perform these functions, the Air Technical Intelligence Center has been organized as indicated on the Organizational Chart attached hereto.<sup>3</sup> In addition to four staff offices - Air Inspector's Office,

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3. See Appendix - TAB - B.

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Scientific Advisor's Office, Air Intelligence Office, and Policy and Management Office - three main divisions have been established. These are: Technical Requirements Division, Technical Analysis Division, and Technical Services Division. A further breakdown of the functions has been made within the divisions and staff office to accomplish special tasks. Particular attention was paid, during the reorganizational planning, to avoid duplication of effort.

In the history to follow, changes in organization and functions, accomplishments, and problems are presented concerning each component of the Air Technical Intelligence Center.

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OFFICE OF THE COMMANDING OFFICER

The organization of the Office of the Chief, Air Technical Intelligence Center, has remained unchanged since its inception 1 June 1951. However, as a result of the reorganization of the Directorate of Intelligence, Headquarters USAF effective 21 April 1952, the Chief, ATIC, Colonel (b) (6) reports directly to the Director of Intelligence, USAF, Major General (b) (6). The Chief, ATIC, formerly was responsible to the Assistant for Production in the Directorate of Intelligence, USAF.

Captain (b) (6), (b) (3) (B) was assigned principal duty as Executive Officer, ATIC, on 25 March 1952<sup>2</sup>. This position had remained vacant since Colonel (b) (6), (b) (3) (B) was relieved of the assignment on 23 September 1951. During the interim period, duties of this position were assumed as additional duties by Captain (b) (6), (b) (3) (B) and Captain (b) (6), (b) (3) (B).

Colonel (b) (6) Chief, ATIC, made an inspection tour of the ATIL Offices in London, England, and Paris, France and the ATIL Offices in Frankfurt, Heidelberg, and Wiesbaden, Germany and Salzburg, Austria during the period from 21 February to 15 March 1952<sup>3</sup>. Colonel (b) (6) was acting chief of the Air Technical Intelligence Center during Colonel

- 
1. Ltr for Col (b) (6) Chief, ATIC, fr Maj (b) (6) 17 Apr 52 (ATIPA Policy File)
  2. Par 12, SO #50, 25 Mar 52 (ATIPA)
  3. Ltr Order 218, 18 Feb 52 as amended by ltr order 226, 21 Feb 52 (ATIPA)

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Dunn's absence.<sup>4</sup>

Lt Colonel (b) (6) was assigned principal duty as Executive Officer, ATIC, on 20 June 1952, vice Captain (b) (6) relieved.<sup>5</sup>

Colonel (b) (6) departed 24 May 1952 for a leave of absence of 60 days.<sup>6</sup> Colonel (b) (6) Deputy Chief of the Technical Analysis Division, assumed command of the Air Technical Intelligence Center on 24 May 1952 for the duration of Colonel (b) (6) absence.<sup>7</sup>

- 
1. GO # 1, 22 Feb 52 (ATIPA)
  5. Par 1, Personnel Action Memorandum 15, ATIC, 25 May 52 (ATIMA)
  6. Par 2, SO #77, ATIC, 7 May (ATIMA)
  7. GO # 1, 24 May 52 (ATIMA)

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#### AIR INSPECTOR'S OFFICE

Upon inception of the Air Technical Intelligence Center, 1 June 1951, the Air Inspector's Office was established.

The Air Inspector assumes the following duties: keeps the Commanding Officer, ATIC, advised as to tactical, administrative, and logistical efficiency of ATIC; holds personal conferences for military and civilian personnel assigned to ATIC; and makes administrative inspections and inquiries as directed.

The Office of the Air Inspector, ATIC, was established on the basis of the CO's prerogative as to use of the manpower allotted on the Table of Distribution. The position of Air Inspector appears in the T/D as Personnel Staff Officer, and no other personnel, military or civilian, are assigned.

In view of the fact that the total manpower of ATIC is over 500, the Air Inspector was forced to adopt an informal type of operation and eliminate most written reports. Exclusive of periodic inspections, most effort has been expended by direct personal contact with supervisory personnel; it is felt that this means of approach has contributed substantially toward producing better work at ATIC. A gradual and continuing decrease of personnel conferences is believed to reflect the accomplishments of the Air Inspector's Office.

#### SCIENTIFIC ADVISOR'S OFFICE

The functions of the Scientific Advisor's Office are as follows:

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To advise and counsel the Commanding Officer relative to the scientific aspects and technical competence of the Air Technical Intelligence Program.

To insure complete coordination and integration of the Air Technical Intelligence Center activities with other USAF programs related to the offensive and defense capabilities of the Air potential of the United States.

To assure the Commanding Officer that Air Technical Intelligence production meets the requirements of all using agencies.

To coordinate and recommend disposition action in connection with produced Air Technical Intelligence studies and reports.

The accomplishments of the Scientific Advisor's Office are included in the section of the Technical Requirements Division.

#### AIR INTELLIGENCE OFFICE

The Air Intelligence Office is operating under an organizational plan that calls for four functional Branches. Although this organization has not been officially approved as of 30 June 1952, the material presented herein is in accordance with the functional Branch structure.

#### Intelligence Briefing Branch

A total of 71 regularly scheduled oral briefings were presented by the Intelligence Briefing Branch during the first six months of 1952. Of this total, 11 were addressed to General (b) (6), (b) (3) (B) and his staff at the regularly scheduled AIC conferences in the Air Room; 22 to the Com-

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manding General of Wright Aeronautical Development Center and his staff at the weekly Director's Conference in the WADC conference room, Area B; 26 to AMC Division and tenant organization representatives in the Air Room; 4 to Navy Personnel from BACH in the Air Room; 2 to the airmen of the Air Technical Intelligence Center; and 6 to the airmen of the Aircraft and Power Plant laboratories in the Aircraft Laboratory conference room. In addition to the 71 regularly scheduled briefings, 7 ad hoc briefings were presented as follows: 1 to the Beacon Hill Group on 16 January 1952; 1 to the representatives from the School of Aviation Medicine, Randolph Field, on 21 February 1952; 1 to Brigadier General (b) (6) (b) (6) and party on 9 April 1952; 1 to Air Reserve Officers on 9 May 1952; 1 to Air Reserve Officers on 23 May 1952; and 1 to Major General (b) (6) and party on 29 May 1952.

The Intelligence Briefing Branch maintained the Air Room situation maps and charts on a 7-day week basis with postings completed and an oral briefing covering the World strategic and Korean tactical situation, prepared by 1000 hours each day. Members of the AMC Staff who came to the Air Room for up-to-the-minute intelligence information were briefed on the basis of coverage desired.

#### Intelligence Publications Branch

Under plans laid in December 1951 by the Office of the Commanding Officer, Air Technical Intelligence Center, the ATIC BULLETIN was established in January 1952. This publication is issued weekly, to disseminate air technical intelligence information to agencies within the National Defense Establishment, mainly to the Air Material Command, the Air Research

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and Development Command, and the Wright Air Development Center.

Planning for publication of the BULLETIN had been based on the premise that the missions of all these agencies, and consequently the overall security of the US, are directly affected by current and anticipated developments in the technology of foreign air power. The BULLETIN was conceived as a means of furnishing interested agencies with information concerning these developments. In the planning it was recognized that the value of this information would be dependent upon its accuracy and its dissemination; and on the other hand it was anticipated that there would be considerable danger in the premature use of unevaluated information. This thinking is reflected in the Foreward, published in every issue of the periodical:

"The ATIC Bulletin is published every Friday by the Air Technical Intelligence Center, Wright-Patterson Air Force Base, to furnish Air Technical Intelligence information on developments, related to the technology of foreign air power—information that is timely and reasonably authentic but not thoroughly evaluated.

"After evaluation and comparison with other data, the isolated fragments of information contained in this Bulletin will, if they are considered pertinent and significant, be integrated into the existing fund of knowledge for eventual incorporation into formal ATIC studies and reports, in an effort to present the best possible current estimates of the situation."

"It should be born in mind that single items of information, such as these, may be misleading in themselves, and that they acquire significance only when they are collated with established facts. It is suggested, therefore, that this Center be consulted

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before specific use is made of the information contained in any item that is published herein."

A consistent effort has been made to disseminate, through the medium of this BULLETIN, the kind of information that will alert the using agencies to new foreign developments, without ascribing undue significance to the preliminary reports.

Publication of the BULLETIN superseded the dissemination of the "AMC Conference Items", bits of air technical intelligence information that had been made available to the Commanding General and Staff of the Air Materiel Command since the days when the air technical intelligence organization was a part of AMC. With the transfer of the air technical intelligence organization from AMC to the immediate control of the Directorate of Intelligence, Headquarters USAF, it had become apparent that the service previously offered to AMC through dissemination of the "AMC Conference Items" should be continued and should be extended to include other agencies also, whose missions are affected by continuing developments in the technology of foreign air power. In consideration of these points, the first issues of the ATIC BULLETIN were disseminated mainly to components of the Air Materiel Command and the Wright Air Development Center.

The first issue appeared on 4 January 1952. A total of 64 copies were published, and 53 were distributed outside the Air Technical Intelligence Center. Response of the using agencies was favorable from the start. Distribution of the BULLETIN has been increased steadily to the point where 197 copies are published every week. Of these, 133 copies are disseminated to agencies outside the Center and the rest are used

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used within this organization. Distribution is made to the Air Research and Development Command and its components; the Bureau of Aeronautics, Navy Department in Washington; the office of the Bureau of Aeronautics, General Representative at Wright-Patterson Air Force Base; the Rand Corporation; Central Intelligence Agency; and the Strategic Air Command, and the Directorate of Intelligence, Headquarters USAF. In addition, of course, the distribution of the Air Materiel Command and its components is continued.

Meanwhile, the Air Intelligence Office of the Air Technical Intelligence Center continues the daily publication of DIRMA (The Daily Intelligence Report to Air Materiel Areas of the Air Materiel Command) and AIR TECH INTSUM. These are companion publications covering current intelligence information of strategic, tactical, and technical implications. DIRAMA is prepared in telegraphic style and is transmitted by electrical means to the Air Materiel Areas. AIR TECH INTSUM, published by a multilith process, is issued mainly to those offices of the Air Materiel Command and the Wright Air Development Center which are located on the Wright-Patterson Air Force Base.

One of the problems involved in the preparation of the three publications (the BULLETIN, INTSUM and DIRAMA) is the use of technical intelligence both in the daily publications (which are concerned chiefly with day-by-day developments, especially in strategy and tactics) and in the weekly BULLETIN, which is concerned exclusively with technical intelligence. The office of the Command Officer, Air Technical Intelligence Center, has taken the position that, since the BULLETIN has been established to disseminate technical intelligence, the publication of such in-

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formation in the daily periodicals should be discontinued. The Chief of the Air Intelligence Office, on the other hand, has felt that the daily publications, especially AIR TECH INTSUM, should continue to cover technical intelligence, even though weekly complications of this intelligence are published in the BULLETIN.

At the present time a compromise between these two positions is in effect. Current technical intelligence is published in brief form in AIR TECH INTSUM. In cases that call for fuller treatment that INTSUM can provide, the daily reports are covered in detail in the weekly BULLETIN. A system of cross referencing is used in both the daily and weekly publications, for the benefit of agencies that receive both periodicals. However, most of the material published in the BULLETIN is used exclusively in this periodical, and none of it is reprinted from INTSUM without the use of previously unpublished details.

#### Intelligence Survey Branch

The Research Branch receives each month approximately 1,000 technical and non-technical documents and messages which are reviewed for the purpose of segregating from a mass of irrelevant material, the data pertinent to the mission of the Air Intelligence Office, ATIC, AMC, WADC, and BAGR.

The daily accession list, a typewritten publication handcarried five days a week to the Technical Analysis Division and the Planning Office of the Technical Requirements Division, consists of items of interest screened from incoming messages, intelligence information, summaries, and reports. Since 1 January 1952, approximately 1463 items have

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been referred to these components of the Air Technical Intelligence Center.

In accordance with a request from Commander (b) (6), (b) (7) (E) a weekly accession list is forwarded to BAQR.<sup>9</sup> Since 22 March 1952, 51 documents have been cited on this weekly list.

#### Special Intelligence Branch

In fulfilling its assigned responsibilities to AMC and WADC, the Special Intelligence Branch provides classified and overt intelligence pertinent to the missions of the following: Mutual Defense (MCSFXP); Supply (MCSM); Industrial Resources, Foreign Procurement Branch (MCPERS); Psychological Warfare Office (MCAF); BW and CW Office (MCSW); Flight Research Laboratory, Metallurgy Group (WCRIL); Aero-Med Laboratory, Personal Equipment (WCRDO); WADC Inspector General's Office (WCI); and AMC Special Plans Section (MCOPXS).

The above components have requested and are receiving intelligence in these categories: Logistics, training, storage and port facilities, pipe-lines, clothing requirements, maintenance capabilities, air material production, strategic minerals, high melting point intermetallic compounds, powder metallurgy, precision casting processes, foreign procurement potentials, new manufacturing techniques, personal equipment, BW and CW, Psychological Warfare technique, Communists activities and patterns which might result in USAF work stoppages, availability and/or production capacity for machine tools, hydroelectric plants, electrical developments, and Arctic floating islands.

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6. Navy Representative at Wright Air Development Center, Ohio

9. Bureau of Aeronautics, General Representative

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From 1 Jan 52 to 1 Jun 52, 556 intelligence reports were referred to the components serviced, bringing the total to 1431 since the inception of the program. Several Disposition Forms commenting on the value and useability of the disseminated intelligence have been received and by ATIX.

Early in the period covered, it was learned that considerable delay was experienced by some of the serviced components in obtaining the documents from the ATIC repository. This was caused by routing the documents in Project Stork <sup>10</sup> before they became available for loan. Arrangements made with ATISD circumvented this obstacle by changing the routing priority so that interested AMC and WADC offices received the reports before they were sent to "STORK".

Dissemination of intelligence was further facilitated during this period by transcribing pertinent material, when it was sufficiently brief, and forwarding the transcription to the interested office. In instances where this was impracticable due to the length of the report or study, the component was apprised of the information on a DI which provided identifying data and an abstract.

This Branch transcribes pertinent counter-intelligence carried in FEAF cables as well as in other sources and transmits these to the Provost Marshal's Office and to the Manpower Branch, Industrial Resources. Overt intelligence, as presented in the press and in periodicals is reviewed daily. Pertinent clippings are forwarded to interested components. News items of strategic and tactical significance are filed by ATIX for future reference.

Another function is the review and selection of appropriate intelli-

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gence studies for inclusion in the Weekly Intelligence Briefing Material, disseminated to Air Materiel Areas, certain Exempted Stations and other interested activities. Sources of this material include studies prepared by the Departments of State, Army, Navy, Air Force, and Central Intelligence Agency, and the British Ministry of Defense. Subjects are selected to provide intelligence officers with current and background information suitable for briefing Commanding Generals and their Staffs.

## POLICY AND MANAGEMENT OFFICE

### ORGANIZATION AND FUNCTIONS

At the beginning of the period 1 January 1952, this office did not exist. Instead, there existed two staff offices - the Comptroller's Office, ATIM, and the Personnel and Administration Office, ATIP. Lt Colonel (b) (6) was the Comptroller, and (b) (6) Chief of Personnel and Administration. On 28 April 1952, these two offices, Comptroller's Office and the Personnel and Administration Office, merged to form the Policy and Management Office, ATIM, with Lt (b) (6) as Chief, and (b) (6) as Deputy Chief.<sup>10</sup> On 12 May 1952, Colonel (b) (6) was assigned as Chief of the Policy and Management Office,<sup>11</sup> Lt Colonel (b) (6) as Deputy Chief, and (b) (6) as Chief of the Personnel Branch.

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10. ATICM 52-10, 25 June 1952

11. ATIC PAM No. 13, 12 May 1952

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## COMPTROLLER BRANCH

## ORGANIZATION AND FUNCTION

The former Comptroller's Office was divided into two branches - The Budget and Fiscal Branch with (b) (6) as Chief, and the Management Analysis Branch over which Lt (b) (6) exercised supervision in addition to his duties as Comptroller. Following the reorganization, 28 April 1952, the Comptroller's Office became the Comptroller Branch, and the two sub-divisions were redesignated "sections."<sup>12</sup> During the period, no change occurred in the internal structure, functions, or key personnel of the Comptroller Branch. At the beginning of the period, allotted and assigned strength were equal and no vacancy existed - one military and seven civilians. During the period, two military and one civilian positions were added, and one military position was cancelled. At the end of the period, allotted and assigned strength consisted of:

Allotted:	2 Military	8 Civilians
Assigned:	2 Military	7 Civilians

As of 5 January 1952, functional statements of all segments of ATIC were published in book form. Included in this book, THE AIR TECHNICAL INTELLIGENCE CENTER ORGANIZATION AND FUNCTIONS, were not only the aforementioned functional statements, but also copies of all documents authorizing the establishment of ATIC and defining its mission. As an accompaniment to the organization and functions book, ATIC ORGANIZATION AND MANNING CHARTS, was published 19 February 1952. This latter book shows the ATIC organization chart in chart form, together with manning charts for each segment. Both

12. The term "branch" was submitted for "section," 16 April 1952, ATIC General Order Number 3.

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these books will be revised as changes occur. On 29 May 1952, a revised organizational chart of the Center was published.<sup>13</sup>

#### Management Studies

Two management studies were completed during this period and a third one is approximately 75 percent completed. Completed were a study of the receipt and the internal routing of mail, and a study of the accounting system for postage. Underway is a survey of manpower requirements. Resulting from the Mail Room study has been a change in the receipt and routing of SECRET or lower documents and the mail receipt and follow-up system. Such documents are now delivered without recording from the Mail Room to the Documents Processing Section, (ATISD). There, they are recorded and prepared for routing. Routing is accomplished by a locally designed form, ATIC Form 487, NAD-ATIC DOCUMENT DISTRIBUTION, instead of by hand receipts. Suspense dates are not established and follow-up slips for correspondence prepared by mail desks within the division or branch to which the correspondence is delivered, instead of in the Mail Room. These two changes, together with changes in location of equipment within the Mail Room have resulted in three former mail room employees being made available for transfer elsewhere and a speed up in the receipt of correspondence and documents. As a result of the postage accounting study, a suitable system to insure accurate accounting of postage is in preparation.

Administrative Publications: The revision of former Intelligence

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Department directives (Office Instructions and Notices), initiated during the former reporting period, was continued. The format for administrative publications was standardized, and policy was established concerning suitable subject matter content. The style was changed to a briefer, concise presentation, incorporating charts, tables, samples, and similar visual aids, instead of narrative presentation. The principles of PLAIN TALK were applied, resulting in publications easier to read and understand. Material apt to change frequently and detailed instructions were incorporated in attachments that may be revised without altering the basic publication. This method also permits operating officials to review rapidly the policy and principles outlined in the basic publication, while the attachments supply the detailed instructions needed by clerical and administrative assistants. Coordination methods were simplified, resulting in savings of time for review of proposed publications, a reduction in time-lapse between initiation and publication, and a reduction in filing space and records maintained. By the end of the reporting period, 26 ATIL Office Instructions were published, 13 being revisions of former office instructions and 9 former Intelligence Department Notices were cancelled. A list of the publications issued during the period is appended.<sup>14</sup> This list reveals the variety of administrative and management problems studies, standards established, and procedures installed by these publications. Review of policies and procedures will continue, and office instructions and memorandums will be revised and issued on a continuing basis. A schedule to insure review of each administrative publication every six months is planned.

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Forms Management Program: The ATIC Forms Management Program has been installed in accordance with AF Manual 9-1, FORMS MANAGEMENT. An office instruction, ATICOI 9-1, FORMS CONTROL, was published 25 April 1952. Included as an attachment to this office instruction is a guide incorporating standards for forms design. Numerical files and the request procedure specified by AFM 9-1 have been installed. The collection system also specified by AFM 9-1 is being planned; likewise, the establishment of functional files. Although no statistical study has been made of the results of the forms management program, it is believed that this program is proving to be an effective cost control tool. All forms are carefully scrutinized to determine their necessity, ease of preparation and processing, and quantity required. Through this study, a number of useless and duplicate procedures have been eliminated; and others simplified. The time required for record keeping has been reduced. Waste in forms has been reduced; an adequate supply has been insured by a centralized storage issuance system and revised stock record accounting procedures. A periodic review insures the currency of existing forms. Improved standards for design have resulted in more efficient forms, more business like in appearance.

During the period, a total of 67 forms were approved and 26 cancelled. Seven were temporary forms, and a number were revision of existing "authorized" or "unauthorized" forms. One, which will become "ATIC Form 475" when published, is a specialty type that has been approved by Headquarters, USAF, and is being procured from commercial sources by the Government Printing Office. The improved design will result in substantial material and labor savings.

Position and Manpower Requirements. Although no major changes have

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occurred in the mission and objectives of the Air Technical Intelligence Center during the period, the position and manpower requirements changed in various work areas. These changes were necessitated by reassignments in functional responsibilities, shifts and fluctuations in workloads, critical labor market, and implementation of new work methods and procedures. During the first six months of 1952, approximately 175 personnel and position actions required the attention of the Management Analysis Section. These actions resulted directly from the cited factors. A breakdown of these actions follows:

- 64 new positions established, approximately 50 percent being identical-additional.
- 84 reassignments, 50 per cent resulting in promotions.
- 55 accessions.
- 51 separations.
- 41 positions cancelled; 50 percent of the cancellations were identical-additionals. (Position cancellations and reassignments indicate a shifting of workload.)
- 2 positions reclassified. These reclassifications were justified on the basis of increase in subject matter requirements and combination of homogeneous duties formerly assigned to two other positions.

Fiscal year 1952 manpower authorizations totaled 346. Estimated civilian manpower requirements for fiscal years 1953 and 1954 have been submitted to Headquarters, USAF. The civilian position requirements for 1953 and 1954 were presented in a detailed report of personal services, submitted with the ATIC Budget Estimate, as partial support of the "581 funds" requirement. Approximately 86 percent of the required GS-7 positions and above the 77 percent of the GS-6 positions and below are for intelligence production. The remaining positions in the higher and lower grade brackets are required to support command, administration, supply, comptroll r, training, and maintenance functions. Only 8 percent of the GS-7 positions and above and 1 1/2 percent of the GS-6 positions and below fall in the category of purely administrative.

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Other Organizational Changes Initiated or Approved: At the direction of the Commanding Officer, the following organizational changes were accomplished:

ATIC Flight Operations Office: This office was established 17 April 1952 by ATICOI 20-1, for the purpose of assisting all rated military personnel to maintain flying proficiency. It is under the monitorship of the Chief of the Technical Services Division and will be reported on more completely in the Technical Services Division history.

Registered Documents Section: As of 1 March 1952, ATIC was authorized to establish a special documents office. One month later, 1 April 1952, a part of the responsibility assigned this office - responsibility for cryptographic material- was transferred to the USAF Security Service. On 26 April 1952, this office was moved from the Technical Services Division to the Air Adjutant General Branch of the Policy and Management Office and was redesignated the "Registered Documents Section."

Preliminary Research: On 29 May 1952, the title of the Preliminary Research Section of the Document Services Branch, Technical Analysis Division, was changed to Document Screening Section. Functions were changed from professional preliminary review and evaluation of documents to screening of material for routing and coding library reference. The responsibility for preliminary review and evaluation of documents was transferred to the Technical Analysis Division and integrated with the analysis function being performed by intelligence analysts.

Technical Analysis Division Changes: The two segments were created in the Technical Analysis Division (ATIA). The Special Projects Office was established at staff level and the Aerial Phenomena Section was added to the Aircraft and Propulsion Branch.

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BUDGET AND FISCAL SECTION

This section's responsibility for procuring, allocating, and obligating ATIC funds has been discharged as follows:

Funding: The Center has been particularly fortunate in obtaining full annual budget authorizations for air technical intelligence requirements. The fact that the Center has suffered no appreciable reduction in its annual budget estimates speaks well for the accuracy, justification, and support of these estimates. The return of unused funds before the end of the fiscal year has been another factor in obtaining full budget authorizations from Congressional Appropriations Committees. The total commitment of all funds allotted to the Center for FY 1952 averaged 78 percent. This figure does not include any funds committed by AMC on monetary projects for which the Center furnished budgetary support.

The financial plans and annual funding programs for FY 1953 were prepared and tentatively approved by the Comptroller pending receipt of the annual budget authorization from Headquarters, USAF. In Advice of Allotment for Project 731 for FY 1953, effective on 1 July, was received from S/I on 23 June 1952. The financial program for Project 481 funds has been tentatively approved by the Secretary of the Air Staff, but the Advice of Allotment authorizing obligation of funds had not been received as of 30 June 1952. Permission to quote a FY 1953 allotment number for travel, however, was obtained from the Base Comptroller in order to process TDY and PCS travel orders.

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Considerable activity was experienced in year-end procurement, principally in placing contracts with special collection agents for overseas assignments. These agents are not normally available for assignment until the end of their scholastic year. In each case, it was necessary to make advance arrangements with the Procurement Division, AMC, to assure that the contracts would be executed in time to permit departure for overseas stations as scheduled.

The total for contingencies funds for FY 1952 amounted to more than two million dollars. This represents an increase of approximately 25 percent over FY 1951.

Arrangements were made with the Procurement Division, AMC, to negotiate in advance a new contract for translation services for FY 1953 to ready the contract for execution as soon as the new funds become available. This procedure will save several weeks delay in placing these contracts, thereby permitting practically a full 12 months service.

An ATIC Office Instruction - "Initiation of Procurement" - is in preparation. It is anticipated that this office instruction, when published, will greatly assist initiators of procurement in preparing and processing purchase requests. The last instruction of this nature, published in 1946 by the parent intelligence organization, Intelligence T-2, proved very effective over the past several years.

Use of 731 Funds for Intelligence Purposes: Due to the difficulty experienced by ATIC's in overseas theaters and by Class B Agents at the Center in determining when and how to use intelligence funds, an ATIC office instruction, "Use of Project 731 Funds for Intelligence Purposes", is being prepared. When this instruction is published it will greatly facilitate the purchase of intelligence information. Because of special

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restrictions imposed on the expenditure and accounting of these funds by the Secretary of the Air Force, ATI Officers have been somewhat disinclined to use these funds for intelligence purposes to the fullest extent possible. Pertinent portions of this pending instruction have been incorporated in an ATI Officers' training manual.<sup>15</sup> Further clarification of the use and accounting of these funds was given by the Budget and Fiscal Branch in a series of lectures to ATLO's in training and ATI specialists assigned to overseas duty. These lectures were given at the request of the ATI Training Section.

The proposed office instruction has been coordinated with the Directorate of Intelligence, Hq USAF, to make this office instruction, when published, applicable to ATLO's in Air Attache Offices, as well. It is expected that publication will be accomplished early in the next fiscal year.

Cost Accounting: Arrangements have been made to take over from AMC the entire operation of the ATIC project cost accounting system of 1 July 1952. These services have been performed for ATIC by the Statistical Services Division, Hq AMC. AMC, however, agreed to complete the costing of ATIC projects for FY 1952, including publication of the final cost reports for the month of June. It also agreed to render such assistance and guidance, including the loan of cost accounting personnel, for such time as may be necessary to place the system in operation under the Center. The final agreement is being formulated.

Improvement in ATIC Costing Procedure: An analysis of labor costs

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15. T52-5016 ATI Officers Training Manual, CONFIDENTIAL FUNDS AND THEIR OPERATIONAL USE (Secret), published by the Technical Requirements Division 17 April 1952

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for four months (December through March) showed a decided improvement in the ratio of the cost of productive to non-productive labor. The direct labor cost for intelligence production increased percentage-wise from 49.6 to 60.1; whereas, the indirect labor costs decreased from 50.4 percent to 39.9 percent over the same period. The approach to a more nearly ideal ratio of 65 to 35 for intelligence operations is significant.

Another improvement in the ATI costing system was the substitution of weekly time sheets for the daily reports previously used. This change resulted in a great reduction in clerical work by both ATIC and AMG employees engaged in operating the cost system. The direct saving in man-hours resulted in a substantial decrease in the cost of operating the system.

Effect of 1951 Pay and Leave Acts: Savings in funds requirements for FY 1952 as a result of the reduced annual and sick leave provisions of this Act, were estimated at \$21,676 for an average of 298 positions. The savings in terms of man-years were estimated at 4.9.

Budget Estimates for FY 1952: The preparation of the budget estimates for FY 1954 took precedence over all other work during the month of June. The estimates for Project 731 were approved and submitted as of 12 June. The estimates for Project 481 were completed on 20 June.

#### AIR ADJUTANT GENERAL'S BRANCH

##### ORGANIZATION AND FUNCTIONS

Prior to 28 April 1952, the Air Adjutants General's Branch was subordinate to the Personnel and Administration Office. With the new reorganization, the Air Adjutant General's Branch merged with the Personnel Branch

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and Comptroller Branch to form the Policy and Management Office.<sup>16</sup> Re-organized Sections subordinate to the Air Adjutant General's Branch are as follows: Administrative Section, Mail Section, Registered Documents Section, and Internal Security Section.

Major (b) (6) was relieved as Air Adjutant General on 21 March 1952<sup>17</sup> and assigned to the Office of the Commanding Officer as Executive Officer. Major (b) (6) was assigned as Air Adjutant General on 25 March 1952<sup>18</sup>

#### ACCOMPLISHMENTS

Records disposition schedules for the entire Center were prepared by the Records Disposition Officer on 1 November 1951. This was accomplished after lengthy consultation with all offices in the Center. Schedules were forwarded to the CO, 1020th USAF Fld A/Wing, Hq Comd, Bolling AFB, D. C., on 29 November 1951. Tracers, sent to determine the status of these schedules, revealed they had been forwarded to the Records Management Officer in the Office of the Air Adjutant General, USAF, through the Directorate of Intelligence. A period of three months elapsed before the schedules reached the Records Management Officer, Headquarters, USAF. A slight modification was made by the Records Management Branch. This necessitated new signatures and return of schedules to Washington for final approval.

Authority was given for direct correspondence with the Mail and Records Division, AAC, USAF, on matters concerning records disposition

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16. ATICM 52-10, 25 June 1952

17. ATIC 50 No 50, PAR 12, 25 March 1952

18. ATIC 50 No 50, PAR 11, 25 March 1952

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schedules and directives pertaining thereto. This will save much time by permitting direct contact with the final approving authority in these matters, and allowing quicker response in resolving any difficulties that may arise in the future.

This project will enable ATIC to retire non-current permanent records to Records Storage Depots and to dispose of other records of no value to the operation of the Center. It will permit utilization of valuable storage space now occupied by obsolete records. It is anticipated that retirement and disposition of such records will be accomplished by July 1952.

The Publication Library in the former Personnel and Administration Office was shifted to the Air Adjutant General in May 1952; one airman was transferred with the Library.

Plans have been formulated whereby the Top Secret Control Officer is to be assigned to the Air Adjutant General's Branch.

#### PERSONNEL BRANCH

The Personnel Branch, Policy and Management Office, ATIC, was formerly the Personnel and Administration Office; however, after 28 April 1952, this Branch became subordinate to the Policy and Management Office. Major (b) (6) acts as Chief of the new Personnel Branch.

#### MILITARY PERSONNEL SECTION

##### ORGANIZATION AND FUNCTIONS

The Military Personnel Section, Personnel Branch, 1125th USAF F/A Group (ATIC) was organized on a Table of Distribution.<sup>19</sup> The T/D for the

19. (AF-HQ-No (ATIC-1) USAF, Hq Command, USAF, Bolling AFB, Washington 25, D.C., dated 1 June 1951.

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Military Personnel Section includes the following: one officer, as Chief; one officer, as Personnel Officer; one Administrative Supervisor; one Senior Career Guidance Specialist; one Personnel Supervisor; two clerk helpers; five apprentice clerks; and one disbursing clerk. M/Sgt (b) (6)

(b) (6) was acting chief of the Military Personnel Section until 19 March 1952, when (b) (6) the incumbent, was appointed as Chief.

#### ACCOMPLISHMENTS

Since the last reporting period, the strength of the organization has increased from 153 officers and 91 airmen, 1 January 1952, to a total strength of 191 officers and 109 airmen as of 30 June 1952.

To prepare personnel for duty assignments, quotas have been obtained to send both officers and airmen to Air Force Schools, including Air Intelligence Officer Course, Air Command and Staff School, Special Weapons Course, and Unit Supply schools. On-the-job training of airmen was begun in October 1951 and has progressed to approximately 80 percent completion during the period covered. Systems for expediting necessary reports have been established.

Three airmen have been transferred to the Training Command to attend Officers Candidate School. Two airmen have completed exams and have been approved for Flight Training at a future date. Also, two Master Sergeants were appointed Warrant Officer (W-1) during the reporting period.

During this period the new Air Force conversion of Officer PMOS to AFSC was begun and as of this writing is 100 percent complete. Progress is being made in the implementation of this new conversion program.

Difficulty in obtaining qualified personnel, both officer and airmen, to fill T/O vacancies was experienced from the beginning. Requisitions

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have repeatedly been filled with personnel, either unqualified or for whom it was almost impossible to obtain a security clearance.

This branch has been handicapped by having personnel (recruits) assigned to perform administrative functions. These had to be trained in administrative practices, policies, etc. As of this writing, the training responsibilities of the Chief, Military Branch, are approximately 60 percent complete. The change of requirements and qualifications of personnel for jobs within the Center is so frequent as to present a never-ending problem in procuring qualified personnel to fill the vacancies.

During this period, 31 airmen were reassigned because they lacked qualifications for their duties. Of this number, three were cryptopersonnel who originally should have been assigned to Air Force Security Service, and two were foreign nationals for whom security clearances could not be obtained because of citizenship requirements.

#### CIVILIAN PERSONNEL SECTION

##### ORGANIZATION AND FUNCTIONS

The Civilian Personnel Section operates under the jurisdiction of the Policy and Management Office of the Personnel Branch. Two employees are assigned to this Section. The functions assigned to the Civilian Section have remained unchanged during this reporting period.

##### ACCOMPLISHMENTS

This Section received and processed 427 personnel actions during this reporting period. These actions are defined as follows:

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<u>Type of Action</u>	<u>Number Processed</u>
Establishments.....	37
Reassignments.....	15
Promotions.....	25
Employment.....	24
Reclassification of Positions.....	2
Separations.....	32
Cancellations.....	19
Functional Transfers.....	68
Miscellaneous.....	24

According to records maintained in the Civilian Personnel Section, civilian strength for ATIC as of 1 April 1952 was 306. As of 30 June, ATIC civilian strength was 298, a decrease of eight personnel. As will be noted, the assigned strength was varied slightly with the turnover of personnel, keeping ATIC within the authorized allotments and offsetting the number of additions.

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TECHNICAL REQUIREMENTS DIVISION

ORGANIZATION AND FUNCTIONS:

The assigned functions of the Technical Requirements Division provide for the necessary administrative, logistic, funding, and air technical intelligence coordination with concerned agencies for the accomplishment of its assigned mission. The Division is required to organize and operate the Collection Control Branch and the Air Technical Liaison Program Branch for the purpose of producing air technical intelligence; establish and monitor air technical intelligence collection requirements with all Air Force and associated intelligence collection activities, United States and allied; monitor the administration of the ATLO and Foreign Scientists Program; and monitor and participate in certain phases of the domestic exploitation program. Finally the Division is charged with maintaining direct liaison with Air Force activities and other Governmental agencies in matters pertaining to air technical intelligence.

Since the last reporting period, there have been few variations in the "personnel" situation. Several new civilian employees have been hired; nevertheless, the division is still 11 employees under its authorized manpower strength of 51. Total officer personnel has increased from 73 to 88, and at this time, there are 28 airmen assigned, compared with 24 on 31 December 1951.

Lt Colonel (b) (6) was assigned as Chief on 24 April 1952, replacing Colonel (b) (6) who departed on a new assignment, 22 April 1952.<sup>1</sup>

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1. PAM - No. 7, Par 10 - 22 April 1952

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ACCOMPLISHMENTS:

The Operations Section, Collection Control Branch, is currently responsible for the implementation of the projects described below:

Evaluation and monitoring of collection programs: The responsibility of the Air Technical Intelligence Center to produce accurate estimates of the technological capabilities of foreign countries requires timely, systematic collection of air technical intelligence information from all possible sources. Varying conditions and increasing requirements combined with the extreme difficulty in obtaining detailed information necessitate maintenance of an aggressive collection organization. This group is responsible for assuring maximum exploitation through existing and new collection programs. The objects of this project are to provide for an expert staff to implement ATI collection plans devised by the Collection Planning Office; place responsibility for monitoring all approved collection plans and programs; place responsibility for providing authoritative evaluations of all ATI collection programs and sources; provide the Collection Planning Office with a supporting staff capable of furnishing expert advice on all phases of ATI collection; provide ideas for collection plans to the Collection Planning Office, based upon experience in developing, implementing, and monitoring other plans; and provide a project to which all expenditures of time or funds may be charged when the item of expense is not directly chargeable to a specific collection program. This will include costs of such work items as maintenance of files and records, general evaluations or staff studies on collection of air technical intelligence, and travel not related to a specific plan or program.

This project is progressing satisfactorily.

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Collection of ATI Information (Scientific Personnel): It has been the experience of the Air Technical Intelligence Center, and also reported by other services, that for the most part, contacting of foreign scientific level personalities for the purpose of obtaining air technical and scientific intelligence information is relatively non-productive, unless accomplished by American personnel of established scientific status. This was brought out rather pointedly during the summer of 1950, when the Air Technical Intelligence Center contracted the services of 10 "summer scientists" <sup>2</sup> for approximately 45 days of duty in Germany and Western Europe. The primary objective of this group was to contact scientific authorities in educational and research organizations to determine the extent of their relationship with sources having access to information on USSR aeronautical research and production capabilities and the extent to which this relationship could be exploited.

The results of the activities of this group of 10 scientists, as contained in their final reports, verified the theory that foreign scientists personnel can be exploited best, and in many cases only, by their professional equals. The report confirmed that there is a certain amount of communication between Western European scientists and scientists in the Soviet Union and satellite countries. It was further established that valuable technical and scientific intelligence information may be elicited from Western European scientists through careful and close association. This, then, necessitates

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2. "Summer scientists" refers to a group of American scientists, mainly college or university professors, who are being sent overseas, on a contract basis, for the purpose of collecting technical intelligence information in their individual fields. The term "summer" was applied inasmuch as these scientists were usually available for this purpose only during the summer months.

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the placement of American scientific personnel in positions where continuity of contact with foreign scientists is maintained. It also establishes the need for establishing a group of American scientists who may be called on for short periods of duty in foreign areas on specific projects requiring scientific ability and training.

This project is, therefore, established for the purpose of providing a medium through which scientists may be assigned as the need occurs on overseas missions. A study will be undertaken to determine the immediate needs for scientific collection personnel in Western Europe and subsequent recruiting action initiated. The performance period for this project is unlimited and may be amended as evaluation of responsibilities suggests.

Exploitation of Technical and Scientific Meetings: During the course each year, a considerable number of American, foreign, and international technical and scientific unions and societies hold annual meetings to which scientists from most countries are usually invited. These meetings present considerable air technical and scientific intelligence potential for two primary reasons:

- (1) Many papers are presented and discussions ensue on subjects of aeronautical research significance.
- (2) American personnel or persons selected provide air technical intelligence coverage and have opportunity to establish and cultivate relationships with foreign scientists for future exploitation.

To accomplish maximum air technical intelligence exploitation of these meetings, it is essential to know well in advance, the names of American scientists who are invited or expected to attend meetings in foreign countries. This is necessary because they usually can be induced to cover

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attended meetings in the interests of the Air Technical Intelligence Center and submit reports of their observations and conclusions. In many instances it will be possible to obtain such services at no cost to the ATIC; and in other instances, when special effort is requested by the Center, the offer of transportation costs will suffice. At the same time, this approach provides ATIC with the services of highly competent scientific personnel with no apparent or obvious government affiliation.

It is important to know in advance the names of foreign scientists expected to attend scientific meetings in order that significant participants may be noted and special efforts directed toward their exploitation. In instances of especially significant potential, it may be advisable to negotiate with a selected and trustworthy foreign source to attend and report on meetings.

Considerable progress has been made in acquiring lists of technical and scientific meetings to be held in Western Germany and Europe during 1951; however, there is no one source from which delegate information can be obtained. It has been tentatively determined that such information is most easily secured from the secretaries of the societies. In certain instances, the secretaries of foreign societies can be successfully approached by ATIC personnel; however, in many instances it will be necessary that such contact be made by an individual or agency having a legitimate commercial interest and no apparent Government sponsorship. In these instances utilization of "Project Stork" facilities has been proposed to contact secretaries of sensitive societies for the purpose of obtaining lists of delegates and members. The further use of "Project Stork" facilities is proposed in contracting the services of non-governmental American scientists to provide specialized coverage of meetings considered to have unusual potential.

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In addition, information has been received indirectly indicating that CIA, State Department, National Academy of Sciences Research Council, Office of Naval Intelligence, and other Government agencies are initiating progress of a scientific nature which may contribute materially to this project, particularly in assisting and determining the names of American scientists who will be participating in international and foreign scientific conferences and symposiums.

It is considered highly advisable that ATIC have in ready reserve a list of American scientists, properly cleared, who will be willing, upon call by ATIC, to attend American and foreign and international scientific meetings in instances where other scientists are not available, or where special coverage is required.

Collection of Air Technical Intelligence Information - (Domestic):

Little has been accomplished in establishing sound means for obtaining technical and scientific intelligence information from domestic sources. In 1949, an attempt was made to obtain notification of foreign travel contemplated by Air Force contractor personnel through Procurement District Offices. The procedure developed at that time proved ineffectual because the implementing directive contained no enforcement clause, and reports were made voluntarily without solicitation. The ability of CIA to learn of source travel is limited by the size of its staff and industrial and institutional cooperation.

A survey, completed in January 1952, studied ways and means of learning of foreign travel performed by industrial firms and institutions having contracts with the Air Force. Data so obtained was then weighed against disadvantages, including the amount of control which could be exercised.

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It was finally determined that classified Air Force contractors are the only group employing highly skilled technicians and scientists performing foreign travel, with the required clearances for disclosure of ATIC-CIA objectives. The Inspector General, Headquarters, AWC, agreed to the utilization of IG personnel to implement and maintain control and follow-up of the program. Accordingly, on 17 March 1952, Hq AWC regulation 200-3 was published, establishing the program and preparing the way for implementation.

Arrangements were made to have joint briefings by ATIC and CIA of all Security Inspection personnel in each Procurement District during the period of 4 May through 10 June 1952. The Security Inspection Officers and CIA field representatives now work as a team to implement the program and follow up to assure effectiveness.

While covering the various Procurement District Offices, contacts were made with various educational institutions which have tentatively agreed to assist in exploitation of technical specialists and scientific sources developed by this program. These institutions were contacted during February, but at that time complete ATIC requirements for consultant services had not been developed, and neither the exact products nor CIA working relationship had been determined. CIA has since approved such an arrangement, and complete requirements have been developed. During this visit, all aspects of the proposal were discussed and final arrangements were made to negotiate contracts when they are needed.

Collection of ATI Information - (Scientist Correspondence): During the summer of 1950, 10 American scientists were put under contract by ATIC to perform special missions in Europe and Western Germany, and to

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contact foreign scientific personalities, to obtain information on USSR aeronautical research and development. Each of these scientists established friendly relations with numerous prominent foreign scientists who, over a period of time, may prove of assistance to the ATIC mission. Upon the return of the American scientists, a symposium was held at Hq, AMC on 21 October 1950. At this meeting the Chief, ATIC, expressed a desire that the scientists establish and maintain correspondence contact with their foreign scientific acquaintances. This plan was concurred in by all scientists; however, they made another suggestion directly related to maintaining the good will of foreign scientists. This called for a program to supply foreign scientists with unclassified technical and scientific literature. It was pointed out that the majority of German scientists have been restrained from research having any possible military application. As a result, they are anxious to obtain any type of scientific literature. Scientists and technicians from other countries also have been restricted in their activities to a considerable extent by loss of facilities from war damage and lack of capital. As a result, their interests in such material and the activities of US personnel is an entree to closer relationships. Discussions of the proposal with CIA indicated a similar program of limited scope was in operation in that agency. To date, ATIC efforts have been confined to scientists employed to perform foreign travel for this Center.

It is planned to expand the scope of operations to include other specialized US personnel associated with educational institutions, research foundations, and the aircraft industry to increase the production of air technical intelligence information through this medium. The proposal and program will be fully coordinated with CIA to obtain their

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cooperation and assistance in including personnel other than ATIC contractors.

Participants in this program will be provided translation, reproduction and other services required for effective operations. Technical documents and funds for purchase of approved items of expense, including postage, will be furnished by ATIC. Each correspondent will be considered individually in relation to his productivity and cooperativeness.

It is also desired to provide AMC scientists with technical and scientific literature to be furnished their foreign scientific acquaintances as a means of encouraging foreign scientists to volunteer similar and other information of air technical intelligence value.

Acquisition of Foreign Equipment and Material: To adequately evaluate the technical capabilities of foreign countries, it is necessary to acquire certain equipment, data or material for analysis or evaluation to supplement or substantiate information received on research and development activities. To intelligently acquire items of major importance to ATIC objectives, a continuous program is required to keep field requirements current, and to develop more positive acquisition methods when routine facilities fail.

The purpose of this project is to incorporate past efforts of a limited scope into a continuing program which will assure maintenance of current equipment, material and related data requirements with foreign collection organizations at all times. When experience indicates more critical items cannot be acquired through existing plans or facilities, collection plans will be formulated and implemented in cooperation with an appropriate organization.

The project monitor and the Operations Section will act only in a coordinating capacity as long as collection results are adequate for fulfill-

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ment of ATIC requirements. When more positive action is desired, requirements will be formulated and means devised to assure acquisition.

The Requirements Section, Collection Control Branch, is responsible for two major projects, i.e., "Collection of ATX Information - Specific Requests," and "Preparation of ATX Collection Guidance Manuals."

The guidance manual project, initiated August 1951, calls for the preparation of 10 intelligence collection guidance manuals in the following technical fields: Electronics, Armament, Aircraft, Aircraft Propulsion, Equipment, Fuels and Lubricants, Guided Missiles, Research Facilities, Materials, and Industrial Methods.

On the basis of man-hours required, certain deadlines were established for submission of original drafts of these publications to Hq, USAF, for review and publication; so far only three of these manuals have been prepared. Inability to meet specified deadlines has been occasioned by various factors: difficulty in convincing technical engineers preparing the material of the importance of presenting such technical material in a simple style, readily understood by laymen; honest differences of opinion between engineers and reviewing and coordinating personnel; various changes and transfers of personnel, requiring indoctrination of new personnel; and long periods of temporary duty.

On 16 April 1952, a staff study was prepared which pointed out all problems and obstacles contributing to the failure to meet specified publication deadlines. It was suggested that Hqs, USAF, be informed that these deadlines could not be met and statement made to the effect that every effort would be made to complete the 10 manuals by the end of 1952.

The basic concept of intelligence collection guidance manuals is to

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increase the output of intelligence information by enlisting the services of non-technical collectors. This idea has been further carried out by a Hqs USAF, recommendation to have these manuals translated into Chinese (Mandarin), Korean, Croat-Serbian, Polish, and Japanese. In this connection, the Technical Services Division has appointed a project officer to lay the ground work for these translations.

Project: "Collection of ATI Information - Specific Requests." This project, initiated 22 March 1951, is continuous and employs the services of five full time personnel during the period covered by this history. The workload applicable to this project has increased approximately 75 percent over the previous reporting period. This increase is largely due to the substantial increase in the number of technical analysts employed by the Technical Analysis Division. During the reporting period, 267 Specific Requests for Information were initiated and 162 cancelled. An increase in the amount of information on foreign equipment received as a result of SRIs was evident during the period; this was particularly true of electronic components obtained from the Eastern Zone of Germany. The procedures and functions relevant to the continuous accomplishment of this project are progressing efficiently, and no recommendations for change are made at this time.

The Requirements Section, during this period, also assumed the responsibility of monitoring the action to obtain ATIC requirements from interrogation of sources available to CIA, when such source availabilities are reported to ATIC by CIA. Upon receipt of a source availability notice, a disposition form is prepared to the Technical Analysis Division, transmitting a copy of the notice and requesting requirements for interrogation of the source. This disposition form contains a deadline answer date and is handcarried to the Technical Analysis Division. Upon receipt of an

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answer from ATIA, the specific request for information group prepares a reply to CIA outlining the requirements. A request control number is assigned to the requirement, and appropriate records are established and maintained.

Another functional responsibility was assigned to the section by Hqs, USAF.<sup>3</sup> This letter contained collection instructions to follow on occasions requiring immediate evaluation and advice of apparently important intelligence information to exploit or develop a source that may be available only temporarily. The letter advises the collector to forward the salient facts to ATIC, ATTN: ATIRC-1. It further states that ATIC will answer the message with an information copy to Hqs, USAF, Directorate of Intelligence, ATTN: AFOIN-23. The Requirements Section, upon receipt of a "Blitz Evaluation Request," will handcarry the request as a disposition form inclosure to the Technical Analysis Division for evaluation of the information. Technical Analysis Division will then expeditiously evaluate the information and transmit the evaluation for ATIRC-1 for further transmittal to the interested collector.

During the reporting period, a handbook containing the standing operating procedures for the Requirements Section was prepared. This handbook contains the following: Statement of section function, organizational chart, flow chart of intelligence requests, individual position functions and responsibility descriptions, and standard forms used by ATIRC-1. This handbook

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3. Directorate of Intelligence letter, AFOIN-C/CC-6, dated 28 February 1952, subject, "Immediate Evaluation of Certain Intelligence Information."

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has proved to be very useful in the indoctrination and training of new personnel.

During the period 1 January through 30 June 1952, the Foreign Scientists Branch was responsible for the overall administration of 646 specialists and their dependents, including both immigrated and non-immigrated personnel. This figure embraces specialists who are under Air Force contracts and their dependents, and non-immigrated specialists (and their dependents) who have been released for employment by industry.

Five specialists and 76 dependents were formally immigrated, and nine specialists were released to industry. Twenty-six specialists and 218 dependents have yet to receive lawful alien resident status. In this regard, it should be noted that all future "Paperclip" and "63"<sup>4</sup> personnel will enter the US with immigration visas. This will automatically solve problems formerly encountered under the McCarran Act of 1950.

Under "Project Paperclip", two specialists were procured and assigned to Air Research and Development Command installations. Present emphasis is definitely on "Project Paperclip" rather than "Project 63."

Attention is also invited to the fact that, during the months of May and June 1952, 94 specialists were converted to Civil Service Status and given Schedule A appointments. Contracts for the remaining 43 have been negotiated for FY 1953.

Advance information from the European Theater indicates that from 30 to 40 additional foreign scientists will be contracted and actively employed by the Air Force within the next six months.

Changes in assigned functions were effected as follows:

(1) Preparation of payrolls and leave records became the responsibility of Air Materiel Command.

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4. See Technical Analysis Division



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(2) Mail check for personnel not in possession of immigration visas was discontinued. The requirement remains in effect, however, for those alien specialists and their dependents where the specialist is employed on a short-term contract, or in the event it can be determined that his admission, or that of his dependents, to the US on a permanent basis is improbable.

(3) Termination of contracts became the responsibility of Wright Air Development Center.

(4) Recommendations for "listing" and/or employment of alien scientists residing abroad no longer will be made by this Branch but will be accomplished over the signature of the Commanding General of the interested installation or his authorized representative.

The following recommendations are made concerning the responsibilities of the Foreign Scientists Branch:

(1) Abolish the military escort requirement for these specialists and/or their dependents formally immigrating through Canada or Mexico, except in such cases where, for security reasons, an escort is deemed advisable. American consular officials at Niagara Falls have already indicated that such escorts are no longer required for personnel immigrating through Canada. Moreover, since specialists "immigrating" through Mexico are not required to leave the United States, an escort in such cases appears to be unnecessary.

(2) Eliminate this organization as a channel for the distribution of documents and requests from Hqs, USAF, to ARDC installations for recommendations as to "listing" and future employment of alien scientists. Since procedures require only a forwarding indorsement by this office, elimination of this intermediate step would not only expedite the handling of such cases, but would also appear to fall quite logically under ARDC jurisdiction.

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(3) Transfer Foreign Scientists Branch personnel to Wright Air Development Center in the event the latter assumes the functions of this branch, as recently proposed by the USAF Director of Intelligence.<sup>4</sup>

The ATL Program Branch has three projects covering the operations of that organization. Specifically, these are:

(1) "General Recruiting, Processing and Indoctrination." This project was formally approved on 2 November 1951, and established as a continuing project. It delineates the procedure to be followed in recruiting qualified personnel for overseas Air Technical Liaison duty, processing these personnel, and training them for foreign protocol and technical duties. The Processing Section is responsible for this portion of the ATL Program.

During the period covered by this history, 28 personnel completed air technical intelligence training within the Center and were assigned to overseas duty stations. During this same period, an additional 19 personnel were selected for overseas assignment. They are currently being trained within the Center.

Contracts have been negotiated assigning three scientific consultants, all particularly well qualified in the fields of micro-wave physics, guided missiles, and aeronautics, to German and Austrian ATIL Offices. It is anticipated that the accomplishments of these personnel will contribute noticeably to the successful fulfillment of the air technical intelligence mission overseas.

(2) The Foreign Activities Section is responsible for the monitoring of the two remaining projects of the branch. The project covering "Foreign

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4. Letter dated 1 February 1952 to Air Research and Development Command.

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Activities" was formally approved on 18 April 1952, and established as a continuing project. It outlines the procedure to be followed in the administration of that part of the program mission for which the section is responsible. This project has established a focal point of contact between the ATIL Offices overseas and various agencies within the Zone of Interior, such as components of ATIC, ARDC, Department of the Navy, industry, etc. One of its primary objectives is to bring about a closer relationship between the overseas activities and this Center, insuring that the problems encountered by these offices are solved as expeditiously and efficiently as possible.

Operation within the scope of this project promotes free exchange of information and assistance between the ATIL Offices overseas and ATIC by maintaining liaison of operations through the continual exchange of correspondence, reports, and regular journals.

It is also the purpose of this project to provide a means by which administrative problems, reported in monthly activity journals received from overseas offices, may be examined and thoroughly investigated. In addition to presenting such problems as requesting supplies for equipment and reporting status of funds, these journals also provide a current picture of the status of all projects for which a requirement has been established by the collection control activities of this Center.

Any weaknesses reflected in the administration of this project are believed to be caused by the physical separation of the offices affected. Laxity in the submission of monthly activity reports has been prevalent where the ATL Offices attached to the Air Attache are concerned. It has also been noted that an unreasonable amount of time elapses during the transmission of these reports and other correspondence when routed through offices

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of the Directorate of Intelligence, Hqs, USAF.

The procurement of materiel required by overseas offices has not been entirely satisfactory regarding books and publications supplied locally. This situation is expected to improve when Technical Services completes contract negotiations permitting direct purchases.

(3) The project concerning "Debriefing and Orientation of ATL Personnel" became effective 11 February 1952, is continuing in nature and sets forth the procedure to be followed in administering the program of debriefing and re-orientation of ATL personnel returned to the Zone of Interior at the end of each 12 months of their PCS assignments. The principle objectives of the re-orientation program are to insure that ATL personnel are:

(a) Thoroughly briefed and kept current on such research and development activities within the United States as pertain to their particular specialized technical fields, and

(b) Personally briefed and oriented on current intelligence requirements of primary importance in their particular technical fields and fields related thereto.

These reorientation periods will be of two weeks duration and are intended to provide an adequate and accelerated program of orientation for ATL personnel.

Where this program has been effectively implemented, it has been extremely beneficial to the overall ATL mission, in that it has offered advantages to both the overseas technical liaison personnel and their related operations, and has also benefited the requirements, collection, and analysis functions of technical intelligence.

Difficulties have been encountered which have hampered the administration of this program. It is believed that full implementation of the re-

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orientation procedure has partially failed. Attempts to gain the complete cooperation of some of the Air Attache Offices in permitting the return of ATL personnel assigned to them have not always been successful. This has necessitated the assignment of a technical analyst from the Center for temporary duty overseas, in order that discussion, information, and action required for a specific project could be successfully completed.

It has been determined that satisfactory administration of this program will never be attained until support is received from higher authority. The preparation of letters to all offices to which ATL personnel are assigned, requesting concurrence in this program, is recommended. These letters will (1) outline the importance of the reorientation program to the ATIC mission; (2) schedule eligible officers for return to the Zone of Interior for a minimum of 15 days temporary duty; (3) serve as authority for the return of all future personnel when they become eligible; and (4) be prepared for the signature of an office at Directorate level.

The Administrative Office has recently had published an Air Technical Intelligence Officers' Training Manual on "Confidential Funds and Their Operational Use." This manual was written by Lt. Colonel (b) (6) formerly Deputy Chief of this division, and edited by a member of the Administrative Office. It is believed that the instructions contained in this publication will provide ATLO trainees with a clearer insight as to the purpose of Confidential Funds and the proper methods of justifying expenditures made from these funds. The manual was prepared explicitly for use in the ATLO training program and is not intended for general dissemination.

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## TECHNICAL ANALYSIS DIVISION

## ORGANIZATION AND FUNCTIONS:

Four changes have occurred in the organizational structure of the Technical Analysis Division since 1 January 1952; the abolishment of the Special Research Office(ATIA-3); the establishment of Technical Advisor's Office (ATIA-3); at division level; the establishment of the Special Studies Office (ATIA-4); and the establishment of the Serial Phenomena Section, (ATIA-5), within the Aircraft and Propulsion Branch.

During this reporting period the Technical Analysis Division was authorized 126 civilian personnel and 33 military personnel. Current manpower consists of 105 civilians and 49 military personnel. Future requirements for civilian and military are as follows:

	<u>Civilian</u>	<u>Military</u>
Office of the Chief	16	4
Aircraft and Propulsion Branch	71	24
Electronics Branch	39	17
Associated Equipment Branch	37	12
Total	163	57

The inability to staff certain civilian technical positions was of particular significance to the production of specific intelligence end products. Numerous Forms 57 (Application for Federal Employment) were reviewed as a result of this division's recruiting program and referrals by Positive Recruitment Branch (WOPCR-1) of Wright Air Development Center Professional Employment Unit. Only one technical position was filled; however, efforts to recruit civilian personnel are being continued.

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Following is a list of specialized fields for which air technical intelligence specialists are needed: Aircraft, Guided Missiles, Aircraft Accessories Systems, Turbojet Power Plants, Reciprocating and Compound Power Plants, A/C Instrument and Navigation, Bombing Systems, Antiaircraft Artillery, Manufacturing Methods, Nuclear Physics.

There were three changes in key personnel assignment during this reporting period. Colonel (b) (6) succeeded Colonel (b) (6) as Chief, Technical Analysis Division; Captain (b) (6) assigned as Executive Officer, Technical Analysis Division; and Major (b) (6) placed (b) (6) as Chief, Aircraft and Propulsion Branch.

Quantitatively, the following figures reveal a summary of project activity in the various technical fields of this division.

	Active 1 Jan 52	Initiated 1 Jan 52 30 Jun 52	Completed 1 Jan 52 30 Jun 52	Cancelled 1 Jan 52 30 Jun 52	Active as of 30 Jun 52
Aircraft & Propulsion	18	20	18	0	30
Electronics	15	6	5	0	16
Associated Equipment	18	12	5	8	17

The following ATIC publications and other end products were issued in the various technical fields:

	Aircraft & Prop	Electronics	Asso Equip	Total
ATIC Studies	17	9	3	29
Technical Reports	3	4	11	18
Preliminary Reports of Foreign Equipment	1	3	29	33
Air Intelligence Digest Articles	5	8	13	26
Technical Briefs	99	52	97	248
AF 112's	6	0	3	9

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Projects which are contributing significantly to the mission of the Technical Analysis Division are as follows:

PROJECT STORM - AIR FORCE CONTRACT NO. AF 33(038)19741 Project No. 9974

(Init, 1 Feb 52; Extension of previous contract AF 33(038)18741;

ROD, 31 Jan 53; Auth, CO, ATIC; PM, (b) (6) Asst PM, Capt (b) (6)

(b) (6)

This contract was initiated to gain for the Air Force an outside contractual arrangement to provide a source of scientific research, study, and analysis of the technical capabilities of a foreign government to wage offensive air warfare and to defend itself against air attacks. It also provides for analysis and evaluation of selected foreign air material and related data, studies and reports concerning the technical characters, performance, and manufacturing techniques as well as material employed in the production of such material. This work was to be directed by the initiation of specific sub-projects prepared by various engineers of the Technical Analysis Division. To date there have been 102 sub-projects initiated under this contract and its predecessor. Of the 111 sub-projects initiated under these contracts, during the reporting period, 45 were completed, 16 were cancelled, and 50 were partially completed.

During the reporting period, 13 contract projects have been completed and technical reports reproduced and distributed. Eight projects have been completed and letter reports supplied to the Project Monitor. Eighteen technical reports have been submitted to ATIC for coordination prior to printing and distribution, and are in the process of coordination. Seven studies in various fields of technical interest to the Air Force are in process, four of which are in coordination form and are in the hands of



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the project monitor. Two special reports have been completed as well as the regular scheduled reports mentioned above.

This contract is progressing in a manner satisfactory to the Project Monitor. Some of the individual projects are under study to determine what specific limitations must or should be placed upon them. Certain projects must be expanded and certain others curtailed. It is apparent that more funds will be necessary to implement this contract in the fashion deemed essential.

By way of justification, the contractor has proved that the work is essential to the mission of the Air Force. He has expended considerable time and money in the training and education of personnel and the collection and reporting of technical information in the form of reports. A closer system of coordinated effort has been initiated, and all work is progressing satisfactorily.

STATUS OF THE TECHNOLOGY OF AIRCRAFT METALLURGY IN THE USSR - Project No. 30022

(Init, 29 May 50; EOD, 31 Dec 52; Auth, CO, ATTC; PM, Mr. (b) (6)

(b) (6)

This project was initiated prior to Project Stork, and on 1 May 1951 it was found operationally more desirable to accomplish the contractual phase of the project through "Stork." This, together with lack of technical personnel in the Branch, rendered the estimated man-hours and completion dates, as originally established, unrealistic. Efforts are being made to obtain a number of Russian US metallurgists to evaluate literature without the necessity of translation. Trips in connection with this project were made as follows:

- a. On 3 - 6 June 1952, to United Engineering Co. and Foundry, Pittsburgh, Pa. and SAE Summer Meeting, 1952, Atlantic City, N.J. to

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furnished USSR on lend-lease and to discuss the status of Soviet metallurgy with cleared engineering personnel for the aircraft and metals industries.

- b. On 24 May 1952 to Aeroproducts Division of General Motors Corporation, Vandalia, O., to familiarize ATIC analysts with the significant factors in propeller materials and manufacturing methods. Additional time requirements for the study advanced the deadline date for receipt of the contractor's report from April to September 1952.

The establishment of developments in aircraft metallurgy will make it possible to determine USSR capability in those critical materials, particularly as they apply in the construction of aircraft, guided missiles, and related components.

PRODUCIBILITY OF THE SOVIET ASH-21 AIRCRAFT ENGINE - PROJECT NO. 30028

(Init, 10 Jul 51; 18 Mar 52, ed; Auth, CG, ATIC; PM, (b) (6))

Due to higher priority work involving acquisition and interpretation of data pertinent to the analysis of the MIG-15 airplane and the ASH-62 engine, the anticipated completion date, 1 December 1951, was extended 104 days. An ATIC study entitled "Soviet ASH-21 Aircraft Engine Manufacturing Methods Analysis"<sup>1</sup> was forwarded for coordination, 5 January 1952, and final distribution was accomplished 13 March 1952.

Essentially of Soviet design, the ASH-21 engine is a seven-cylinder, air-cooled, radial, reciprocating engine for use in light (liaison, trainer) aircraft. Since it can be considered a conventional type, the result of

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years of development and manufacturing method and process analysis were considered to reflect the general level of Soviet aircraft reciprocating engine manufacturing technology. Reference is made to Project No. 30031, "Producibility of ASh-62 Engine."

SOVIET METAL AND ALLOY COMPOSITIONS, PROPERTIES AND APPLICATIONS - Project No. 30029

(Init, 26 Jul 51; ECD, 18 Aug 52; Auth, CO, ATIC; PM, (b) (6))

The final study has been completed in rough draft form, and coordination copies of ATIC Project No. 30029 were forwarded to D/I for approval on 17 June 1952. This project is being given a final check for accuracy, pending receipt of approval and prior to final distribution as an approved D/I, USAF-ONI Project. It is expected that this handbook will be revised as new information becomes available to ATIC.

There is a continuous need for a handbook summarizing the Soviet alloy compositions and other corresponding Soviet code numbers. This study will be a reference work for use by ATIC in particular, but should be a valuable summary for all agencies dealing with Soviet materials.

PRODUCIBILITY OF THE SOVIET ASH-62 ENGINE - Project No. 30031

(Init, 27 Jul 51; Cd, 13 Feb 52; Auth, CO, ATIC; PM, (b) (6))

Primarily due to priority work involving acquisition and interpretation of data pertinent to analysis of MIG-15 airplane, it was necessary to advance the completion date 75 days from that envisioned in the original PIF. ATIC Study No. 102-AE-51/7-34 entitled "Soviet ASH-62 Aircraft Engine Manufacturing Methods Analysis" was forwarded for coordination 7 December 1951, and final distribution was accomplished 12 February 1952.

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This is the first study solely concerning the manufacturing methods used in production of a Soviet reciprocating engine. Coupled with the findings provided by the ASH-21 Study,<sup>2</sup> it provides an insight into the level of application of industrial technology in the Soviet aircraft engine industry.

ANALYSIS OF THE SOVIET 23-MM NS AUTOMATIC GUN - Project No. 30033

(Init, 11 Oct 51; Cd, 13 Feb 52; Auth, AFCHN-2B3; PM, 1st (b) (6))

Original Project Plans called for the production of an ATIC study; however, on 18 December 1951, it was proposed and approved that this be changed to a Technical Report because of the analysis being performed was a technical evaluation of physical material and not an analysis of collected intelligence information with varying degrees of reliability. It was also necessary at that time to secure approval for \$2,039.00 additional funds for contractor and 100 additional man-hours for civilian labor. Technical Report number TR-AS-2 entitled "Evaluation of Soviet 23-MM Automatic Gun" was given partial distribution, and approval for termination was given 13 February 1952, based on fuller reproduction and distribution to be accomplished at the earliest possible date.

Analysis of the 23-MM NS Automatic Gun was given priority over older type available guns because of its possible research and development value as well as its characteristics and performance.

ANALYSIS OF INSTRUCTION BOOK ON USER TYPE PEP-1, SIGHT - Project No. 30034

(Init, 1 Nov 51; Cd 14 Mar 52; Auth, CO, ATIC; PM, (b) (6))

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2. Project No. 30026

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Originally, this project was to be completed 14 January 1952; however, 60 days extension was required for completion of coordination and reproduction. ATIC Study No. 102-AE-51/40-34 entitled "Analysis of Instruction Book on USSR Type PBP-4 Sight" was forwarded for coordination 29 December 1951, and final distribution was accomplished 11 March 1952. The study produced as a result of this Project described the bombsight in the following detail: Determination of performance, equations; determination of approximations employed; probable instrumentation of sight equations; instrumentation errors and probable effect on sighting accuracy; and general suitability of the sight.

SIGNIFICANT PRODUCTION FACTORS IN THE MANUFACTURE OF MIG-15 AIRCRAFT -  
Project No. 30035

(Init, 8 Nov 51; ECD, 25 Jun 52; Auth, CO, ATIC; PW, (b) (6)

(b) (6)

It was originally estimated that the study planned to follow this Project would be issued on or about 25 February 1952. Approval was received from D/I for distribution as an approved D/I, USAF-ONI Study. Due to the fact that drawings received from the contractor, which compose a large portion of the study, were of such poor reproducibility, it was found necessary to re-draw them. This advanced the deadline date for distribution to 15 August 1952. After reviewing advance copies, the Air Intelligence Digest has proposed to include portions of the study in three consecutive issues, beginning in August 1952.

The objective of this Project is to determine probable Soviet level of the attainment in tooling, labor skill, and control. This will assist in determining the development of present and future Soviet capabilities

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in production and performance of air weapons.

PRODUCTION FACTORS IN THE SOVIET ELECTRONICS INDUSTRY - Project No. 30038

(Init, 8 Feb 52; Cd, 5 May 52; Auth, CO, ATIC-Requested by AFOIN-T/TP;  
PM, Mr. (b) (6), (b) (3) (B)

This Project was initiated for the purpose of monitoring the work incidental to the preparation of a Letter Report outlining significant factors affecting the output of various products or components of the Soviet electronics industry. The report was completed 25 April 1952, and approval for release to AFOIN-3A5 on 28 April 1952, was received. The project was terminated 5 May 1952.

This Report included the effect of production techniques on the quality of the electronic equipment. The scope of the problem was to make certain analysis of the American electronic industry to provide analogue ratios on which to base Soviet electronics production estimates.

EVALUATION OF 37-MM N & NS AIRCRAFT GUNS BY CONTRACTOR - Project No. 30039

(Init, 19 Dec 51; ECD, 5 Sep 52; Auth, CO, ATIC; PM, (b) (6)

It was originally estimated that this project would be completed upon publication of an ATIC Technical Report on 37-MM N on or about 5 June 1952.

However, further consideration of the project proposal in line with the sub-contractor's<sup>3</sup> estimates for additional analysis, involving the 37-MM NS as well as the 37-MM N, required deadline advancement. At an ATIC conference an agreement was reached between the project engineer and ARF representatives on the final configuration of the gun, based on factual



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intelligence information and a fill-in by the ABF gun-design group.

The preliminary draft of the final report on the Soviet 37-MM aircraft automatic guns has been prepared by the contractor and reviewed by the Project Monitor on 29 May and 21 June 1952. The technical content of the report was generally acceptable; however, there was only brief coverage of intelligence back-ground information to support the technical intelligence information used in the project. This information was expended by the Project Monitor for incorporation in the final report by the contractor.

As a result of this project a Technical Report will be written giving design, physical and performance characteristics of the 37-MM N and 37-MM NS automatic aircraft guns.

RUBBER PARTS HAVING A SIGNIFICANT EFFECT ON AIR WEAPON PERFORMANCE -  
Project No. 30040

(Init, 28 Dec 51; Cd, 26 May 52; Auth, Chief, ATIA; PM, (b) (6)

(b) (6)

A coordination copy of TR-AM-5 in connection with this project was forwarded 5 June 1952 for approval. Following approval on 10 June 1952, the Report was forwarded to ATISD for reproduction and limited distribution. On trips by the PM to various aircraft and rubber industries in connection with this and other ATIC projects, information was received warranting the changing of certain portions of the Report. This required extending the date for distribution to 3 July 1952.

Primarily a basic study, this project will be used by ATIAS-3 to determine: Which rubber parts have a limiting effect on USAF aircraft and missile performance and upon the serviceability of USAF aircraft.<sup>4</sup>

4. The limiting effect in this case is due to the physical characteristics of the rubber material and not to the design of the rubber part.

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Where, due to developments, an improvement in rubber materials will improve the performance or serviceability of air weapons, and from a material standpoint, the detailed reason or physical characteristic that limits the use of each type of rubber.

#### MATERIALS APPLICATIONS IN THE MIG-15 AIRFRAME - Project No. 3001.1

(Init, 28 Jun 52; ECD, 29 Jul 52; Auth, CO, ATIC; FM, (b) (6))

Due to the fact that Cornell Aeronautical Laboratory did not complete their portion of the Study within the time limit originally anticipated, 26 May 1952, and advanced the deadline date for completion of their work to 15 July 1952, the work done by North American Aviation cannot be accomplished prior to 15 August 1952. This necessitated advancing the deadline date for completion of the Project to 14 October 1952.

A need exists for the following data which can be utilized to establish materials applications relative to the MIG-15 airframe: weight of each type of metals systems (steel, aluminum, etc.) by commodity form, viz, forgings, casting, (all types), extrusions, sheets, bars, tubing, wire products, and powder-metallurgy products; evaluation of the manufacturing methods employed; and determination of materials usage scope. Categorizing of the MIG-15 materials in such form also will furnish quantitative data, statistically employable by other Intelligence Agencies to estimate Soviet materials and industrial requirements necessary to support the USSR jet airframe program.

#### CRITICAL PRODUCTION FACTORS IN THE SOVIET PRECISION INDUSTRY - Project No. 3001.2

(Init, 8 Feb 52; ECD, 16 Nov 52; Auth, CO, ATIC; FM, Mr. (b) (6), (b) (3) (B))

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By Form "C", dated 16 June, 1952, it was requested that all due dates for this project be extended for 120 days from original dates. This extension was necessary because of priority of the Collection Guidance Manual.<sup>5</sup> A Project Stork Proposal,<sup>6</sup> was initiated 3 June 1952. The data required for "Soviet capabilities in Aircraft Instrument Manufacturing" will be used in the Project since it was proposed in the PPS that "Project Stork" prepare a report concerning Soviet capabilities in manufacturing aircraft instruments.

The purpose of the Project was to establish criteria for determining Soviet development in the production of precision aircraft components: armament, electronics, electrical equipment instruments, bearings, and machine tools. It was hoped that two results would be obtained: Objective means for establishing the state of the art; and an indication of future limitations on equipment to be produced.<sup>7</sup>

SOVIET AM-12 AIRCRAFT ENGINE - MANUFACTURING METHODS ANALYSIS - Project No. 30013

(Init, 19 Feb 52; RCD, 28 Oct 52; Auth, CO, ATIC; PH, (b) (6))

To date Project 30013 has proceeded as initially scheduled. It was proposed by Form "C", dated 21 June 1952, however, to temporarily discontinue work on the manufacturing methods analysis of the Soviet AM-12 engine.

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5. The project was initiated to determine the adaptability, Project 140014

6. PPS 107

7. A Technical Report will result from the information secured by this survey.

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This action was recommended to insure completion of the propulsion contribution to the Collection Guidance Manual, Industrial Methods, by its intended completion date.

The project was initiated for the purpose of determining the adaptability of design to quantity production methods and to determine by physical examination the effect on production and functional quality resulting from significant US departures from manufacturing methods and processes. It was also proposed to consider the result of this analysis in the light of past Soviet engine manufacturing methods analysis as an indicator of the general level of production technology in the Soviet aircraft industry. The AM-12 is a 12 cylinder inline aircraft reciprocating engine, the most recent development (in ATIC possession) of the Soviet A.M. series. As such, it is believed that a manufacturing method-an-process analysis would yield results which, when evaluated by similar investigations of other USSR aircraft engines, would be indicative of the general level of production technology in the Soviet aircraft engine industry.

EVALUATION OF FOREIGN LANDING GEAR SHOCK STRUTS - Project No. 30014

(Init, 8 May 52; ECD, 28 Oct 52; Auth, CO, ATIC; PM, (b) (6)

(b) (6)

Representatives of ATIC and (b) (6) of Menasco Manufacturing Co., Burbank, Calif. conferred with ATIC on 26 March 1952; and the requirements of ATIC were outlined for Mr. (b) (6), (b) (3) (B). Confirmation in proposal form was received from Menasco Co. on 14 April 1952. Subject proposal was in agreement with those outlined previously by ATIC; Menasco also expressed willingness to complete examination analysis and report at

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no cost to the government. A Purchase Request was initiated 19 May 1952 to furnish the analytical service required of Menasco Co., and the company was named as sole source. ATIC was notified by PR assignment slip that the PR had been received in the Service Branch of the Materials Section and had been assigned to Mr. ~~(b) (6)~~ as buyer.

The project was initiated to conduct a detailed examination and analysis of two YAK-11 landing gear struts of different manufacturing dates, and to compare the progress or retrogression between the two struts with regard to design manufacturing and material characteristics. A detailed examination and analysis was conducted of one MIG-15 landing gear shock strut with respect to design and manufacturing and materials.

STATUS OF SOVIET CERAMICS AS APPLIED TO AIRCRAFT - Project No. 30015

(Init, 12 May 1952; ECD, 20 Jan 53; Auth, CG, ATIC; PM, ~~(b) (6)~~)

A proposal,<sup>9</sup> was submitted 25 January 1952 to outline ATIC requirements for analysis and evaluation by Project Stark personnel of selected ceramic materials and documents. When evaluated, this information should disclose how the Soviets have used these materials to solve important problems in aircraft production and performance. The preliminary estimate of Soviet ceramics status<sup>10</sup> was an indication of a considerable amount of knowledge through project activity. It was indicated, on the basis of the information obtained, that the USSR has a well balanced ceramics development program.

This project was initiated to determine the status of technology of the ceramic industry, its ability to contribute to the USSR aircraft

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9. PPS 092

10. Special Report No. 6, dated 11 June 1952.

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industry; and to predict the aeronautical applications and capabilities of ceramics materials, manufactured or developed for USSR consumption. An ATIC study will be published as a result of this project. At the time of the initiation of the project, little was known about the ceramic materials available for USSR use as materials for construction and preservation of aircraft components.

STATUS OF SOVIET SYNTHETIC RESINS AS APPLIED TO AIRCRAFT - Project No. 30016

(Init, 4 May 52; ECD, 5 May 52; Auth, CO, ATIC; PH, (b) (6))

A quarterly status report received from the contracting facility did not contain information acceptable to the Center. It was decided to request the contracting facility to furnish further information since no technical information was contained in the report. A Proposal<sup>11</sup> was submitted 31 January 1952 outlining ATIC requirements for analysis and evaluation of selected plastic materials by "Project Sterk." The PPS also provided for documents on this subject and for abstracting and cataloging information.

At the present time, little is known about the synthetic resins available for USSR consumption as materials used in the construction and preservation of aircraft. It is intended that this Project shall identify and evaluate plastic materials now used in the construction of USSR aircraft. The Project was initiated to predict aeronautical applications and capabilities of plastics, synthetic resins, and those materials including protective coating which are developed or manufactured for USSR consumption. The measurable influence of these plastic materials upon the performance

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11. PPS 063

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and producibility of USSR aircraft is of primary importance. An ATIC study will be issued as a result of this Project.

USSR TYPE A-1 FIGHTER GUNNERY TRAINER - Project No. 30047

(Init, 4 Jun 52; ECD, 22 Sep 52; Auth, CG, ATIC; PM, (b) (6)

(b) (6)

The ATIC Study to be written as a result of this project is in rough-draft form at the present time. It is hoped that the deadline dates established in the original PIF will be met.

This project was initiated to provide necessary man-hours for preparation of an ATIC study consisting of a comprehensive report concerning the design and development of the USSR Type A-1 Fighter Gunnery trainer. It is proposed as a result of this project to prepare an ATIC study which will evaluate the subject device, utilizing information contained in various documents in which several versions are described, in order to arrive at an estimate of general suitability. Previous work on the subject has resulted in a preparation of an AID Brief.

SOVIET ANTI-FRICTION BEARING INDUSTRY - Project No. 30048

(Init, 20 Jun 52; ECD, 17 Nov 52; Auth, CG, ATIC; PM, (b) (6)

PPS 023 was initiated on 16 April 1951 to outline ATIC requirements relative to this Study. The PPS also provided for the type of information upon which the study was to be based and the methods for securing this information. Recent developments in the field and the changing picture of intelligence needs have made some of the original provisions in the PPS inadequate.

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This project was initiated to establish the present Soviet technology capabilities of aircraft anti-friction bearings with emphasis on the quality of Soviet aircraft bearings and production facility available and the Soviet application of bearings in aircraft. An ATIC study will be issued as a result of this project.

AIRCRAFT RUBBER TECHNOLOGY IN THE USSR, Project No. 30049

Init, 27 Jun 52; ECD, 17 Dec 52; Auth, GO, ATIC; PM, (b) (6)

A Project Stork proposal,<sup>12</sup> was submitted 28 March 1951 outlining ATIC requirements for the analysis and evaluation of selected Soviet rubber samples and documents. This activity by the contractor has progressed to a standpoint where a complete report is being written covering the findings of materials analysis, the evaluation of documents, and the open literature survey.

The project was initiated to estimate the present status of Soviet aircraft rubber technology and to predict future Soviet capability in this field. In turn, the effect of current and future capability on performance or serviceability of Soviet aircraft was estimated. An ATIC study will be issued as a result of the project.

STUDY OF CHARACTERISTICS OF ALL KNOWN RADIO FREQUENCY SIGNALS OF ALL COUNTRIES - Project No. 20020

(Init, 27 Jun 50; ECD, No definite completion date for the project has been established; however, the contractor's work is scheduled to be terminated 5 August 52; Auth, GO, ATIC, PM, (b) (6)

12. PPS 019

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Haller, Raymond, and Brown, Inc., State College, Pa., were contracted for this work, due to the large amount of man-hours required to produce the end product.

The final report on this Project will provide all interested Government agencies with the signal characteristics of the most important electromagnetic radio-frequency emanations of all countries. Extensive listings and charts of government and commercial radar navigation, pulse communications, missile guidance, etc., will be contained in the final report. To make the project feasible, it has been necessary to limit the scope of the project, omitting communication signals, except of the pulse type.

The final report will be of considerable reference value to organizations engaged in countermeasures research and development, intelligence, etc.

SOVIET RADAR PERFORMANCE AGAINST ALLIED US AIRCRAFT - Project No. 20042

(Init, 24 Aug 51; EOD, 11 Aug 52; Auth, CO, ATIC; FM, (b) (6)

(b) (6)

The desirability for this type of information had been recognized by ATIC for some time, and limited estimates of Soviet radar coverage diagrams had been attempted; however, specific requests from SAC and FEAF for Soviet radar coverage diagrams, maximum detection range, radiation beam width, etc., brought about initiation of this project.

Arrangements were made with Aircraft Radiation Laboratory (WCERO-2) to have Ohio State University Research Foundation conduct echo area measurements on model aircraft, F-41, F-56, B-36, B-47, and B-50, indicated by SAC to be those of greatest importance. This work is being supervised by WCERO-2 under their contract with Ohio State University, and ATIC is contri-

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bating \$10,000 to the contract.

The principal difficulty encountered on this project was that of obtaining the radar echo area of the selected model US aircraft at 73 mc; however, this was accomplished by the contract with Ohio State Research Foundation. While the effect of target echo area on the range of a radar set is only proportional to the fourth power of the echo area, it was found that the echo area of the B-36 at zero degrees bank angle and through 360 degrees azimuth varied from 1 to 3,3000 sq. meters. Thus, it can be seen that this factor alone could affect the radar range by a factor of 7.6.

Progress since the first of this year has been the receipt of the preliminary radar echo measurements on the last two model aircraft, B-36 and B-36, from the Ohio State Research Foundation. Radar echo measurements on the MX-1626 aircraft were received from the Ohio State Research Foundation.

The final report, providing estimates of the performance of Soviet 70-mc band early warning radar sets against selected US aircraft, has been prepared and forwarded to AFCEM-X for approval. The report will be of value to SAC and other Air Force Commands required to take offensive action in the event of hostilities. These estimates are considered valuable since no actual Soviet sets are available for calibration.

#### ANALYSIS OF LENINGRAD TELEVISION RECEIVER T-2 - Project No. 2053

(Init, 11 Jan 52; ECU, 28 Nov 52; Auth, CG, ATIC, FM, (b) (6)

Following receipt of the Leningrad T-2 receiver, recently manufactured in the Soviet Zone of Germany, it was sent to the contractor, Capthart-

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Farnsworth Corp., Fort Wayne, Ind., where it will be analyzed for comparative purposes. The ATIC technical report on this receiver will be distributed approximately 1 Dec 52.

EVALUATION OF A FOREIGN AIRBORNE RADIO DIRECTION FINDER - Project No. 20046

(Init, 3 Dec 51; ECD, 2 Jan 53; Auth, CO, ATIC; PL, (b) (6))

The Soviet homing equipment, RPKO-10M, is being flown simultaneously with the U.S. AN/ARN-6 radio compass installation to obtain operational comparison information. Since USAF has had no identical counterpart to the RPKO-10M, direct comparisons are difficult. The AN/ARN-6 radio compass is more versatile, having the automatic direction finding available and covering a greater frequency range. Requirements for these added features must be weighed accordingly. Data accumulated during the first 30 percent of the flight testing program indicates that the RPKO-10M KC frequency range offers somewhat greater operating ranges, reliability, and ease of operation than the standard AN/ARN-6 installations in US jet aircraft. Delays encountered in the Eglin Field flight test program and additional higher priority work requirements in the Navigation Unit of the Electronics Branch have necessitated rescheduling this project. It is estimated that this study will be distributed 2 January 1953.

This is the first project permitting direct comparison of the operational performance of Soviet airborne radio equipment with comparable American equipment.

#### ELECTRONIC COLLOQUIUM

A colloquium, held weekly in the Electronics Branch, was started early in 1951. Usually these meetings consist of informal reports by ATIAE per-

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personnel who have attended scientific meetings or conferences during the previous week. Occasionally, however, scientists outside ATIC are invited to speak to this group. Two of the most outstanding presentations made since 1 January 1952 were of those by (b) (6) WCERO, and (b) (6) director of the Computation Laboratory at Harvard University.

(b) (6) discussed the major research undertaken by his unit in the field of wave propagation, primarily concerning the reliability of air-to-air transmission. The investigation involves the behavior and causes of "radio-holes", ranges at which reception is poor.

(b) (6) one of the leading scientists in the computation field, outlined the evolution and present status of large scale digital computing machinery, including the development of the Mark I, II, III, and IV Computers.

#### THE SOVIET YAK-11 AIRPLANE - Project No. 11096

(Init, 28 Dec 51; ECD, 21 Sep 52; Auth, CO, ATIC; PM, (b) (6))

The Hungarian Soviet YAK-11 trainer which crashed in Siegenburg, Germany, was received by ATIC in November 1951 and a Flash Report<sup>13</sup> was published shortly thereafter. The YAK-11, a Soviet counterpart of the USAF T-6 airplane, was not considered to have specific significance as a technical aircraft. However, since it was built early in 1951, a study was initiated to determine what improvements, if any, were made on Soviet equipment from 1946 or 1947, dates representing previous information on this airplane.

A group weight statement and weight and balance calculations, considering all possible conditions, have been prepared by Lt (b) (6), (b) (3), (b) (5). The con-

13. Flash Report No. ATIAA-61

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tributions received from contributing sections pointed out significant improvements both in equipment and methods of manufacturing. Pictorial sketches and a three view drawing of the YAK-11 aircraft will be included in the study. The three view drawing is representative of the aircraft which ATIC has in its possession. A rough draft of the study is now being coordinated within the Center, and the project is being completed on schedule.

SPECIAL STUDY OF USSR AIRCRAFT FOR ESCAPE & EVASION BULLETIN - Proj No. 10135

(Init, 4 Apr 52; EOD, 28 Jul 52; Auth, CO, ATIC; PM, (b) (6)  
vice (b) (6)

This project was initiated upon a request from D/I, USAF, based on a SAC requirement for operating instructions for Soviet Aircraft. The information desired was a complete pilot's operating instructions for each Soviet aircraft known to ATIC. The original planning for the project included the YAK-9P, IL-10, and the YAK-11 aircraft. The IL-10 report, which is being prepared by Cornell Aeronautical Lab., has been delayed. The YAK-11 report was prepared by (b) (6) and was forwarded for reproduction and distribution.

GUIDED MISSILES GROUND HANDLING AND LAUNCHING EQUIPMENT PROGRAM

(Init, Jan 52; EOD, Cont; Auth, CO, ATIC; PM, (b) (6)

Inasmuch as there had never been a great deal of work done on the ground handling and launching equipment for guided missiles, a familiarization program of USAF development was initiated. In doing so, several analysts from the Equipment Section were sent to test facilities and contractor's plants to familiarize themselves with USAF developments in support of this program. Personnel were also sent to Washington to confer with ONI on their intelligence regarding ability to launch guided missiles

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from sea-going vessels or submarines. Information received to date has been gratifying.

#### WEIGHT ESTIMATES PROGRAM

(Init, Feb 52; EGD, Cont.; Auth, CO, ATIC; PM, (b) (6)  
vice (b) (6)

It has been determined that there is a definite need for ATIC to keep weight data and to estimate the weight for foreign aircraft based upon conclusive information. This program, initiated in the Equipment Branch under the direction of Lt (b) (6), (b) (3) (B) has progressed slowly. Conferences were held with the "weight estimates" group at WADC, and a program of collecting the weight of all components of Soviet equipment received within ATIC was initiated. Since May 1952, this program has become the responsibility of the Performance and Characteristics Section, and the project is now being written. The collection of weight on all components of Soviet equipment is being continued. Capt (b) (6), (b) (3) (B) has begun to acquire and assemble all weight estimation procedures in use by the US. After the compilation of all weight estimation procedures, and evaluation will be made to determine the most suitable method to be used by ATIC.

#### CONTRIBUTION TO THE NATIONAL INTELLIGENCE SURVEY

(Init, Jul 51; EGD, Cont.; Auth, CO, ATIC; Req by D/I, USAF; PM,  
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Although the ATIC contribution to NIS on Czechoslovakia<sup>11</sup> was submitted

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11. Project No. 10119

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prior to 1 January 1952, this contribution was returned by D/I, USAF for revisions. New material was submitted; and the revised Sections, 70 and 76, were returned to D/I, USAF 18 February 1952. The contribution on Sweden<sup>15</sup> was satisfactorily completed and submitted to D/I, USAF 11 February 1952. The rough draft of the contribution on France<sup>16</sup> has been completed and is now being coordinated in the Aircraft and Propulsion Branch. This Project is running approximately one month behind schedule, due to the delay of the contributing sections in acquiring the latest information on French research and development. A project has been initiated<sup>17</sup> consolidating basic intelligence on Switzerland. This is due to be completed 24 October 1952. In HIS contributions, ATIC consolidates basic intelligence on the various areas of the world. This information is used by high-level US military planning organizations, such as the Research and Development Board.

POTENTIALITIES OF BOUNDARY LAYER CONTROL DEVICES ON SOVIET AIRCRAFT - Project No. 10114

(Init, 12 Feb 52; ECD, 10 Dec 52; Auth, CO, ATIC; PM, (b) (6))

Because of extensive research now under way on Boundary layer control in this country and elsewhere, it has been necessary to review extensively the recent trends in this field. The acquisition of data is complete, including Project "Stork". Six reports have been prepared and have been typed in final form for coordination within the Center.

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15. Project No. 10127

16. Project No. 10142

17. Project No. 10152

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LITERATURE SURVEY PROGRAM

(Init, Feb 52; ECD, Cont.; Auth, CO, ATIC; PM, (b) (6))

The literature survey, contracted by Stork, on the evaluation of any aspect of Soviet air research and development is progressing steadily. A visit by (b) (6) ATIAA-2, and Mr. (b) (6), (b) (3), (b) (7) "Stork" to the Mid-West Institute at Kansas City in March indicated that this Institute can assist in the survey on literature because of their close contacts with many foreigners capable of translating and interpreting USSR literature.

EVALUATION OF REPORTS OF UNIDENTIFIED AERIAL OBJECTS - Project Blue Book  
(Project No. 10073)

(Init, 15 Aug 51; ECD, Cont.; Auth, CO, ATIC; Req by: D/I, USAF; PM, (b) (6))

This project, in progress for approximately four years, involves the investigation and evaluation of reports<sup>of</sup> unidentified aerial objects. To date, approximately 900 reports have been received by the Air Force. Recent articles in LIFE, LOOK, and TIME magazines have caused an increase in letters from the public. About 250 letters were received during May and June 1952.

These reports have been filed and cross-indexed so that the maximum amount of data can be utilized. This cross-indexing breaks down the sightings according to color, shape, location, date, etc. It is estimated that about 20 percent of the reports cannot be explained by any proven theory, or by identifying the objects as balloons, aircraft, meteors, or known natural phenomena; however, the remaining 80 percent of the reports can be explained in various degrees of probability.

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The problem of unidentified aerial objects has been presented to various Air Force agencies in briefings. In most cases the briefing was given to familiarise the groups with the project and to enlist their aid or advice. AIC has put all available radar scope cameras on a 24-hour operational basis. A special electronics questionnaire has been sent out to all camera-equipped stations. This questionnaire will be completed and forwarded to ATIC with the scope photos. Certain portions of the project have been declassified so that the press may have access to more facts, a step designed to reduce some of the "mysteriousness" heretofore associated with the project.

A PARAMETER STUDY OF LONG RANGE SINGLE STAGE BALLISTICS MISSILE IN THE ATMOSPHERE - Project No. 10121

(Init, 24 Oct, 51; EOD, 15 Apr 52; Auth, CO, ATIC; PM, (b) (6)

(b) (6)

This project had as its objective the accurate calculation of rocket missile velocity, altitude, and ground range at fuel cut-off point, considering the ratio of thrust to gross mass, the ratio of cross-sectional area to gross mass, the ratio of propellant weight to gross weight, and the burning time. The effects of varying atmospheric density on drag and thrust and the effects due to the power-on missile turning program<sup>15</sup> considered in these calculations. These computations, performed by numerical integration processes using the facilities of the Mathematical Computation Team, Flight Research Laboratory, WADC, have been assembled in chart form and published.<sup>15</sup> Results of this study have been used in Projects 10099 and 10123.

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15. Technical Report No. TR-AC-11, dated 9 Apr 52.

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Upon completion, the information obtained from this Project will be used in determining relative errors of approximate methods of calculation as compared with rigorous methods and establishing standard methods of calculations for power-on performance of rocket powered missiles.

AERODYNAMIC INVESTIGATION CONNECTED WITH THE SOVIET M-1 AND M-100 MISSILES -  
Project No. 10122

(Init, 22 Oct 51; RCD, 28 Mar 52; Auth, CO, ATIC; PM, (b) (6))

(b) (6)

In order to evaluate available intelligence on German-assisted Soviet design work on rocket-powered aerodynamic research vehicles, ATIC Study No. 102-AC-51/32-34 was initiated. This report, now being distributed, points out the similarities between proposed Soviet free flight aerodynamic research techniques and those employed in the US and discusses the possible conversion of test vehicle configuration to tactical use.

CAPABILITIES OF SOVIET GUIDED MISSILES POWERED BY A 120 METRIC TON  
THRUST ENGINE - Project No. 10123

(Init, 21 Oct 51; CR 23 May 52; Auth, CO, ATIC; PM, (b) (6))

This project has resulted in the preparation of an ATIC Study<sup>19</sup> on the estimated performance and availability of possible Soviet ballistic and glide missiles, which might be powered by one or more rocket engines of 100/120 metric tons (220,000/264,000 lb) thrust each. Both single and two-stage missiles are being considered.

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19. No. 102-AC-51/11-34

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SOVIET GUIDED MISSILES, AIR RAFT, SHIP OR SUBMARINE LAUNCHED, MASS DESTRUCTION WARHEADS - Proj. No. 10138

(Init, 13 Feb 52; RCD, 13 Nov 52; Auth, CG, ATIC; Req by D/I, USAF; PM,

(b) (6)

This is the second major project in the overall program of the Guided Missiles Group to estimate Soviet guided missile capabilities. Initiated in February 1952, the object of this project is the estimation of Soviet capabilities to develop air-launched, ship-launched, and submarine-launched missiles capable of carrying mass destruction warheads.

SOVIET SURFACE-TO-SURFACE GUIDED MISSILE 1,000 NAUTICAL MILE RANGE - Proj. No. 10139

(Init, 4 Jan 52; CD, Def; Auth, CG, ATIC; Req by D/I, USAF; PM, Mr.

(b) (6)

This project, now deferred until completion of projects No. 10149 and 10159, will result in an overall study of Soviet capabilities in the surface-to-surface missile field between ranges of 1000 to 2500 nautical miles.

ATIC CONTRIBUTION TO JOINT ANGLO-AMERICAN GUIDED MISSILES CONFERENCE WORKING PAPER - Proj. No. 10149

(Init, 4 Apr 52; RCD, 27 Jun 52; Auth, CG, ATIC; Req by D/I, USAF;

PM, (b) (6)

In preparation for a Joint Anglo-American Conference to be held on guided missiles in September 1952, ATIC has contributed portions of a working paper prepared jointly by all US intelligence agencies. Drafts of all ATIC contributions have been completed and were submitted 27 June 1952 to other US intelligence agencies for review.

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MISSILE PARAMETER STUDY - Project No. 10152

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(Init, 25 Feb 52; EGD, HK; Auth, CO, ATIC; PM, Lt (b) (6)

This project, initiated in April 1952, will extend the work started under Project No. 10121 to include calculation procedure for rocket missile ranges, maximum altitudes, times of flight, etc. Lt (b) (6), (b) (3) (B) ATIAA-2, visited the ATLO Office in Hq, USAFE, during May to coordinate computational work being performed in connection with this project. Upon completion the information obtained from this project will be used to determine relative errors of approximate methods of calculation as compared with rigorous methods and to establish standard methods of calculations for power-on performance of rocket powered missiles.

SOVIET SURFACE-TO-SURFACE GUIDED MISSILES, 2500 NAUTICAL MILE MINIMUM RANGE  
- Project No. 10099

(Init, 12 Jun 51; EGD, 1 Aug 52; Auth, CO, ATIC, Req by D/I USAF; PM,  
(b) (6)

The study prepared under this project on Soviet long range surface-to-surface missiles (2500 nautical miles and over) has been coordinated within ATIC and will shortly go into final typing. In this study, it has been generally concluded that Soviet development efforts for long range missiles will be concentrated on ballistic, rocket-powered missiles carrying mass destruction warheads.

In connection with studies produced under Projects No. 10123 and 10099, an oral presentation on Soviet long range missile capabilities has been prepared and given before high level groups with WADC and Aircraft and Weapons Board. This presentation, to date, has been very effective in bringing Soviet missile capabilities to the attention of US research and develop-

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ment personnel and in exerting some influence on the US missile development program.

EVALUATION AND ANALYSIS OF YAK-9P AIRCRAFT - Project No. 10076

(Init, 13 Feb 51; EOD, 9 Jun 52; Auth, GO, ATIC; PH, (b) (6)

A YAK-9P aircraft in a disassembled condition was shipped from FEAF to San Francisco, thence direct to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y. Upon arrival at Cornell, 26 December 1950, work was begun on the evaluation program. At the termination of this program, Cornell provided ATIC with sufficient information, drawings, photographs, etc. to permit a complete analysis of the physical structure of the Yak-9P aircraft. This information plus weight, balance, nameplate, and markings data, was contained in the contractor's final report of the Yak-9P. Distribution of this report, TR-AC-3, was accomplished on 20 May 1952.

After completing the detailed inspection of Yak-9P components, Cornell personnel re-assembled the aircraft and restored it to flight condition. Later three shakedown tests were flown by Cornell's test pilot. At the completion of these tests, the aircraft was flown to Wright-Patterson Air Force Base, 4 September 1951. Flight tests necessary to determine the performance characteristics were conducted from 21 September to 12 December 1951 at Wright-Patterson Air Force Base. The test program consisted of 16 flights, totalling 23 hours, 55 minutes of flying time. Results of the test program are contained in a Technical Report.<sup>20</sup>

Upon completion of the flight test program, all of the electronic equipment in the Yak-9P was removed and replaced with equipment from a Yak-11. Arrangements were then made to have the aircraft flown to Air Proving Ground, Eglin

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Field, Fla., 15 January 1952, for a complete check on the electronic equipment. After tests were completed, the aircraft was returned to Wright-Patterson Air Force Base and placed under the jurisdiction of the ATIC Flight Operations Office.

EVALUATION AND ANALYSIS OF IL-10 AIRCRAFT - Project No. 10077

(Init, 12 Jul 51; EGD, 8 Dec 52; Auth, CO, ATIC; PM, (b) (6))

Two disassembled IL-10 airplanes were shipped from FEAF to San Francisco, thence direct to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y. Upon arrival, 21 January 1951, work was begun on the evaluation program. At the termination of this program, Cornell provided ATIC with sufficient information, drawings, etc. to enable a complete analysis of the physical structure of the IL-10 aircraft to be made. This information, plus weight and balance data, is contained in the contractor's final report of IL-10 aircraft. After completing the detailed inspection of IL-10 components, Cornell personnel re-assembled one IL-10 airplane and restored it to flight condition. The other airplane was shipped to Wright-Patterson Air Force Base and placed in Building 89.

In May 1951, Phase II of the IL-10 work program was completed. The aircraft retained at Cornell was completely assembled and flown for shakedown, 4 May 1951. On 7 May 1951, the aircraft was flown for final check-out by Cornell's test pilot, and on 8 May 1951 it was ferried to Wright-Patterson Air Force Base.

Flight tests necessary to determine the performance characteristics were conducted by Flight Test Division, WADC, from 20 June to 15 August 1951. The test program consisted of 11 flights totalling 13 hours and 55 minutes. Results of the test program are contained in WADC Memorandum No. WCT-2371. They will also be incorporated in the final ATIC study which will be completed in the near

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future.

On 17 August 1951, the IL-10 was flown to Aberdeen Proving Ground, Md., where vulnerability tests are being conducted on the aircraft. The estimated completion date given by Aberdeen for this program is 1 September 1952.

#### EVALUATION OF MIG-15 - Project No. 10115

(Init, 6 Sep 51; RCD, 18 Nov 52; Auth, CO, ATIC; PM, (b) (6))

Prior to receipt of any MIG-15 wreckage, a study<sup>21</sup> was prepared and distributed concerning the physical characteristics, performance, structural design and materials, power plant, armament airborne electronic equipment, and aircrew equipment of the MIG-15.

Upon receipt of certain engine parts and the tail section of a crashed MIG-15 a supplemental<sup>22</sup> study was distributed which analyzed a MIG-15 having a 6000-lb thrust engine instead of one having a 5000-lb thrust engine as reported in the earlier publication. Certain of these engine parts were forwarded to Roll-Royce and Lucas in England for their coordination in the Technical appraisal.

Later receipt of a crashed MIG-15 on 25 July 51 by ATIC resulted in immediate action on a preliminary study<sup>23</sup> of all of its components, utilizing personnel available to ATIC and the Wright Air Development Center Laboratories.

The airframe parts<sup>were</sup> forwarded to Cornell Aeronautical Laboratories, Inc. for further examination and analysis. Cornell is providing ATIC with information, drawings, photographs, necessary to complete an analysis of<sup>the</sup> physical structure of a MIG-15. In addition they are proving a weight

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21. 1/D Study, 102-AC-50/38-34

22. 1/D Study 1-2-AC-51/10-34

23. Report No. ATIAA-59

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and balance statement, a preliminary stress analysis of the bill of materials of the aircraft. The bill of materials will include a detailed materials analysis as outlined in DD Forms 346 and 346-1. All available parts of the Soviet RD-45 (None) engine were made available to the Pratt and Whitney Aircraft Corporation. These parts have been studied in detail by Pratt & Whitney engineers and ATIC analysis<sup>24</sup>, and the resulting publication has been disseminated to the US aircraft engine industry. Thus, any improvements or innovations the Soviets have included in their engine will be fully exploited by US industry. In addition, a panel<sup>25</sup> made up of personnel from industry has been established for the purpose of providing a group of highly qualified consultants to the Air Technical Intelligence Center on propulsion matters.

Letters were sent to 14 major aircraft companies inviting their engineering personnel to view the MIG-15 for the purpose of becoming more familiar with a Russian production aircraft and at the same time contribute to air technical intelligence. A panel<sup>26</sup> consisting of representatives from these companies and ATIC is being forwarded to facilitate the exchange of information between ATIC and the airframe industry.

A detailed production study has been accomplished by ATIC and the North American Aviation Company. Utilizing the services of North American made it possible to closely compare production techniques and procedures employed in manufacturing the MIG-15 with the methods used in manufacturing the F-86.

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24. 1/D Study No. 102-AC-51/31-34

25. First Meeting 17-18 Sep 51

26. First Meeting 11-12 Dec 51

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A study is now in progress to determine probable improvements on the MIG-15.

SOVIET MULTI-PURPOSE BOMBER - Proj. No. 10102

(Init, 5 Jun 51; CD, 17 Jan 52; Auth, CO, ATIC; PM, (b) (6)

This report, presented a complete re-evaluation of the types 27 and 30 Soviet light bombers.

ESTIMATED CHARACTERISTICS OF SOVIET AIR WEAPONS - Proj. No. 10140

(Init, 22 Jan 52; ECD, Cont; Auth, CO, ATIC; Req by D/I USAF; PM,

(b) (6)

The purpose of the project is to maintain, revise, and publish quarterly the report entitled "Estimated Characteristics of Soviet Air Weapons". The revisions reflect the following: inclusion of performance data on new types; revision of performance on current Soviet aircraft; changes in future capabilities estimates as required; publication of the report quarterly.

The issue dated 1 January 1952 was distributed 1 April 1952; the next issue will be distributed during July 1952.

JOINT ANGLO-AMERICAN STUDY ON USSR AIRCRAFT - Proj. No. 10146

(Init, 16 Apr 52; CD, 27 Jun 52; Auth, CO, ATIC; Req by D/I, USAF;

PM, (b) (6)

During the preparation of this study a three-man team representing UDI (Tech) visited ATIC for approximately four weeks, where they worked with the three-man team representing ATIC. Specific items discussed during the conference were as follows: Performance estimates of the new types; assistance provided by foreign development<sup>27</sup> to Soviet research and development of aircraft;

27. UK, US, German

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development history of each type of USSR aircraft;<sup>28</sup> performance estimation methods; the performance data presently existing on each Soviet aircraft type; and future Soviet capabilities in aircraft performance and characteristics.

This project was extremely important inasmuch as it was the first such study to be prepared on Soviet aircraft. The completion<sup>29</sup> will present a unified UK/USA performance and characteristics estimate on Soviet aircraft.

#### JOINT ANGLO-AMERICAN CONFERENCE ON SOVIET ELECTRONICS AND GUIDED MISSILES

The steering Committee for the Conference held its first meeting in February 1952 to discuss arrangements for the scheduled Joint Conference with the British on Soviet Electronics and Guided Missiles. Three ATIC personnel were designated by this committee as alternates to attend all meetings and activities. Major ~~(b) (6), (b) (3) (B)~~ and ~~(b) (6)~~ ATIAE, were appointed to the Electronics Working Group. The Working Groups were specially charged with: (1) preparation of a detailed agenda for the conferences and terms of reference for the studies involved for submission to the British; (2) preparation of coordinated US Studies for submission to the British;<sup>30</sup> (3) and review and discussion of British studies prior to the conference.

Twenty copies of the US coordinated paper on Soviet Electronics (TS) were prepared by the Working Group and turned over to Sq/Ldr ~~(b) (6)~~ on 25 April 1952. This paper was submitted as the US contribution to the Joint Conference, held 16 June 1952 through 27 June 1952, at CIA. The agenda for this conference included three general items: (1) detailed estimates of the status of Soviet Electronics; (2) a review of trends, consolidation of require-

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28. Thirty-five types have been identified

29. Now being printed

30. Due/dates--Electronics, 1 May 1952, Guided Missiles, 15 Jul 52

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ments, and direction of collection of effort; and (3) a discussion of recent significant intelligence research and production.

The Guided Missile Conference, scheduled for a two weeks period beginning 8 September 1952, will follow the same general procedure at the Electronic Conference.

MILITARY LOADS OF SOVIET TRANSPORTS AND GLIDERS - Proj. No. 10091

(Init, 4 Jan 51; CD, 21 Jan 51; Auth, CG, ATIC; Req by D/I USAF; PM,

(b) (6)

This study, distributed and completed 25 April 1951, presents the loading capabilities of Soviet operational and prototype transport aircraft, including cargo gliders. Military equipment considered in the loadings were guns, trucks, jeeps, tanks, aircraft engines, and mobile radar units.

From this project, the loading capabilities of Soviet operational and prototype aircraft was presented.

RANGE AND RADIUS OF SOVIET GLIDER-TOWPLANE COMBINATIONS- Proj. No. 10111

(Init, 30 Jan 52; ECD, 20 Jul 52; Auth, CG, ATIC; Req by D/I, USAF;

PM, (b) (6)

This study, completed 2 May 1951, presented range and radius estimates for Soviet glider-towplane combination, considering the towing of both one and two gliders at a time by a towplane. However, it was returned by AFON-2B3 for additional work, considered necessary. Present indications are that the study is essentially satisfactory in its present form, and recommendations to this effect will be made to D/I.

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MAINTENANCE OF CHARACTERISTICS AND PERFORMANCE HANDBOOK, USSR AIRCRAFT -

Project No. 10123

(Init, 26 Oct 51; EOD, Cont; Auth, CO, ATIC; Reg by D/L, USAF; PM,

(b) (6)

All the latest performance and characteristics data, as calculated by the Aircraft Group, were supplied to AFOSM-1B3 for publication in this handbook, an up-to-date summary of Soviet aircraft types.

ANALYSIS AND EVALUATION OF FOREIGN AIRCRAFT FUELS AND LUBRICANT SAMPLES -

Project No. 10095

(Init, 21 Mar 51; EOD, Cont; Auth, CO, ATIC; PM, (b) (6)

The study resulting from this project, "Laboratory Investigation of Captured Soviet Aircraft Fuel, Lubricants and Related Materials" has been approved and was published. It summarizes intelligence data on samples obtained during the past two years. This project will not be closed out since it was initiated on a continuous basis to handle foreign fuel sample analysis and coordinating Research Council Advisory Group Consultation.

The CRC Group met at ATIC on 25 January 1952 to complete the test procedures for handling petroleum samples, and a presentation was given by Mr.

(b) (6), (b) (3) (B)

and (b) (6) on intelligence information collected by ATIC during the past two years. It was decided that all sample analysis will be conducted by the Services' Laboratories until such time as the volume becomes too large for the available facilities. The CRC is charged with arranging for outside facilities should these be necessary or otherwise desirable. Another meeting of the CRC Group, 6 May 1952, was held at the offices of the American Petroleum Institute, in New York City. Tentative test pro-

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cedures were reviewed and modifications were suggested. The next meeting is scheduled for some time in July. At this time, sample analysis of captured petroleum materials will be discussed.

This project is set up on a continuous basis, and the periodic reports published enable AFIC and all recipients to keep abreast of Soviet developments in aircraft engine fuels and lubricants. This data is essential to evaluate Soviet capability to conduct aerial warfare insofar as fuel and lubricant developments are concerned.

#### DESIGN AND PERFORMANCE ANALYSIS BY LYCOMING-SPENCER OF SOVIET RECIPROCATING ENGINES

(Init, 15 Jan 52; RCB, ND; Auth, CO, AFIC; PH, (b) (6))

A program was established in February 1951 for the analysis by Lycoming-Spencer of Soviet reciprocating engines as they became available to AFIC. A separate project number was assigned to each engine type sent to Lycoming-Spencer to facilitate handling of progress reports, AFIC studies, and miscellaneous records. The following projects have been initiated under this program.

#### SOVIET ASH-62 IR ENGINE; Project No. 10101

The first interim report was published in August 1951, and a complete design analysis report<sup>31</sup> was published in September 1951. An operable engine has been sent to Lycoming-Spencer for calibration tests, and tests stand modifications are in progress.

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SOVIET ASH-21 ENGINE; Proj. No. 10104

One damaged engine was sent to Lycoming-Spencer in March 1951, three interim reports were received and consolidated into one ATIC study.<sup>32</sup> A final report by Lycoming-Spencer was published in November 1951, and Project No. 10104 was terminated.

SOVIET VK-107A ENGINE; Proj. No. 10105

One damaged engine was sent to Lycoming-Spencer in July 1951, and an Interim Report,<sup>33</sup> was published in January 1952. A final report by Lycoming-Spencer is in process, but it cannot be completed until the current contract has been amended to provide for additional personnel ratings. Calibration tests will be performed on the engine now installed in the Yak-9P, if the engine is still in operational coordination.

SOVIET AM-42 ENGINE; Proj. No. 10 109

One new engine was sent to Lycoming-Spencer in July 1951; Interim Report<sup>34</sup> was published in February 1952. A Lycoming-Spencer report<sup>35</sup> covering the calibration tests of the engine, was published in March 1952. A design analysis report is in process; however, it cannot be completed until the current contract has been amended to provide for additional personnel ratings.

SOVIET M-11 ENGINE; Proj. No. 10130

One incomplete set of engine parts was sent to Lycoming-Spencer in January 1952. An Interim Report,<sup>36</sup> has been approved by D/I, USAF, and is now in reproduction. The rough draft of Lycoming-Spencer's final report has been

32 No. 102-AC-51/18-34

33 No. 102-AC-51/34-34

34 No. 1470

35 ATIC Study No. 102-AC-52/2-34

36 Project No. 10113

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approved by ATIC, but editing may delay it because of changes in contract requirements. The reports resulting from this program will provide ATIC and all recipients with a knowledge of Soviet reciprocating engine design and performance characteristics.

#### ROCKET POWER PLANT DEVELOPMENTS IN THE USSR, UNITED STATES, GREAT BRITAIN AND FRANCE - Proj No. 10100

(Init, 9 May 51; CD, 24 Feb 52; Auth, CO, ATIC; FM, (b) (6))

On 24 February 1952, the first ATIC power plant study, a comparison of development progress made by both foreign and domestic rocket engine development centers, was approved and published. A commendation received from WADC indicates that studies containing comparison data on several nations are extremely useful.

A similar ATIC study on Foreign and Domestic Pulsejet Power Plants has been approved by D/I, USAF and ONI and is now being published.

The I/D studies on rocket and pulsejet power plants provide a development history of these plants in various countries, including the USSR.

#### ANALYSIS OF FOREIGN AIRCRAFT PROPELLERS - Proj. No. 10107

(Init, 19 Jul 51; ECD, ND; Auth, CO, ATIC; FM, (b) (6))

A program was established in July 1951 for the analysis by Hamilton Standard Propeller Company of Soviet aircraft engine propellers as they become available to ATIC. Also, several interim reports have been published on specific propeller types. The final technical report has been prepared by Hamilton Standard Propeller Division, United Aircraft Corporation. This report is now in final review and coordination at the contractor's plant and

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will be submitted to ATIC in the near future, published as a technical report.

The final reports resulting from this program will provide ATIC and all recipients with a knowledge of Soviet engine propellers performance characteristics.

AIRCRAFT TURBO ENGINES BASED ON J & JUNKER'S DESIGN - Proj. No. 10111

(Init, 27 Jul 51; ECU, ND; Auth, CO, ATIC; (b) (6))

This project was initiated to analyze, evaluate, and determine the extent of modifications of the German Junker type design of turbo engines since 1939, the date the first prototype of the JUMO 004A became available. This project has been deferred by Form G2 because of higher priority projects.

This study will determine the extent of Soviet exploitation of the German Junker's Turbo Engine designs. A knowledge of this exploitation will permit ATIC to estimate the extent of German assistance given to the Soviets in the development of these engines.

FOREIGN AIRCRAFT ENGINE CHARACTERISTICS IN MANY BOOKS - Proj. No. 10112

(Init, 24 Jul 51; ECU, ND; Auth, CO, ATIC; FM, (b) (6))

A program was established in July 1951 to provide a compilation of the characteristics of foreign engines for ready reference. Starting with a book on USSR engines, it is currently being planned to prepare a similar book on other foreign nations.

Approximately 60 percent of the known USSR power plants have been established in rough draft form on special format sheets<sup>37</sup>. Coordination of these sheets is being accomplished at Section level, but final typing of the sheets will be held up until an IBM operator has received proper security clearance.

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AIRCRAFT TURBOPROP ENGINES - DOMESTIC AND FOREIGN TYPES - Proj. No. 10128

(Init, 24 Apr 52; ECD, 30 Nov 52; Auth, CO, ATIC; Req by, Research and Development Board; PM, (b) (6))

This project was initiated to present a compilation of all the turboprop engines used and contemplated for use for aircraft propulsion of both domestic and foreign design, listing the development status, performance, and physical characteristics of each model. The status of this project is in the acquisition stage; the Project Monitor is now awaiting information from Great Britain.

The I/D studies on turboprop engines provide a development history of these engines in various countries, including the USSR. This data enables ATIC to evaluate future Soviet capability to conduct aerial warfare insofar as turboprop engines are concerned.

BRITISH TURBOJET ENGINES - PRODUCTION, SERVICE AND DEVELOPMENT - Proj. No. 10129

(Init, 24 Oct 51; ECD, 8 Oct 52; Auth, CO, ATIC; PM, (b) (6))

This project was established in October 1951 to provide a revised and more complete tabulation of data, charts, and bar diagrams of an earliest ATIC<sup>38</sup> study on British and US turbojet production, service and development engines. The status of this project is in the acquisition stage; the Project Monitor is now awaiting information from Great Britain on turbojet engines of intelligence interest.

RECIPROCATING ENGINE SUPPLY AND MAINTENANCE SUPPORT PROGRAM FOR SOVIET AIRCRAFT - Proj. No. 10131

(Init, 6 Dec 51; ECD, 2 Nov 52; Auth, CO, ATIC; PM, (b) (6))

38- ATIC Study No. 102-AC-51/1-37

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This project was established in December 1951 to provide charts, formulas, and diagrams necessary to assist the analyst in deriving extrapolated performance for Soviet pulsejets and ramjets. Approximately 45 percent of the monograph charts for interpretation of Soviet ramjet and pulsejet engines have been completed. Acquisition has been completed, and the project is now in the interpretation stage.

This study will provide a tool for ATIC in evaluating the performance of Soviet ramjet and pulsejet engines.

#### SOVIET ROCKET POWER PLANTS

(Init, 19 Dec 51; RCD, 19 Feb 53; Auth, ON, ATIC; PW, (b) (6))

A program was initiated in December 1951 to evaluate the present and future capabilities of Soviet developments of rocket power plants. Project No. 10136 covers rocket power plants suitable for surface-to-air-guided missiles, and Project No. 10137 covers rocket power plants suitable for aircraft propulsion. The acquisition materials is continuing through reinterrogation of available sources. Continuous evaluation is being conducted which will tie in applicable foreign developments to the Soviet development activity has been prepared in conjunction with the presentation for the Third Guided Missiles Panel Meeting in early August 1952. Additional information may be obtained from this panel meeting in terms of the Soviet need for specific power plant developments to meet what appears to be the logical guided missiles program. This program will provide several studies on the estimate of the Soviet future capabilities to conduct aerial warfare with different types of equipment which utilize rocket power plants.

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SYNTHETIC AVIATION GASOLINE IN SOVIET GERMANY - BOEHLEN PLANT - Proj. No. 10147

(Init, 26 Feb 52; ECD, 6 Feb 53; Auth, CO ATIC; (b) (6))

Project No. 10147 was initiated in February 1952 to investigate the potential and capabilities of the synthetic fuel plants in the Soviet Zone of Germany. It has been delayed due to an extended sick leave taken by the Project Monitor.

This study will determine the extent of Soviet exploitation of German synthetic aviation gasoline. A knowledge of this exploitation will permit ATIC to estimate the extent of German assistance given to the Soviets in the development of synthetic aviation gasoline.

PREPARATION OF HANDBOOKS ON FOREIGN AIRCRAFT, OTHER THAN SOVIET - Proj. No. 10150

(Init, 9 May 52; ECD, 15 Feb 53; Auth, CO, ATIC; Req by, Dir. of Res. and Dev, Hq USAF; PW, (b) (6))

The need for a standard handbook on characteristics and performance of foreign aircraft of friendly nations was established and requested for in a letter from the Director of Intelligence, DCS/D, to the Director of Intelligence, DES/O.<sup>39</sup> In this letter it was pointed out that information is not readily available, and that the current data on aircraft of friendly nations when compared with that of official USAF performance data often leads to misunderstandings. It was suggested that the Air Technical Intelligence Center, Wright-Patterson AFB, be assigned the responsibility for publication and dissemination of the performance data which will be regarded as the official figures for use in comparing overall aircraft of friendly foreign nations.

39 Subject: (Restricted) Standard Aircraft Characteristics of Foreign Aircraft, dated 10 Jan 52.

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This letter was forwarded to ATIC for comments as to practicability, workload involved, availability of information from other sources, etc. On March 4, 1952 ATIC informed Hq, USAF, AFOIN-A, that the preparation of handbooks would be undertaken by ATIC. During early January, the Aircraft Group, Technical Analysis Division, ATIC, was assigned the task of compiling the necessary data for the handbooks. From early January until mid February 1952, only part time could be devoted to this work due to a lack of personnel; however, during this period excellent progress was made. The necessary research material was assembled, organizational requirements as regards personnel to do the job were arrived at, and an interim basic format was completed. During the third week in February 1952, a non-commissioned officer was assigned to the Aircraft Group and began work by compiling aircraft characteristics data for the handbooks. In early April, Maj (b) (6), (b) (3) (B) visited the Center in order to effect the necessary coordination. Major (b) (6) Aircraft and Propulsion Branch, discussed matters regarding the respective fields of responsibility and drew up a proposed format for the handbooks. At the discussion held prior to (b) (6) return to Washington, the proposals and/or recommendations arrived at between Major (b) (6) were discussed with (b) (6) then chief of the Aircraft Group. A basis for agreement on all proposals and/or recommendations were reached, and Major (b) (6), (b) (3) (B) stated that he would have it officially confirmed in a letter thru channels to ATIC. Furthermore, as an aid in expediting work on the handbooks, he suggested that further exchange of views be made via telecon. During the middle of April ATIC initiated Project No. 10150,<sup>41</sup> containing all the points agreed upon during (b) (6) visit. Substan-

<sup>40</sup> Representative of AFOIN-2B3, Hq USAF

<sup>41</sup> The authority for the preparation of Standard Handbooks are the characteristics and performance of aircraft of friendly foreign nations, world wide.



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tially, those agreements are as follows: The handbooks will be standard for the Air Force. The format contained therein is designed not only to serve the needs and requirements of the various Research and Development organizations such as the R & D Board; DSC/D, USAF; ARIC, USAF; WADC, USAF; but is also designed for operational Combat Intelligence, USAF; Intelligence Collection activities, USAF; and other allied services and Civil Defense organizations. ATIC will submit material for the handbooks to the D/I, USAF, for coordination and inclusion in the handbooks as it is produced. The order of priority in producing the handbooks will be as established by the D/I, USAF. With the concurrence of the D/I, USAF, ATIC will continue to give top priority to producing individual sheets on specific aircraft, exclusive of the handbooks, at the request of the DCS/D. The general planning of these handbooks will consist of presenting each country's significant native aircraft and considering these aircraft as either operational or developmental. When a country does not have native aircraft, such aircraft as they do possess will be shown in a miscellaneous section indexed and cross-referenced. The handbook format will contain suitable photographs and/or drawings showing a three view silhouette or alternatively, a three view line drawing provided by AFOIN2B3. Photographs will consist of two in flight, one generally abeam, one generally head on or astern and one the ground showing as much detail as possible; a chronological factual history of the aircraft; the dimensions and performance of the aircraft; and any other important information concerning specialized equipment installed in the aircraft. Target date for completion of the project is 15 February 1953, and target date for completion of the first volume desig-

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nated "Europe" is September 1952. During May an aeronautical engineer was assigned to the performance and Characteristics Section to compute performance data for the handbooks. A printed copy of the handbook format and the written confirmation of the agreements and/or recommendations arrived at during the meeting attended by the AFOIN representative and of the Technical Analysis Division heretofore mentioned, were received in the Aircraft and Propulsion Branch for study during the second week in May 1952. Study of the document disclosed no basis for disagreement, and it was concurred. Rough work sheet forms, replicas of the adopted format, were received at the end of May. These forms will be filled in, and transposition to the printed format will be made when received from the printer. Captain (b) (6), (b) (3), (b) (7) visited the office of the D/I during the first week in June 1952 for conference with Major (b) (6), (b) (3), (b) (7) regarding fields of responsibility between AFOIN-2B3 and ATIC in the compilation of data and submission of handbook format sheets as completed. Delineation of respective responsibility in general is that ATIC will provide AFOIN-2B3 with technical information as prescribed in the format of the ACC handbook; provide current estimates dated the month in which the format sheet is submitted, as well as a digest of the aircraft's military possibilities; and provide written evaluation of information used as the basis for estimates. AFOIN-2B3 will supplement any deficiency in ATIC photographic coverage of aircraft appearing in the handbook; arrange for the accumulation, presentation, and publishing in handbook form all data received from ATIC; and arrange for the distribution of the ACC handbook when printed. During the second week in June 1952 a non-commissioned officer of the Aircraft and Propulsion Branch, ATIC, was sent

42. France and other countries

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to Washington, D.C., on seven days TDY for the purpose of assisting Major (b) (6) in AOC handbook matters. During that period the following were accomplished: Using current AOB, final selection of all aircraft which will appear in the handbook was made; index to Volume I, "Europe," of the handbook was made completed in draft form; France was selected as the first nation to be completed in the handbook; priority for completion of coverage on certain native and foreign aircraft in France was established; coordination for procurement of necessary photographic material was effected between ATIC; AFM-233, Hq USAF; OPNAV, US Navy; and the Photographic Library in the Pentagon Building, Washington, D.C., which is under the jurisdiction of the US Army. At the closing period of this writing, the project is proceeding satisfactorily. The chronological factual history, dimensions, and other important information concerning specialized equipment installed in the aircraft appearing in the "Europe" column is approximately 70 percent completed; and the performance data on French aircraft is approximately 50 percent complete.

#### PERFORMANCE CALCULATION METHODS FOR GUIDED MISSILES - Proj. No. 10150

(init, 9 Jun 52; ECD, Cont; Auth, CO, ATIC; PW, Lt (b) (6)

A previous report, Project No. 10121, of power-on trajectories was completed as a first step in developing performance calculation methods. This project will extend the development of methods to include calculation of power-off trajectories including determination of range, time of flight, and maximum altitude. Computational work for this project is being performed by both the Wright-Patterson Aeronautical Development Laboratories and Foreign personnel under contract to the Air Technical Liaison Office, Hqs, USAFE. The project monitor visited the ATIL office in May for a period of three weeks to

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coordinate the computational work being done there with that being performed in this country.

ANALYSIS OF THE TYPE-15 AIRCRAFT - Proj. No. 10153

(Init, 28 May 52; ECD, NS; Auth, CO, ATIC; PM, (b) (6))

Receipt of recent air intelligence information and a re-evaluation of past intelligence information has resulted in a new estimate of the Type-15 size and weight. Although there is not enough intelligence information at this time to indicate that the Type-15 may have the Soviet VE-1 engine installed, it is believed that the possibility of such an installation, as in the MIG-15, warrants a performance evaluation. Although there has been little additional intelligence information on the Type-15 itself, enough general intelligence information has been received since June 1950 to warrant a complete study. Since there is a possibility that additional information may be obtained on the Type-15 in the July 1952 Air Show, the work on this project is being deferred until that time.

COMBAT RADIUS CAPABILITIES OF THE SOVIET MIG-15 - Proj. No. 10155

(Init, 13 Jun 52; ECD, 30 Jan 53; Auth, CO, ATIC; (b) (6))

The combat radius capabilities of the Soviet MIG-15 with the VE-1 engine installation have been completed under the following conditions: no external fuel, a total of 140 gallons of external fuel, and a total of 250 gallons of external fuel. These will be reproduced on charts as soon as possible and sent to FRAF and all other interested agencies.

THIRD GUIDED MISSILES PANEL MEETING - Proj. No. 10159

(Init, 16 Jun 52; ECD, 15 Sep 52; Auth, CO, ATIC; PM, (b) (6))

Letters of invitation have been sent to representatives of industry and

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interested military organizations, and preparation of an agenda for the meeting has been tentatively discussed.

From this meeting ATIC will be able to obtain advice and suggestions of qualified industry personnel engaged in guided missiles research and development on the intelligence operations and end products of ATIC in the guided missiles field. Of secondary importance is the presentation of available intelligence and the results of ATIC analyses to the industry.

ANALYSIS OF THE TYPE-31 BOMBER - Proj. No. 10160

(Init, 23 Jun 52; SOP, 30 Oct 52; Auth, CG, ATIC; PH, (b) (6))

Previous Type-31 contributions from other sections of the Technical Analysis Division have been combined into a new report. The rough draft of this study is expected to be completed and available for coordination within the Aircraft and Propulsion Branch by 11 July 1952.

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CLASSIFIED PROJECT, ATIAE-3; Proj No 20024

(Init 12 Apr 48 as Proj XC-56; reinit as Proj 9997, 1 Dec 49; reinit  
as Proj 20024, 8 Jan 51; Auth, Hq USAF; PM's, (b) (6)

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The purpose of this project is to provide for the technical analysis of radar and radio signals of a non-communications nature obtained from "Ferret" material. In requesting the initiation of the current project, APOIN W/TC stipulated that the analysis should result in "periodic technical intelligence studies or reports for dissemination to all interested staff and field agencies on a continuing basis." This has been superseded by a policy letter<sup>14</sup> providing for final analysis on non-communications intercept material at Hq, USAF level.

Under this directive, ATIC is one of three headquarters components responsible for final analysis, but the division of responsibility has not been clearly defined. The organizational structure and the inter-relationship of the agencies concerned with the project constitute a general problem. It is understood that Hq USAF is examining the situation in an effort to assign specific responsibilities.

The urgency of this problem as well as the significance of the project is illustrated by a recent high-level joint declaration stating that "important phases of US military research and development and US operational planning are directly affected by information of Soviet use of electronic devices. The best available direct means of obtaining this information is by electronic countermeasures search."

During the period 1 May 1952 - 30 June 1952, a report entitled "Soviet

14 D/I Hq USAF, USAFSS and ATIC: APOIN-G/5R Setter, 29 Feb 52

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"Radio Frequency Transmissions" was drafted, covering the fourth quarter 1951 and summarizing the results of all 1951 electronic reconnaissance operations. A study covering the first quarter of 1952 is now being prepared. Earlier in the year a study covering electronic reconnaissance operations between mid-July 1950 and 30 September 1950 was issued. The report made liberal use of background material resulting from analyses originating in 1948.

Another accomplishment marking the first half of 1952 was the publication of a text on analysis techniques. Entitled Notes on Methods for the Technical Analysis of Radio-Frequency Transmission, the book was based on material prepared by ATIAE-3 personnel for the SAC training program.

The text was used in training 11 officers and two airmen assigned to SAC. These men took part in a formal training program at ATIC where they were taught the techniques of analyzing electronic reconnaissance information. Part of the instruction was accomplished at the plant of an analysis equipment manufacturer. Other SAC personnel, on TDY, aided ATIC in establishing forms and procedures for reporting "Ferret" observations, which have been adopted for standardizing by Hq, USAF.

Investigations include research and laboratory work in connection with complex radar-type transmissions reported by F2AF in February 1951. This work is being carried on with the assistance of WADC, AFSA and USAFSS, all of which have contributed substantially through liaison and exchange of material.

Recorded transmissions were subjected to laboratory investigation to provide material for periodic studies and special activities. Developing from this research were specific laboratory techniques, permitting simulation of complex transmissions and theoretical studies of particular modulation system.

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Very considerable time and effort has been expended in providing technical support for electronic reconnaissance activities in the field and ZI. The resulting workload impelled ATIAK-3 to notify AFCEK-1A7 (Supplemental Research Branch) that it could no longer act as a supply agency for specialized electronic research equipment. In support of the notification a policy letter was cited clearly assigning the responsibility elsewhere.

Prior to the notification, these supply services had been rendered: preparation of equipment lists; procurement of equipment and services required by SAC analysts in their training program; procurement and shipment of "Groundinghog" equipment required by Hq USAF; procurement and shipment of equipment required by Hq FSAF. Technical support of field operations<sup>45</sup> also was assumed.

This contract, originally drawn for a one year period, provides for study and experimental work on methods for receiving and analyzing intercepts related to Soviet guided missile activities. The contractor is Haller, Raymond, and Brown, Inc., an organization now operating under a new contract which continues the research started under the old.

Company researchers have learned that transmissions employed in the development test phase of guided missile work offered the best exploitation possibility. Methods for reception, recording, and analysis were developed. Applications of radio in US missile tests were reviewed by the contractor and two experimental intercept operations against US bases carried out. Existing service and commercial equipment were evaluated under conditions approximating actual practice.

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Another study resulting from the contract concerned the geography of Central Asia. This was undertaken to determine the most likely areas for Soviet guided missile bases. Studies of Semantic analysis problems were made to develop methods of breaking simple voice codes.

Implementation of the contractor's findings is the responsibility of USAFSS, although the contract is monitored by ATIAE-3. The latter maintain close liaison with USAFSS both in regard to implementation and as consultants for related USAFSS programs.

Contractual arrangements with the Federal Telecommunications Laboratories, Inc, have been completed. This agreement provides for the interpretation of "Della Rosa" (Airborne instantaneous microwave direction-finder) results, secured in the Far East during operations trials. This work is expected to require the presence of an ATIAE representative at the contractor's facilities for a considerable part of the time required.

ATIAE-3 also is collaborating with USAFSS in a program seeking to provide means for collecting intelligence on Soviet LP-navigational aids and in the preparation of recordings of typical non-communications transmissions. These are being used in recognition training USAFSS personnel.

Other activities connected with the project include a program for the instrumentation of laboratory Ferret-type aircraft for FRAF and a B-29 Ferret test vehicle to be assigned to WADC. Active participation in the Joint Signals Evaluation and Analysis Subpanel is being continued.

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TECHNICAL SERVICES DIVISION

OFFICE OF THE CHIEF

ORGANIZATIONS AND FUNCTIONS:

The Technical Services Division during this reporting period remained responsible for logistical type services required to support the ATIC operations. In addition, a Flight Operations Office for the Air Technical Intelligence Center was established<sup>1</sup> which assumed control of all matters concerning flight operations within the Center that were not the assigned responsibilities of established activities of Wright-Patterson Air Force Base. Requirements of this office are as follows: To assist all rated Center personnel in maintaining flying proficiency and inform the Chief, ATIC, and the individuals concerned, when the possibility exists of failure to meet minimum annual proficiency flying requirements; to secure aircraft for administrative flights and schedule such flights; to establish and control a program for familiarization by flying in foreign aircraft assigned to the Center and assist the Flight Operations Board in establishing eligibility of personnel to participate in familiarization flying of foreign aircraft; and to perform all necessary liaison between the Center and Wright-Patterson Air Force Base in matters related to flight operations. (b) (6) was assigned additional duty as Chief, Flight Operations Office on 17 April 1952.<sup>2</sup>

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<sup>1</sup>ATIC Office Instruction No. 20-1, 17 April 1952.

<sup>2</sup>ATIC PAM No. 5, 17 April 1952.

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Captain (b) (6) was assigned to the Office of the Chief of this Division as the Special Assistant for Reserve Matters;<sup>3</sup> in this capacity he completed a preliminary survey of mobilization requirements for the division. This planning assumption indicated that an increase of 14 officers, 13 airmen, and 64 civilians would be required under a full mobilization or wartime condition, due to an increased work load that would be placed on the division in support and as a result of an increased collection effort and analysis task which ATIS would service.

The initiation and establishment of four new division projects has provided a means for applying time spent in the duties outlined against a specific project rather than against an indirect or overhead account. These projects are as follows:

<u>Project No.</u>	<u>Description</u>
2004	Maintain liaison and process all requests between the ATIC, JMIA, and other military and non-military organizations participating in this program.
2005	Prepare and present oral presentations of the Technical Services Division's operations and functions.
2006	Accomplish all work specifically requested by Hq USAF which is pertinent to the ATIS portion of the ATIC mission.

<sup>3</sup> ATIC PAM No. 5, 17 April 1952

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Project No.

Description

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Such work will include staff studies, compilation of air technical intelligence training information, budget information, special assignments to accomplish specified tasks, photo critiques, etc.

Accomplished work specifically requested by ATIC components which will require less than 40 manhours.

During this reporting period, Major (b) (6) assumed the duties as Chief of the Technical Services Division, Vice Colonel (b) (6) Captain (b) (6) was transferred to Maxwell Air Force Base 12 May 1952, and Major (b) (6) became the Deputy Chief.<sup>5</sup> Major (b) (6) departed 13 June 1952 to the Department of State, Washington, D. C., for two weeks pre-orientation prior to his attendance at the American University, Beirut, Lebanon; his work will consist of a special course of instruction concerning the Near East.<sup>6</sup>

Military strength authorization is 28 officers and 34 airmen, and civilian strength authorized has been changed to 118. Authorizations for planning purposes have not been changed.

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<sup>4</sup> PAM-12, 8 May 52 and PAM-17, 26 May 52

<sup>5</sup> PAM-13, 12 May 52

<sup>6</sup> LO-0000717, 12 Jun 52

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SPECIAL DOCUMENTS PROJECT OFFICE

ORGANIZATION AND FUNCTIONS:

The Special Documents Project Office continued in the manner previously established and serves to centralize the receipt, handling, and dissemination of Top Secret and other documents of a sensitive nature.

Authority<sup>7</sup> was received to disseminate copies of "I" documents and "DRAGON RETURN" reports to personnel in the analysis groups who are properly cleared for access to the security classification assigned to these documents.

During this reporting period the status of operating personnel has changed to some degree, emphasizing the need for a re-audit of civilian positions to adjust to changes in nature and volume of workload. One officer in the grade of Captain and one civilian file clerk are required to fill positions allotted; a request for re-audit of three civilian positions has been made, and action is pending.

The Table of Organization for Headquarters ATIC during reporting period, 1 March 1952, included provision for an additional troop space allotment of four officers and eight airmen for the purpose of manning the "Special Security Office", heretofore absorbed by the office structure of the Special Documents Project Office.

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<sup>7</sup> Department of the Air Force, Hq USAF, AFOSIN - C/DB (AFOSIN-1A2)

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Effective 1 April 1952, The United States Air Force Security Service, Hq Brooks Air Force Base, San Antonio, Texas, assumed full responsibilities for operating, manning, and jurisdictional control of this special activity. Troop space allocations to Hq ATIC were transferred to USAFSS, concurrently with assumption of control. The officer in charge, Major (b) (6) assigned to Hq ATIC with primary duty as USAFSS "Special Security Officer", is also assigned duties as Hq ATIC Top Secret Officer; Chief, Special Documents Project Officer; Custodian of Hq ATIC cryptomaterial; Summary of Court officer and crypto-security officer. Since it is contrary to USAFSS policy to press additional duties upon the SSO, a change in officer personnel is to be made, effective 1 July 1952, completely separating activities of the SSO office and Hq ATIC functions.<sup>8</sup> The SSO office will in effect operate as a tenant activity, serving the Air Material Command and Hq ATIC.

The following have been accomplished during the period under review: alerted and kept informed on a timely basis, all properly cleared persons, facts of newly acquired information made available to Air Technical Intelligence Center by highly controlled procedures; conducted weekly meetings to insure that vital information is properly received, utilized, and disseminated; disseminated vital information of technical nature with acknowledged results to "Headquarters USAF Indications Panel" and other national agencies.

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<sup>8</sup> Top Secret Office, Special Documents Project Office

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initiated Standing Operating Procedures for handling "X" documents, Top Secret "DRAGON RETURN" reports and Secret and lower "DRAGON RETURN" reports for Center use; devised information indexing file and installed desk type "ozalid" machine for reproduction of controlled intelligence information index file; and concluded arrangements for closer and more effective liaison between Headquarters ATIC and national agencies and commands, using this Center's end products.

#### DOCUMENT SERVICES BRANCH

##### ORGANIZATION AND FUNCTIONS:

In general, the organization and functions of the Document Services Branch remained the same as during the previous reporting period.

As of 30 June 1952, eight of the 84 civilian positions allocated remain vacant. Delay in filling most of these vacancies has resulted from inability to find personnel qualified to fill such positions as ATI Specialist (screener), translator, artist-illustrator, and clerk-translator.

Changing requirements have made it necessary to revise job descriptions to coincide with the work being done, and to achieve better alignment of positions with relation to the organizational structure of the Branch. Several conferences have been held during the past two weeks with personnel of the Management Analysis Branch of the Comptroller's Office as the first step in the proposed re-audit of the positions.

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The number of military personnel fluctuates constantly due to the temporary nature of most assignments.<sup>9</sup>

A survey conducted during the month of April for the purpose of estimating manpower requirements for M-Day revealed an anticipated need for 46 additional civilian; three additional officers (Captains); and three airmen, military personnel being acceptable as substitutes in several of the 46 civilian positions.

Since the current translation contract will expire 30 June 1952, negotiations have been in progress for awarding a similar contract for the FY 1953. Proposals from 12 contractors have been considered, and the contract will probably be awarded within the next several weeks.

An attempt has been made, through continuous planning with key personnel of the three sections, to develop a smoother-running and more efficient organization. Results of this planning, and other accomplishments of the Document Services Branch, are reflected in the individual histories of the three respective sections.

#### DOCUMENT PROCESSING SECTION

##### ORGANIZATION AND FUNCTIONS:

Since the first of the year the distribution of ATIC Studies has increased or decreased according to existing requirements at the time

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<sup>9</sup> e.g., Air Technical Intelligence Officers in training who are assigned for a period of several weeks to the Screening Unit, Preliminary Research Section.

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of publication. One study had a distribution of 160 copies while another study had a distribution of 771 copies; at present there are 15 ATIC publications being distributed. The increase in distribution of ATIC publications and the additional requirements of non-ATIC publications have resulted in a distribution of over 4,000 items per month.

ACCOMPLISHMENTS:

As of 1 March 1952 procedures were established to eliminate Hand Receipts for documents assigned ATIC numbers, and a complete record of routed documents within ATIC has been maintained. A daily record is now available of all documents routed to each receiving office. Documents are delivered to the receiving office on an average of eight work hours after ATIC Form 75 is prepared; this process formerly took from two to five workdays. A Follow-up Clerk has been assigned to review Dispatch Sheets and Locator Cards in order to determine if each document has been routed to all intended ATIC activities. When it is determined that further routing is required, the appropriate division office is notified in writing that the document is past due. As a result of the written notices, the division offices have requested duplicate copies of the Dispatch Sheets in order to predetermine suspense dates.

The ATI Repository has been rearranged to provide more storage and work space. A wooden book shelf has been built against one wall for storage of books and ATI Repository records; and a wooden book rack has been installed in the Reading Room area, providing additional space for display of magazines. Files have been completed in the Russian Library, and a record of daily visitors and users has been

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maintained. While records have been established, the actual work has been accomplished by borrowed personnel, airmen, because of difficulty in staffing the clerk-translator position.

New forms have been designed and approved for use in the ATI Repository to expedite services and to maintain a more complete record of documents on loan; and three additional issues of the publication, "Did You Know This About the Document Processing Section?", have been distributed.

Since 1 January 1952, code numbers have been assigned to individual countries; prior to that time, only three country codes were used. The new code numbers have been assigned and used in order to provide easier access to information in the Locator Card Files. These files were reorganized and adjusted in accordance with the new codes; however, the work has not been completed because of a requirement for temporary additional personnel to complete change over from the old codes to the new codes.

Prior to the first of the year, documents were sent to the ATI Repository, placed in manila folders, and then filed. Since that time, however, documents, other than books or magazines, are stapled into manila folders upon receipt in the Document Processing Section. This procedure eliminates the hazard of single page documents becoming attached to other documents with paper clips, and also results in better storage facility while the documents are in the various receiving offices.

A proposal for the indication of routing of documents to be shown on the manila folder to which the document is attached has been submitted. As yet, no action has been taken, but it is anticipated that during the coming months such a procedure will become effective.

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Immediately upon receipt of documents bearing one of the following marks of identification - CIA, AF, EP, FP, IR, ATI, PIR - a temporary record is made indicating the receipt date of the referenced document and the ATIC number assigned. This procedure provides a ready reference to the documents prior to their processing and dispatching.

Conferences were held with representatives of Standard Register Company; the Comptroller, ATIC; and the Document Processing Section for redesigning of the Document Data Form. ATIC Form 75 was revised as a result of these meetings, and was renumbered ATIC Form 475. It is anticipated that the new form will be available sometime after 1 July 1952. ATIC Form 488, a document distribution card, was introduced 1 May 1952; this form lists publication title, source, number of copies received, number of copies distributed, and the symbol or name of the office to which each document is sent.

Three special requests for services not normally performed by the Document Processing Section are as follows: survey for ATIR of time lapse in receiving advance copies of ATLO reports, distribution of CO-B and CO-G reports received direct from source, and briefing of two groups of ATLO's.

Storage space for Locator Cards has become acute, in order to provide additional filing space, action has been initiated to microfilm obsolete locator cards. Microfilming is being accomplished in such a manner that future references to the information on the locator cards will be as easily available as though the information was in the Locator Card Files.

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The function of opening sealed document packages, checking for completeness, signing inclosed receipt forms, and assigning control numbers to each document, was transferred to the Document Processing Section on 1 March 1952 from the Mail Group, Air Adjutant General's Office. In addition the task of sorting documents into inter-office categories continues to be accomplished by this section although it is a normal Mail Group responsibility.

#### PRELIMINARY RESEARCH SECTION

##### ORGANIZATION AND FUNCTIONS:

Administrative responsibility and authority remained the same as during the previous reporting period. No additional duties were assigned to the section during this period nor were any functions removed from this section's purview.

Currently, this section allocated 25 civilians and 23 officers and airmen. During the reporting period there were 18 civilians on duty and 18 officers and airmen. Following the transfer of Major (b) (6) to another Branch within the Technical Services Division, Major (b) (6) became Section Chief in conjunction with his duties as Chief of the Translation Unit. He also serves as Assistant Chief, Document Services Branch.

Under the administration of Major (b) (6) (b) (6) the Preliminary Research Section has been melded into a smoothly operating whole. Personnel maladjustments have been corrected,

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operating procedures have been streamlined, and the tone of the entire organization has been vastly improved.

ACCOMPLISHMENTS:

The Preliminary Research Section operates under three continuing projects: the Screening Project, the Biographic & Facility Register Project, and the Translation Project.<sup>10</sup> The first named project provides for the preliminary screening of documents for pertinency to the mission of ATIC and for the disseminating of the selected documents to the ATI technical analysis for further document research activities. The Biographic and Facility Register Project provides for the compilation, recording, and reporting of biographic information on foreign scientist and technicians and research and development installations. The third project provides for the translation of pertinent foreign data and material in support of document research activities of ATIC; it also provides translation services of technical and non-technical material to Directorate of Intelligence, components of Hq, AMC, ARDC, and ASTIA, and the contribution of translated data and material to CIA, and ASTIA for additional dissemination and for use in the preparation foreign language dictionaries and glossaries of technical aeronautical terms.

The Screening Unit has been operating under the major handicap of being understaffed. By dint of overtime work by regular staff members and part-time assistance from members of other units, the screening panel processed 40,466 documents during the reporting period.

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<sup>10</sup> Projects No. 50406, 50407, and 50408

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it has been impossible to fill the eight civilian position vacancies in the Screening Unit because the job descriptions for such positions were based on a concept of the functions of the Unit which has since changed.<sup>11</sup> Therefore, during this reporting period work has been started to revise these civilian job descriptions to fit present conditions in order that this staffing problem may be resolved. Another step in reorganization of the Unit was taken in a meeting of the Chiefs of ATIA, ATIS, ATIM, and ATISD, when it was decided that five ATI Specialist positions would be transferred from ATISD to ATIS.

Numerous procedural reforms have been accomplished which have speeded and improved the Unit's operation—a requirement file for each technical unit within the Center was set up, file index codes were revised, and cross indexing methods were improved.

An outstanding accomplishment of the Unit was the initiation of a training period for Air Technical Liaison Officers prior to their overseas assignment. These officers, after having worked as screeners, stated that they had a better concept of the kind of information desired by the analysis within the Center, and also stated that it was of assistance to them to learn the types of document being received; the sources of information; the document processing methods; and the ultimate utilization of the information.

During the reporting period the staff of the Biographic Unit reviewed 3,270 routine documents and 222 special documents;

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<sup>11</sup> See history of Air Technical Intelligence Center—30 June 1951—31 December 1951

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735 Biographic and 113 Facility folders were written and added to the Register. Also, the Unit prepared 612 personality sketches and dossiers for the Technical Analysis Division, ATIC, and other requesting agencies.

In order to provide the urgently needed at-hand use of the information in the Biographic and Facility Register, arrangements were made with Battelle Memorial Institute in January to supply duplicate Biographic and Facility data cards to the Unit.<sup>12</sup> A filing system was devised by the staff members, and the system was set up. During this reporting period 72,600 personality and facility data cards, received from Battelle, were screened, from which 26,000 index cards were selected and filed.

The accomplishments of the Translation Unit during this period were augmented by the procurement of additional technically-competent Russian translators. The Unit screened 4376 foreign language documents for pertinency of information, completed the translation of 382, 735 words, and provided approximately 165 on-the-spot brief oral translations daily to analysis within the Center. The Unit monitored the assignment of translations to the contractor and provided monthly bibliographies of available translations to CIA, ASTIA, NACA, Library of Congress, and Air University. The Unit likewise provided an index of all unclassified documents to the Library of Congress.

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<sup>12</sup> See Biographic and Facility Unit History, June-December 1951

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## REPRODUCTION AND GRAPHIC SERVICES SECTION

### ORGANIZATION AND FUNCTION:

During this reporting period, several changes in personnel were made. On 11 March 1952, Captain (b) (6) relieved Captain (b) (6) as Section Chief. 13 (b) (6) was assigned to the position as Acting Unit Leader to fill the vacancy created by the re-assignment of Captain (b) (6), (b) (3) (B).

A reorganization is being planned within the Reproduction Unit in an effort to reduce the impractical "span of control" which now exists and to better facilitate the flow of work. There will be two Miscellaneous Duplicating Unit Supervisors and one Miscellaneous Duplication Equipment Operator, working supervisor. Each unit supervisor will control and be responsible for supervising the total operations of personnel engaged in the reproduction of a variety of material by specific processes with normal duplicating processes, such as mimeograph, ditto, multilith, etc., being one unit and photo and related processes comprising the other.

New personnel assigned to the section during this period consist of one Editorial Clerk (General), one illustrator, and one Microphotographer; however, three resignations have been submitted which will become effective in the future, and planning schedules must be adjusted accordingly. The difficulty in finding personnel with the desired technical background for these positions makes restaffing them a serious problem. The immediate staffing of a clerical position, which has been established in the section office during the reporting period, will greatly aid the operation of the entire section since in order

13 ATIC SO No. 41, 11 March 1952

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to accomplish these duties it has been necessary to utilize the services of the Scheduling Clerk from the Reproduction Unit. A clerk-typist position to assist the Editorial Clerks in the accomplishment of special typing assignments related to layout and graphic art has also been established but not staffed.

ACCOMPLISHMENTS:

The establishment of a library of reproduced art and photographs is at present 75 percent complete. The completion of this project will allow the section to provide a file of graphic and reference air technical intelligence material to be utilized as a basis for the production of technical and scientific illustrations of complete aircraft, components parts of the aircraft, guided missiles, electronics, and foreign research facilities such as wind tunnels, industrial plants, research laboratories, and testing equipment. This library will service not only the Air Technical Intelligence Center but also will provide Special graphic services to authorized intelligence claimant agencies.

Both the Reproduction and Graphic Services Units are confronted with the following major problems.

The lack of space within the working area of Graphic Services is daily becoming a more critical problem, and has an adverse effect on work, security, and morale. The cramped conditions prohibit the freedom of movement and safety from body contact, which is a prerequisite for this type of work, subsequently resulting in a production lag. These aforementioned conditions make the practice of good security prohibitive. A large amount of Secret and Top Secret material is prepared within the working area of Graphic Services, and crowded

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conditions make necessary safeguarding impossible. The accumulation of these undesirable conditions and awareness of the personnel to them creates a state of apprehensiveness which is detrimental to morale. Upon fulfillment of personnel allocations and newly requested allocations, the condition may be termed desperate. At this time, however, it is believed that a solution is the contemplated removal of NCES to other quarters which will free sufficient space to allow for proper quarters for this operation.

High priority un-coordinated projects, such as briefings, special projects, etc., presented a problem since coordinated projects are scheduled quite tightly to assure dissemination of intelligence in time to be of maximum value. Although un-coordinated, meeting the briefing, special project, etc., deadlines is a must. This can be solved only by the use of overtime.

This section, working in conjunction with representatives from DD/I Tech, London, England, and the Aircraft Branch, completed the Anglo-American Joint Study. This publication contains a U.S.-British internationally coordinated study of U.S.S.R. aircraft obtained from a combined pool of information, photographs, and illustrations. Detailed contributions by this Section consist of the following: design and preparation of forms; necessary photographic interpretation; total make-up required, which will include publication layout, pagination, some basic reproduction typing, coordination with NCESKF, etc.; and total art work required.

The Technical Photographic Services Branch (WCUP) has alerted the Reproduction Unit to the fact that in the near future they will be able

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to accomplish our work on such a low-priority basis that ATIS will have to seek other means to have continuous paper printing and necessary processing done, either here at ATIC or by another organization. A series of meetings are being held with interested organization to solve this problem.

The repeated breakdowns of the Foto Flow machine have been a constant bottleneck to both Reproduction and Graphic Services Units; however, this situation should improve in the near future since a new photostat machine is to be delivered to ATIC 2 July 1952.

#### ATI INDOCTRINATION BRANCH

##### ORGANIZATION AND FUNCTIONS:

Major (b) (6) was assigned Chief, ATI Indoctrination Branch, on 28 March 1952 vice Captain (b) (6). Preliminary planning of M-Day requirements indicates an increase of 11 officers, 7 airmen, and 2 civilians for the Branch.

#### PHOTOGRAPHIC SECTION

##### ORGANIZATION AND FUNCTION:

Major (b) (6) was assigned Chief of the Photographic Section on 28 March 1952 vice 1st (b) (6).

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14. ATIC SO No. 53, 28 March 1952.
  15. ATIC SO No. 53, 28 March 1952.

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The following month (b) (6) was promoted from the rank of M/Sgt to WOJG and was assigned as Assistant Chief of the section to assist (b) (6) in the organization of the Photographic Laboratory and to aid in the acceleration of the photo training program.<sup>6</sup> Despite extremely large classes and inadequate darkroom facilities, the morale of personnel is extremely good.

#### ACCOMPLISHMENTS:

Three different training groups in session simultaneously forced consolidation<sup>of</sup> related groups into one which is operating successfully and will complete training one week after the end of this reporting period. This group of 15 individuals is comprised of both Air Attache and ATLO personnel.

The ATI investigator group, which is the largest class so far, has approximately 30 students. The class had to be divided into three groups due to the lack of sufficient darkroom facilities. However, with a few inconveniences plus a few night lab sessions, this plan has worked out rather successfully.

Projects: (photo training and indoctrination for period of January through April 1952.)

Project No. 70013	Attaches (Officers)	12
	Attaches (Airmen)	8
Project No. 70014	ATLO (Officers)	7
Project No. 70015	ATI Investigator (Officers)	12
Project	ATI Investigator (Airmen)	37

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16 ATIC PAM No. 7, 24 April 1952.

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(b) (6) Photographic Engineer, continues research and development on Projects No. 70016 and No. 40012-3, which are approximately 15 percent complete; Project No 70020 has been terminated.

The following two projects were initiated and approved during this period:

Project No. 70031	Render photographic services of a specialized or emergency nature for D/I and ATIC as required.
Project No 70022	Maintain an adequate number of cameras in operating condition in order to perform assigned functions.

#### MILITARY AND CIVILIAN TRAINING SECTION

##### ORGANIZATION AND FUNCTION:

(b) (6) was officially appointed Acting Chief of this section vice Major (b) (6) on 5 January 1952, and was appointed Chief of the section on 19 February 1952.<sup>17</sup>

##### ACCOMPLISHMENTS:

During the reporting period, the Military and Civilian Training Section has both expanded its scope of responsibilities and transferred other responsibilities in compliance with the effort to obtain more homogeneous assignment of endeavor within each section's area of responsibility. The two continuing projects<sup>18</sup> will be examined on the basis of

17. ATIC SO No. 29, 19 February 1952

18. Projects No. 70009 and 70019

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their component phases.

The primary project, Orientation and Indoctrination<sup>19</sup>, has constantly expanded in scope. Sixty new ATIC employees have been received and processed by this section since 1 January 1952. In the two formal ATIC orientations for new employees conducted in January and April, a total of 45 persons were oriented. Of these new ATIC employees, a total of 25 were assigned to the work pool, but have since been absorbed into their respective sections. Ninety requests for training from ATIC military and civilian personnel have been processed by this section to meet the training requirements of ATIC. The indoctrination of visiting air attaches has consumed the major portion of time devoted to this project. Each month witnessed the arrival of a new group of attaches; 9 in January, 12 in February, 12 in March, 8 in April, and 39 in May and June. Thus a total of 80 attaches were indoctrinated in the role and operations of ATIC in the intelligence framework and the activities of the Wright Air Development Center. In addition to the two aforementioned types of orientation, several special projects and groups have been incorporated into the project. Within this category fall the Staff Officers Familiarization Course on the A-4 Gun-Bomb-Rocket Sight arranged for eight officers and the tour of WADC facilities by two ATIC's in training. Conversely, a tour of ATIC facilities was arranged for two WADC officers. Seven ATI investigators were given a comprehensive view of each branch of ATIC by a five-day briefing. The 64 members of the Associate Intelligence Course of the Air Command and Staff School who spent three days at ATIC and the one-day tour of 23 Air ROTC cadets from Miami University, Oxford, Ohio, constituted the largest special groups to be oriented. In response to a Base regulation, an

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Information and Education Program was instituted for airmen personnel of ATIC. Attendance at these meetings has been consistently high: 251 airmen in February, 212 airmen in March, 225 airmen in April, 215 airmen in May, and 213 airmen in June. The debriefing of all returning attaches was transferred to ATIRL.

The Security Consciousness Program<sup>20</sup> has been gaining impetus by utilizing a variety of approaches to the security problem. A "Security Consciousness Thought for the Day" has been placed in the Daily Bulletin each work day since 23 January 1952. Many of these security slogans have been written by ATIC personnel and placed in the security suggestion box provided for that purpose. The 500 copies of the Security Letter used as a reminder in January were supplanted by short security talks presented in the various work units by ATIST-2 personnel. Attendance at these talks was very good, varying only slightly from 262 persons in February, 266 in March, 250 in April, to 256 in May and June. Appropriate security films, such as "Safe-guarding Military Information," "Face to Face with Communism," "You Never Can Tell," were shown to 283, 150, and 212 people respectively, and aided greatly in serving as graphic security reminders. Also, the media of a public address system was utilized on numerous occasions to impart security reminders. An average of ten new employees a month has been given a security indoctrination and test on AFR 205-1. A concerted drive to have all personnel not previously tested take the security familiarization test on AFR 205-1 resulted in the testing of 78 employees. The security poster effect has almost tripled in the past four months, starting with a production of 40 posters in January, 87 in February, 91 in March, 112 in April, and 100 in May and June. The addition of flashing

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lights to the large overhead posters in the hallway has been very successful in attracting attention to the security reminders. The entire program has been an increasingly successful venture, and it is helping reduce the number of security violations to a minimum. (b) (6) C O, Wright-Patterson Air Force Base, wrote a personal letter to (b) (6) C O, ATIC, complimenting the Center on its showing during a security check made by the Base Investigators Office on 28 May 1951.<sup>21</sup>

#### ATI TRAINING SECTION

##### ORGANIZATION AND FUNCTIONS:

There has been no change in the functions of this section during the reporting period. Captain (b) (6) was appointed Chief, ATI Training Section, vice Captain (b) (6)<sup>22</sup>

##### ACCOMPLISHMENTS:

###### ATI INVESTIGATOR COURSE - Proj No. 70018

Class 52-A, ATI Investigator Course, was graduated on 29 February 1952 and consisted of the following personnel: three officers from ATIC, two officers from ARDC, one officer from RAUF, one officer from ADC, four airmen from ATIST, two airmen from ATIA, five airmen from ATIAL, and one airman from ATIPA.

Class 52-B, comprising four officers from ATIC, two officers from ADC, 19 airmen from ADC, and four airmen from ATIC, began ATI training on 31 March 1952.

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21. Tab D

22. PAK-27, par 1, 8 Jun 52

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ATI SCHOOL GROUP - ATI INVESTIGATOR COURSE - Proj No. 7001

Manuals for each phase of training in the ATI Investigator Course are being compiled by the instructors; the manuals on Power Plants, Photography, Electronics, and Armament have been completed. The Electronics manual has been revised, and the Armament manual is in the process of revision. Manuals on Air Frames and Associated Equipment will be published soon.

The ATI Investigator Course area in Bldg 89, Area C, WPAFB, is being renovated in order to facilitate the mission of the school. The school now has its own supply room in which are kept those items necessary to a field trip that takes place at the end of each class. A photography dark room has been set up so that the students can now develop the pictures taken as a part of the training. The establishment of this unit has eased the load on the Photographic Laboratory located at ATIC: at present, printing facilities are so limited that they are available only for the creation of training aids. A display of ATI activities has been erected just outside the classroom. The ATI Investigator Course has been lengthened to nine weeks, with the classes running from 0800 to 1500 hours, Monday through Friday.

A proposal to transfer the training of Technical Intelligence Specialists from ATIC to the Lowry Intelligence School has been reconsidered by the Directorate of Intelligence. A conclusion was reached that the present placement of the training responsibility offers advantages which cannot be met by the Lowry School.<sup>23</sup>

No specific project number has been allocated to account for the expenditure of much of the time of the ATIC Group and secretarial staff

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23. DD Form 96, 4 Jun 52, Subj: Tng of Tech Intell Specialists

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for debriefings of Korean returnees. ATIO Group personnel were utilized extensively in the preparation and presentation of required debriefing of Korean returnees for the D/I, Hq USAF; the time was divided between project No. 80006 and project No. 70018. A request has been made for a specific project accountability number to cover these debriefings, but as of this date, approval has not been received. It may be noted that adequate equipment was not available to properly carry out these debriefings; however, equipment was improvised, and the debriefings were carried on as scheduled.

Travel accomplished during the period consisted of a familiarization trip of west coast industries including Consolidated Vultee Corporation, Lockheed Aircraft Corporation, North American Aviation Inc., Northrop Aviation Inc., Rohr Aircraft Corporation, and Ryan Aeronautical Corporation. Other travel during the period consisted of an industry familiarization trip to Cleveland, Ohio, with visits to ALCOA and Thompson Products.

#### ATIO TRAINING - Pro No. 80006

During this period the ATIO training reached its highest peak with a total of 72 officers, airmen, and civilians receiving either part or all of the prescribed course. Of this number, 43 have either completed their training or have been reassigned to other projects.

During the reporting period, Mr. (b) (6) ATIO Collection Indoctrination Specialist for the Group, received an Air Force Award for outstanding service in the field of Russian Studies contributing to the ATIO and ATIO Training Programs. The studies involved compilation of several thousand English-Russian technical terms, lectures, and indoctrination in Russian ideology as compared with the political and economic

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systems of the free world,

#### MATERIEL SERVICES BRANCH

##### ORGANIZATION AND FUNCTIONS:

Captain (b) (6) became Acting Chief of the Materiel Services Branch following the reassignment on 8 May 1952 of Major (b) (6) former Chief.<sup>24</sup>

##### ACCOMPLISHMENTS:

Preliminary planning of K-Day requirements determined that an increase of three airmen and 16 civilians would fully implement the Branch.

#### FOREIGN EQUIPMENT SECTION

##### ORGANIZATION AND FUNCTIONS:

Although final plans have not been consummated, it is anticipated that ATISE-1 will assume a greater role in the flight test and maintenance of future flyable foreign aircraft which may be received by the Center. Present policy is to turn all flyable foreign aircraft over to the Flight Test Division of WOT for both flight test and maintenance. Since ATISE-1 has the qualified maintenance personnel, a thorough knowledge of the replacement parts available, and the channels through which additional spares may be procured, active participation and closer liaison with those responsible should serve to expedite any flight test program involving foreign aircraft. Participation would aid considerably the newly organized ATIC Flight Operations Office in the duties of instructing qualified rated personnel in a familiarization program by furnishing maintenance personnel and equipment spares.

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24. PAN-12, 8 May 52

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ATISE-1 has been allocated the services of a translator who will also act in the capacity of photographer. While this addition does not complete the authorized personnel strength of this section, the present strength appears adequate to carry out our responsibilities in view of the present rate material is being returned from overseas theaters.

Military chief, Captain (b) (6) has been assigned to replace the former acting civilian chief, (b) (6) 5

ACCOMPLISHMENTS:

Although no new projects have been initiated, a new project is anticipated to cover the additional responsibilities of the Foreign Equipment Section.

HANDLING OF FOREIGN EQUIPMENT - Proj No. 60001

Since last reporting period, approximately 1166 new items have been received and catalogued.

SOVIET NAME PLATE AND MARKING DATA - Proj No. 60002

This project is continuing satisfactorily.

SOVIET STOCK NUMBERING DATA - Proj No. 60003

Although work on this project was considerably restricted due to the shortage of personnel, greater activity on this project can be expected due to the acquisition of the services of a translator. Since 1 May 1952 sufficient additional marking data have been accumulated so as to warrant the issuance of a new list which is now in the process of compilation.

DISPLAY OF FOREIGN EQUIPMENT - Proj No. 60005

The requirements for items of foreign equipment to be used in displays, training, briefings, etc., are considered above those anticipated. Requests for equipment from other activities have been received - ARDC, AF Museum,

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D/I Hq USAF, HADC, recruiting agencies, and others. To meet this responsibility, displays are now being made with a view toward eventual use of portable displays, in order to provide a keener insight into the workmanship, as well as the ingenuity, of foreign aircraft component designers. A series of eight displays are being furnished ARDC in order to supplement ARDC briefings. The seventh display was held up due to the lack of transportation occasioned by the May oil strikes. These displays were prepared to cover the following fields: reciprocating engines, jet engines, parachutes, clothing, electronic equipment, guns and ammunition, instruments, electrical equipment, carburetors, pumps, valves, and related equipment. As of 30 June 1952, there have been 242 visitors to view the display of foreign equipment. These visitors have included Major (b) (6) D/I, Hq USAF and his party; representatives from Goodyear, Akron; Thompson Products, Inc., Cleveland; RCAF officers, Ottawa; and representatives from components of AC, ARDC, CIA, and Hq USAF. Several special tours were conducted for reserve officers and air attaches.

Reporting of foreign equipment to JMA - ATIC Form 428, "Notice of Receipt of Foreign Equipment," has been approved and is now in use for reporting the receipt and preliminary evaluation of items of foreign equipment to JMA. In connection with this form, ATICOM 200-6, 10 June 1952, has been published for the purpose of establishing the policy and procedure for reporting receipt and preliminary evaluation of foreign equipment. Since the last reporting period, 655 JMA Forms<sup>26</sup> have been prepared and forwarded to ATIA for the reporting of receipt and preliminary evaluation of foreign equipment. Of this number, 197 items of foreign equipment have been reported to JMA. A manual is being prepared which will explain in

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26. ATIC Form 428

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detail the system of stock numbering foreign intelligence equipment, and it is anticipated that this manual will be ready for issuance in the near future.

#### ATI EQUIPMENT SECTION

#### ORGANIZATION AND FUNCTIONS:

On 2 January 1952 concurrence was forwarded to the Air Attaches that ATISE-2 had been authorized to procure specialized equipment and supplies, both USAF and foreign manufacture, for the Air Attache system.

Precedence listing of IX-30 was established 9 January 1952 for the Air Attache system and equipment and supplies under Project Minnow.

A special issue authority permitting MR 28 to procure from the USAF armed service stock, specialized equipment and supplies for all highly classified intelligence projects, was rescinded 11 February 1952.

#### ACCOMPLISHMENTS:

PHOTOGRAPHY PROJECTS - Proj Nos. 70013, 70014, 70015, 70016, and 70021: Additional photographic intelligence training requirements created various arduous procurement and supply problems too numerous to itemize but which were solved to the satisfaction of the initiating activity.

Proj No. 70015: This project established an auxiliary intelligence photographic training laboratory in Bldg 89 to take care of the overflow of personnel scheduled for the course at ATIC, Bldg 263. The additional equipment and supplies required, photographic and air conditioning, were obtained within the deadline established and forwarded to Building 89. There is one exception, however; ATISE-2 requested an Omega D II Projection

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Printer which has not been obtained due to the short deadline and the fact that this item is one of the critically short photographic items. It has been ordered on an S-3 priority through the prime depot, and a strict follow-up is being maintained to expedite the final receipt. The above listed training projects required a scheduling of buses, staff cars, and carryall transportation which was accomplished through the base motor pool.

Proj No. 70018: One major field training problem has been completed, and the second problem is currently in operation. Each problem required ATISE-2 to obtain additional equipment to make 30 personnel self-sustaining while on the program. These problems also necessitated the loan of the following listed vehicles from base motor pool during the length of time required to complete the problems: three C-2 wreckers, two 40 ft trailers, two 25 ft flat bed trailers, one jeep, two  $\frac{1}{2}$  ton Ford trucks, and one ambulance. These problems also necessitated two special aircraft flights to prime depots (Middletown, Pa., Brookley AFB) to obtain supplies within the deadline established by the initiating activity.

COLLECTION OF ATI INFORMATION (General) - Proj No. 40012

COLLECTION OF ATI INFORMATION (Foreign Equipment and Material) - Proj No. 40020: These projects were based on the procurement of highly specialized modified photographic equipment and the couriering of them into Building 278. Procurement problems were solved; the deadline of requesting activity, ATIRL, was met with complete satisfaction; and purchase requests and contracts were let to sole source manufacturer within five days. This required a special set of conferences, correlation, and liaison work with the respective authorities of the Procurement Division. These problems also necessitated four TDY trips by the section chief,

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ATISE-2, to settle contractor's difficulties which arose between the Eastern Regional Procurement Office, Prime Contractor, and Sub-Contractor; and to expedite, pick-up, and courier final complete assemblies back to WPAFB, ATIC.

PROCESSING OF FOREIGN EQUIPMENT - Proj No. 9975: Requirements were established by Major [REDACTED] on highly specialized technical electronic equipment for the electronics laboratory. Due to the nature of this equipment, it required an unusual amount of research through TM-Manuals, Technical Classes 16J, 16K, 08, 030 to finally cross reference it to Class 170. This also required research into Technical Orders, manufacturers' catalogues, and electronics literature. The majority of the 24 items required were ordered, after conferences between ATISE-2 and Hq AWC Supply Division, with the request that they be purchased through local procurement until such time as ATISE-2 special issue authority was granted. Purchase requests were submitted on the balance of items through 731 intelligence funds. Final delivery date of the majority of items is not available at this time due to Armed Services' heavy contracting with various contractors, thus, creating a backlog. The services with the higher precedence listings receive the equipment first, and ATIC receives equipment in accordance with precedence listing.

CLASSIFIED ATIAN-2 PROJECT - Proj No. 20024; ANALYSIS OF SOVIET RADAR DIRECTION FINDER RKV-45 - Proj No. 20027: These projects, of a highly classified nature, required the emergency procurement of specialized electronic intelligence equipment, and the requirements were forwarded to ATISE-2 by Project Monitor, (b) (6). This procurement of approximately 30 line items required correlation and liaison with both the Procurement Division and the Directorate of Supply for authority to have the items sent

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to overseas collection points through ATISE-2, Building 278. Special flights were set up from various depots from which items were obtainable, such as Sacramento, California; San Antonio, Texas; Mobile, Alabama; Ogden, Utah; Rome, New York; Seattle, Washington; and the Signal Corp in Baltimore, Maryland. Upon collection of the majority of items, which totaled approximately 3000 lbs., they were inspected by the project monitor; and by a special flight, the items were couriered to the California Aerial Overseas Depots. The above listed problems were concluded in approximately three weeks. There were also items of specialized photographic equipment which required purchase requests and contracts let to a contractor within one week. Naturally, all items from contracts were not immediately available from the contractor; therefore, arrangements were made with WADC to loan them to ATIC and to be replaced as soon as available from the contractor. Since requirements of projects stated that two WADC personnel were to go to the final destination, arrangements were made with the contractor to pick up the balance of the items at the factory by the personnel who couriered the equipment to overseas destination. At present, additional requirements on these projects are out on purchase requests and contracts and equipment will be forwarded to final destination at the earliest possible date.

HANDLING OF FOREIGN EQUIPMENT - Project No. 60001; DISPLAY OF FOREIGN EQUIPMENT - Project No. 60005: These projects require numerous continuing stock tracing and supply support which have been completed within the deadlines. They also require transportation support on long distance hauling which generally required two enlisted senior vehicle operators. The following trips were required: three return trips to Williamsport, Pa., and two return trips to Buffalo, New York.

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PROJECT SNOWFALL:<sup>27</sup> It was necessary to obtain the loan of a carryall vehicle from Griffis AFB; the loan of the other vehicles required were previously reported in Historical Report dated 31 December 1951. Upon completion of this project, all equipment was returned to ATISE-2, and all discrepancies were taken care of. One vehicle had a slight accident on project; repair was accomplished through WPAFB, Repair Shop. Drivers were furnished to return the borrowed vehicles to their respective bases.

PROJECT MINNOW: This project required intermediate supply support which the section chief, the project monitor's liaison officer, obtained within a minimum amount of delay.

PROCUREMENT OF SPECIAL EQUIPMENT FOR ATL AND AIR ATTACHE OFFICES - Proj No. 60004: This project is assigned to ATISE-2, and the following information is a summary of the routine and unusual problems that were met in the past six months.

The following is a list of shipments to overseas stations: nine shipments, ten packages, to PEARF; seven shipments, seven packages, to USFA; 11 shipments, 13 packages, to USAFE; and ten shipments, ten packages, to A/A.

Supply actions that were undertaken are as follows: 218 issue slips, 61 turn-ins, 100 transactions on local procurement and petty cash, two survey reports, 26 purchase requests initiated, 12 purchase requests completed, seven back purchase requests cancelled, and 28 inventories of MR.

Special issuance authority was revoked on Project No. 60004, 1 February 1952, and new authority for special issue is at present in D/I and Hq USAF for concurrence. Since it is considered policy matter, it is being handled through D/I, Plans and Policy Division, by Mr. (b) (6), (b) (3) (B)

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27. Complete equipment for nine military personnel for self-sustaining winter operations;

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Authorization and concurrence of ATIC was received 2 January 1952 to procure any non-standard, non-listed item of photographic and electronic equipment and supplies for 60 Air Attache stations.

Flying clothing, parachutes, and survival equipment were obtained. Obtaining equipment and clothing involved receiving these items on MR 28 and typing shipping documents transferring accountability and appropriate destination overseas. This problem involved a trip by pickup truck to the prime depot with a total round trip mileage of 190 miles.

The Air Marshall of Thailand was presented a gift of blue flying coveralls; this was accomplished to the best interest of the government through expenditures on project.

Flying clothing for (b) (6) was obtained by a special 190 mile round trip to the prime depot and a transfer of accountability through typing of shipping documents to AF 1977 SO.

Two tires from a YAK-9 aircraft were shipped to Goodyear for recapping, and one has already been completed. One was given to Goodyear for destruction in evaluation and analysis test, and a report is to be submitted to Major (b) (6), (b) (3) (B) ATI Flight Operations Office was notified by Goodyear that the cost of 20 tires would be approximately \$200 each, which would take care of the development of a tire and a mold. This information was verbally relayed to Lt (b) (6).

Transportation under Proj No. 60004: Three  $\frac{1}{2}$  ton Ford pick-up trucks are assigned to ATISE-2; one is assigned to both the Mail Room and ATISE-3. Over a six months period, 3,248 miles were covered. Two trucks are assigned for complete coverage of ATIC runs and have covered a total of 3,315 miles since 1 January 1952. Approximately 13 190 mile return trips were made to

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Shelby, Ohio, Wilkins AF Depot. The approximate number of transportation requests received and completed was 650.

#### OFFICE EQUIPMENT SECTION

##### ORGANIZATION AND FUNCTIONS:

There has been no change in either functions or key personnel during this reporting period.

##### ACCOMPLISHMENTS:

Operations of ATISE-3 are considered routine; however, many requirements placed on this section by ATIC, due to the time element and scarcity of material, pose a far from routine problem. Normally the local purchase of any item through Base Procurement consumes anywhere from 30 to 120 days, and often the cost of processing the paper work exceeds that of the item. Due to the efforts of various RPO's, however, Base has set up a petty cash fund which enables the supply sections to purchase small amounts of non-stock expendable supplies locally. Local purchase of M/R items and larger quantities of expendable supplies are still plagued by more than normal delay. There seems to be no specific point where delay occurs, rather an accumulation throughout the various steps.

Other activities of this section included 50 hours overtime expended in moving units of the Center; request follow-up, and completion of 35 telephone moves; painting hallways; and constructing items of equipment not available in supply. Approximately 350 ATIC Work Orders were processed in completing the last item, and 25 Air Installation work orders were initiated and followed up.

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1126TH AIR INTELLIGENCE SERVICES SQUADRON

The 1126th Air Intelligence Services Squadron, Air Technical Intelligence Center, has continued to operate under the direction of the Commanding Officer, 1125th USAF Field Activities Group (ATIC), for the entire period.

(b) (6) was assigned as Commanding Officer on 3 April 1952,<sup>28</sup> and (b) (6) was assigned additional duty as Squadron Adjutant on the same date.<sup>29</sup>

Changes in squadron strength are indicated below:

<u>1 January 1952</u>	<u>30 June 1952</u>
1 Lt Col	3 Majors
1 M/Sgt	1 Capt
2 S/Sgts	1 T/Sgt
1 Sgt	1 A/1C
2 Cpls	2 A/2C

Authorized strength for the squadron, 16 officers and 15 airmen, is as follows:

1 Lt Col	2 M/Sgts
5 Majors	9 T/Sgts
8 Capts	1 S/Sgt
2 Lts	3 A/2C

28. ATIC SO No. 56, 3 Apr 52

29. ATIC SO No. 56, 3 Apr 52

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GLOSSARY

AOB	Air Order of the Battle
ATIA	Technical Analysis Division
ATIAE	Electronics Branch
ATIAE-3	Countermeasures Section, Electronics Branch, Air Technical Intelligence Center
ATIL	Air Technical Intelligence Liaison
ATIRC-1	Requirements Section
ATIRL	Air Technical Liaison Program Branch
ATIS	Technical Services Division
ATISD	Document Services Branch
ATISD-1	Document Processing Section
ATISE-1	Foreign Equipment Section
ATISE-2	ATI Equipment Section
ATL	Air Technical Liaison
ATIO	Air Technical Liaison Officer
Auth	Authority
BMI	Battelle Memorial Institute
Cl	Completed
Def	Deferred
ECB	Estimated Completion Date
FY	Fiscal Year
Init	Initiated
NACA	National Advisory Committee on Aeronautics
ND	Not Determined

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NE	Not Established
FCS	Permanent Change of Station
PM	Project Monitor
PFS	Project Stork Proposal
SAE	Society of Automotive Engineers
SRI	Specific Request for Information
SSO	Special Security Officer
USAFSS	United States Air Force Security Service
WCERO-2	Air Radiation Laboratory
WCUP	Technical Photographic Services Branch

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APPENDIX

TAB A - General Order Number 31, Headquarters Command, United States Air Force, dated 1 June 1951

TAB B - Organizational Chart, Air Technical Intelligence Center, approved 29 May 1952

TAB C - Forms Approved by the Management Analysis Section, Comptroller Branch, from 1 January 1952 - 30 June 1952

TAB D - Basic Letter from CO, W-PAFB, 18 June 1952, to CO, ATIC, "Security"

TAB E - Semi-Annual Report of the Air Technical Intelligence Center, Fiscal Year 1952 (Statistical History)

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APPENDIX

HEADQUARTERS COMMAND  
UNITED STATES AIR FORCE  
Holling Air Force Base  
Washington 25, D. C.

GENERAL ORDERS )

NUMBER 31 )

1 June 1951

- SECTION I.....Designation of the Air Technical Intelligence Center  
SECTION II.....Designation and organization of the 1125th USAF Field Activities Group (AFIC)  
SECTION III.....Designation and organization of the 1126th Air Intelligence Services Squadron (AIS)

SECTION I

1. Announcement is made of the designation, effective 21 May 1951, of the Air Technical Intelligence Center, with station at Wright-Patterson Air Force Base, Dayton Ohio. The Air Technical Intelligence Center will operate directly under the control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF.

2. The mission of the Air Technical Intelligence Center is to produce Air Technical and Scientific Intelligence under the operational control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF. Specifically, the responsibilities of Air Materiel Command for the production of Air Technical Intelligence as contained in letter, Department of the Air Force, Headquarters USAF, subject: "Responsibilities of Air Materiel Command in the Production of Air Technical Intelligence," file AFOM 321.021, dated 20 June 1950 will be assumed by the Air Technical Intelligence Center upon organization of the 1125th USAF Field Activities Group (AFIC).

3. The Air Force Organization Status Change Report (RCS-AF-SC-02) will be submitted in accordance with current instructions.

4. Authority and reference: Letter, Department of the Air Force, subject: "(Unclassified) Designation of the Air Technical Intelligence Center," file 322 (AFOM 267g) dated 18 May 1951 and letter, Department of the Air Force, Headquarters USAF, subject: "(Unclassified) Organization of the 1125th Field Activities Group (Air Technical Intelligence Center, Wright-Patterson AFB, Dayton, Ohio); and the 1126th Air Intelligence Services Squadron," file AFOM dated 25 May 1951.

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GENERAL ORDER NUMBER 31

SECTION II

1. Effective 1 June 1951, the following Table of Distribution Unit is Designated and Organized as indicated at Wright-Patterson Air Force, Base Dayton, Ohio:

DESIGNATION	ASSIGNMENT	TD-NO	INITIAL AUTHORIZED STRENGTH			
			OFF	HE	CIV	ADG
Headquarters, 1125th USAF Field Activities Group (ATIG)	1020th USAF Special Activities Wing	(ATIG-1)	191	97	331	819

2. Personnel of the Air Technical Intelligence Center will be assigned or appointed to Headquarters, 1125th USAF Field Activities Group (ATIG).

3. The 1125th USAF Field Activities Group (ATIG) will operate under Headquarters Command, USAF for the following purposes:

- a. Non-appropriated fund participation when applicable.
- b. Strength accountability and such other statistical reports as may be required.
- c. Maintenance of Command copies of military personnel records.
- d. Such other purposes as may be specified by Headquarters USAF.
4. Headquarters USAF will be responsible for:
  - a. Staff supervision of the 1125th USAF Field Activities Group (ATIG). This will be performed by the Directorate of Intelligence, Headquarters USAF in accordance with procedures promulgated in separate directives.
  - b. Assignment and re-assignment of military personnel.
  - c. Approval of man power requirements and allocation of personnel authorizations for the 1125th USAF Field Activities Group (ATIG) and subordinate units.
  - d. Effectiveness Reports on the Chief, Air Technical Intelligence Center. The Directorate of Intelligence, Headquarters USAF will prepare Effectiveness Reports on the Chief, Air Technical Intelligence Center.
  - e. Funding in accordance with the following procedures.

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GENERAL ORDERS NUMBER 31

- (1) Operating funds for the Air Technical Intelligence Center will be allotted in accordance with AFR 172-53 through the Secretary of the Air Staff (43) to Headquarters Wright-Patterson Air Force Base in accordance with existing funding procedures.
- (2) Funds under the appropriation "Contingencies of the Air Force" for the Air Technical Intelligence Center will be allotted through the Directorate of Intelligence, Headquarters USAF (40) to Headquarters Wright-Patterson Air Force Base in accordance with existing funding procedures.

5. The Chief, Air Technical Intelligence Center will function as Commanding Officer of the 1125th USAF Field Activities Group (AFIC) and will be responsible for:

a. Publishing such other orders as may be necessary to the effective accomplishment of the Air Technical Intelligence Center mission. Pursuant to the authority contained in AFM 10-1, AFT 11.2, Headquarters, Air Materiel Command will issue necessary invitational travel orders as required by Air Technical Intelligence Center.

b. Preparation of Effectiveness Reports and maintenance of other appropriate records on all personnel assigned or attached to the 1125th USAF Field Activities Group (AFIC) and rendering required personnel reports to the 1020th USAF Special Activities Wing.

c. Directing the operational activities of all personnel assigned or attached to the 1125th USAF Field Activities Group (AFIC).

d. Effecting necessary administrative, logistic, funding and Air Intelligence coordination with concerned agencies for accomplishment of the Assigned mission.

e. Submitting to the Director of Intelligence, USAF, the annual budget estimates covering "Contingencies of the Air Force" and operating fund requirements for the Air Technical Intelligence Center in accordance with annual budget directives.

f. Promotion of airmen assigned to the 1125th USAF Field Activities Group (AFIC) to fill authorized vacancies from Corporal through M/Sgt. This will be in accordance with monthly quotas allocated directly to the 1125th USAF Field Activities Group (AFIC) by Headquarters USAF.

g. Delegating such responsibilities as are considered necessary and desirable to commanders of units subordinate to the 1125th USAF Field Activities Group (AFIC)

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GENERAL ORDERS NUMBER 31

6. The 1125th USAF Field Activities Group (AFIC) will be based at Wright-Patterson Air Force Base, Dayton, Ohio, and will be supported administratively and logistically by Air Materiel Command. This support will be in accordance with the provisions of Air Force Regulation 11-4, 11-4a, Air Force Regulation 172-53 and a Tenancy Agreement to be formalized between the Air Technical Intelligence Center and Headquarters Air Materiel Command. Inspection activities other than those performed by Headquarters Air Materiel Command will be performed under the direction of the Inspector General, Headquarters USAF. The Air Technical Intelligence Center is considered a special activity and is authorized such services as it may require under the provisions of applicable directives.

7. Equipment is authorized by applying the appropriate Tables of Allowances and such other additional equipment as is specifically authorized by the Department of the Air Force.

8. Obligate to the extent necessary the appropriate allotments in accordance with Air Force Manual 172-1.

9. The Air Force Organization Status Change Report (RCS-AF-36-02) will be submitted in accordance with current instructions.

10. Authority and reference: Letter Department of the Air Force, subject: "(Unclassified) Designation of the Air Technical Intelligence Center," file 322 (AFMHO 267 G) dated 18 May 1951 and letter, Department of the Air Force, Headquarters USAF, subject: "(Unclassified) Organization of the 1125th Field Activities Group (Air Technical Intelligence Center, Services Squadron," file AFMHO dated 25 May 1951.

SECTION III

1. Effective 1 June 1951, the following Table of Distribution Unit is Designated and Organized as indicated at Wright-Patterson Air Force Base, Dayton, Ohio:

DESIGNATION	ASSIGNMENT	TO-DO (AFIC-1-A)	INITIAL		
			AUTHORIZED	STRENGTH	
1126th Air Intelligence Services Squadron (AFIC)	1125th USAF Field Activities Group (AFIC)		16	15	31

2. The 1126th Air Intelligence Services Squadron (AFIC) will operate under the direction of the Commander, 1125th USAF Field Activities Group (AFIC) to provide Air Technical Intelligence training for selected personnel to meet the requirements of certain overseas and XI Commands for field collection teams.

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GENERAL ORDERS NUMBER 31

3. Equipment is authorized by applying the appropriate Tables of Allowances and such other additional equipment as is specifically authorized by the Department of the Air Force.

4. Obligate to the extent necessary the appropriate all elements in accordance with Air Force Manual 172-1.

5. The Air Force Organization Status Change Report (RC3-AF-90-02) will be submitted in accordance with current instructions.

6. Authority and reference: Letter, Department of the Air Force, subject: "(Unclassified) Designation of the Air Technical Intelligence Center," file 322 (AFHQ 267g) dated 18 May 1951 and Letter, Department of the Air Force, Headquarters USAF, subject: "(Unclassified) Organization of the 1125th Field Activities Group (Air Technical Intelligence Center, Wright-Patterson AFB, Dayton, Ohio); and the 1126th Air Intelligence Service Squadron," file AFHQ dated 25 May 1951.

BY COMMAND OF BRIGADIER GENERAL LEE:

OFFICIAL:

(b) (6)

Colonel, United States  
Chief of Staff

(b) (6)

Major, United States Air Force  
Adjutant General

DISTRIBUTION: "A" plus  
30 - CG, 1020th USAF S/A Wing  
10 - HQ, AIC  
10 - HQ USAF, AFHQ: AFHQ

A CERTIFIED TRUE COPY:

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(b) (6)

1st Col, USAF

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TAB 4-5

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FORMS APPROVED BY THE MANAGEMENT ANALYSIS SECTION  
CENTROCELLER BRANCH  
1 January 1952 - 30 June 1952

ATIC FORM NUMBER	TITLE OF FORM	DATE APPROVED
106	ATIC VISITORS REGISTRATION CARD	21 Apr 52
107	ATIC AFTER DUTY REGISTER	21 Apr 52
108	ATIC LOCATOR SHEET	1 May 52
118	PROJECT STOCK PROJECT PROPOSAL SHEET	11 Mar 52
118A	PROJECT STOCK PROJECT PROPOSAL COORDINATION SHEET	11 Mar 52
201	RECORD OF SECURITY CLEARANCE	8 Feb 52
202	TOY TRAVEL SCHEDULE	17 Jun 52
203	CARRIER DISPATCHING SHEET	20 Jun 52
252	INVESTIGATIVE REPORT FOR PROMOTION PURPOSES	24 Jan 52
253	OFFICER PERSONNEL REQUISITION	11 Feb 52
254	"DDMO FORM 21A, 'SERVICE RECORD' CHECK LIST"	11 Feb 52
255	"DD FORM 230 'SERVICE RECORD' CHECK LIST"	11 Feb 52
256	REQUEST FOR LEAVE OF ABSENCE (MILITARY PERSONNEL)	16 Mar 52
257	OFFERING CLEARANCE FOR ADDRESS	24 Mar 52
258	INVOICE CLEARANCE FOR ADDRESS	24 Mar 52
259	SQUADRON ISSUE HAND RECEIPT	2 Jun 52
276	PROJECT ESTIMATE WORK SHEET	16 May 52
299	ATIC PERSONNEL DATA CARD	2 Mar 52
301	ADR INTELLIGENCE DIRECT WORK SHEET	5 Feb 52
302	LEDGER PAGE FOR LOG OF PROJECT CONTROL FORMS	13 Feb 52
303	PROJECT STOCK CONTROL RECORD	5 Feb 52
326	DOCUMENT EVALUATION CARD	1 Feb 52
329	PROJECT LOGS RECORD CARD	2 Jan 52
330	PROJECT TIME CHARGES	11 Mar 52
331	BALLOON LAUNCH DATA CARD	27 May 52
332	RADAR OBSERVATION DATA SHEET	18 Jan 52
351	TABULATOR CARD FOR ATIC PROJECT 20024	2 Jan 52
352	(CONFIDENTIAL)	31 Mar 52
353	(CONFIDENTIAL)	23 Apr 52
354	ELECTRONICS PROMOTION FILE CARD	27 May 52
400	DAILY SECURITY CHECK LIST	20 Mar 52
401	SPECIAL DOCUMENT REGISTER CARD	2 Apr 52
402	(SECRET)	25 Apr 52
426	STOCK RECORD CARD	11 Feb 52
427	FOREIGN EQUIPMENT STOCK RECORD CARD	11 Mar 52
428	REPORT ON PRELIMINARY EXAMINATION OF FOREIGN EQUIPMENT	25 Mar 52
430	N/A STOCK RECORD CARD	3 Apr 52
431	NATIVE PART OR TIME NUMBER RECORD	8 May 52
450	ATI INVESTIGATOR COURSE PHOTO LOG & EXPOSURE DATA	9 Jan 52
451	RECORD OF ATTENDANCE	5 Mar 52
452	ON THE JOB TRAINING	25 Apr 52
453	ATIC PHOTO WORKSHEET	7 May 52
454	ORAL EXPRESSION EVALUATION FORM	30 Jan 52
470	DOCUMENT PROCESSING BRANCH REQUEST (Rev)	8 Apr 52
481	WEEKLY ACTIVITY REPORT - ATI REPOSITORY	17 Jan 52
482	DOCUMENT CONTROL FORM	21 Jan 52
483	CHANGES SERVICES CROSS REFERENCE FILE	29 Jan 52
484	CHANGE-OUT SHEET (ATI REPOSITORY)	18 Feb 52

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<u>ATIS FORM NUMBER</u>	<u>TITLE OF FORM</u>	<u>DATE APPROVED</u>
485	DOCUMENT REQUEST AND CHANGE OUT CARD	18 Feb 52
486	DOCUMENT ROUTING & CONTROL	26 Feb 52
487	NON-ATIS DOCUMENT DISTRIBUTION	22 Apr 52
488	DOCUMENT DISTRIBUTION CARD	1 May 52
490	TRANSLATION DAILY PROJECT RECORD	24 Mar 52
491	TRANSLATION MONTHLY PROGRESS REPORT	24 Mar 52
492	IDENTIFICATION TRANSLATION FORM	26 May 52
495	TECHNICAL GEOGRAPHICAL REPORT	1 Jan 52
496	PUBLICATION DATA SHEET	20 Jan 52
498	GRAPHIC DATA SHEET	22 Apr 52
499	WORK REQUEST - GRAPHIC SERVICES & REPRODUCTION BRANCH	18 Mar 52
508	WEEKLY JOB TIME REPORT	8 Jan 52
590	ATIS WEEKLY PERSONNEL CHANGE NOTICE	25 Feb 52
600	INDICATION OF INTEREST FORM	16 Jan 52
650	ATIS LOCATOR CARD	20 Jan 52
675	AFFIDAVIT IN LIEU OF PASSPORT	20 Mar 52
700	TACTICAL ANALYSIS CHART	25 Mar 52
701	AIR ROOM UTILIZATION SCHEDULE	31 Mar 52

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HEADQUARTERS  
WRIGHT-PATTERSON AIR FORCE BASE  
Office of the Commanding Officer

28 June 1952

SUBJECT: Security

TO: Commanding Officer  
Air Technical Intelligence Center  
Wright-Patterson Air Force Base  
Ohio

1. The Air Technical Intelligence Center is to be congratulated for the interest in security shown in connection with an "after normal duty hour inspection" conducted by personnel of the Base Air Provost Marshal's Office on the night of 28 May 1952 in Building 263.

2. It was noted in the report of inspection that the investigators were stopped twice before being allowed to complete the inspection. They were stopped first by the civilian patrolman until the inspection was verified by the Civilian Police Headquarters. Once inside the building they were again challenged by the Officer of the Day, (b) (6) (b) (6), (b) (3) (B) and Charge of Quarters, Staff Sergeant (b) (6) Major (b) (6) contacted First Lieutenant (b) (6) Principal Unit Security Officer, by phone for approval of the inspection which was granted.

3. The report of investigation further revealed that after inspection of all Air Technical Intelligence Offices no a single violation of security was found. It was also noted that a large number of security reminders were displayed in offices and hallways.

4. The splendid cooperation in the interest of security shown by this organization and its employees is indicative that it is this type of security consciousness which pays off in the security of the nation, and security is one of freedom's strongest weapons.

5. It is suggested that this letter be used as an item of consideration in the rendition of Effectiveness Reports of personnel involved.

cc: Dir - Intelligence, HQ USAF  
CC, AEC

/s/ (b) (6)  
Colonel, USAF  
Commanding

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SEMI-ANNUAL REPORT OF THE AIR TECHNICAL INTELLIGENCE CENTER

FISCAL YEAR 1952

The purpose and mission of the Air Technical Intelligence Center necessitate that the work performed be of a classified nature. Therefore, for security reasons it is possible to report only in general terms the progress of the Center during the Fiscal Year 1952. Details concerning the majority of the major projects cannot be given because it is not anticipated that these projects will be declassified by September, 1952. Major activities and events are summarized in statistical form in the following paragraphs.

I. INTELLIGENCE PRODUCTION. The accomplishment of Air Technical Intelligence Center in producing intelligence information is summarized in the following table of publications which shows the type of publications issued by the ATIC, the number of publications completed during the fiscal year, and the number in process at the end of the fiscal year.

(a) Publications:

TYPE OF PUBLICATION	COMPLETED	IN PROCESS
	1 JUL 52 30 JUN 52	30 JUN 52
ATI Studies	41	67
Technical Reports	27	13
Preliminary Reports on Foreign Equipment	66	2
Air Intelligence Digest Articles	56	4
Technical Briefs	130	2
Air Intelligence Reports, AF Form 112	11	1
TOTAL	431	89

(b) Intelligence (Technical Analysis) Projects. Summarized below are the number of Air Intelligence analytical studies undertaken and completed during the fiscal year, together with number in process at end of the year. All the completed projects have been published in one or more of the publications listed in (a) above. Included in these studies is a complete analysis of a Russian MIG-15. Another project of note under way which has received publicity in national magazines such as Time and Life is the collection, compilation, and analysis of data concerning unidentified aerial phenomena, popularly known as "Flying saucers".

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Number of Projects Active	1 Jul 52	57
Number of Projects Added	1 Jul 51 -- 30 Jun 52	71
Number of Projects Completed	1 Jul 52 -- 30 Jun 52	48
Number of Projects Active	30 Jun 52	80

(c) Joint Industry Panels. Since 1 July 1951, two joint industry panels have been formed for the purpose of exchanging information in the field of aeronautical developments related to the problems of production of Air Technical Intelligence.

II. DOCUMENT SERVICES. Documents received and distributed by the ATIS are shown in the following table. Distribution was made to military establishments and government agencies.

Number of documents received and catalogued	75,701
Number of documents dispatched	38,412
Number of receiving agencies	155
Number of requests received for documents	11,412
Standard distribution 1 Jul 51	130 - 300 copies, depending upon material
Standard distribution 30 Jun 52	160 - 771 copies, depending upon material

III. TRANSLATION SERVICES. Translations accomplished are reported in number of English words. Oral translations, reported in hours, consist of on the spot translation of documents and other intelligence material. A total of 4,956 documents were involved in the written translations. The agencies serviced by these translations include other military establishments.

(a) Translations:

DIVISION OF TRANSLATION	BY ATIS	BY CONTRACT	TOTAL
Complete Document	85,932 wds	2,173,168 wds	2,259,120 wds
Abstract from Documents	3,600 wds	192,120 wds	195,720 wds
Identification (title, author, table/contents)	690,468 wds	292,468 wds	983,316 wds
Oral	360 hrs	84 hrs	444 hrs

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(b) Requests for Translations. Requests were for all the types of translations listed in (a) above.

	NUMBER OF REQUESTS
On hand 1 Jul 51	73
Received during year	5028
Completed during year	4956
On hand 30 Jun 52	145
-----	
Number of Requesting Agencies	22
Number of Languages Involved	15

IV. COLLECTION ACTIVITIES. The table below summarizes the various collection activities initiated by the Air Technical Intelligence Center.

Specific requests for information (SRI) active 1 Jul 51	171
SRI initiated 1 Jul 51 -- 30 Jun 52	375
SRI completed 1 Jul 52 -- 30 Jun 52	296
SRI active 30 Jun 52	250

V. FOREIGN SCIENTIST PROGRAM (PROJECT PAPERCLIP). The following table summarizes the administrative responsibility of the ATIC for foreign scientists and their dependents under Project Paperclip.

Specialists (Immigrated and Non-immigrated) FY 1952	145
Dependents (Immigrated and Non-immigrated) FY 1952	533
TOTAL	678
Specialists Immigrated (1 Jul 51 -- 30 Jun 52)	12
Dependents Immigrated (1 Jul 51 -- 30 Jun 52)	142
TOTAL	154
Non-immigrated Specialists (30 Jun 52)	27
Non-immigrated Dependents (30 Jun 52)	230
TOTAL	257
Specialists Released to Industry (1 Jul 51 -- 30 Jun 52)	16

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VI. FOREIGN EQUIPMENT. Since 1 July 1951 a total of 27,163 lbs of foreign equipment has been received for examination and evaluation.

VII. SPECIAL ITEMS PROCURED AND SUPPLIED. Non-AF-Stock items needed by the Intelligence Program have been procured and shipped to overseas activities as summarized in the table below.

Number of special items of equipment received	250
Number of Special Items Transferred overseas	100
Number of overseas stations serviced	68

VIII. BIOGRAPHIC AND FACILITIES SURVEY. Collection of information for incorporation in a register of foreign scientific and technical personnel and foreign scientific and technical facilities relating to aircraft has progressed as follows.

REGISTER DATA	1 JUL 51	30 JUN 52
Foreign Personalities	19,500	32,000
Foreign Facilities	7,200	22,700
	1 JUL 51 -- 30 JUN 52	
Documents Reviewed and Extracted or Abstracted for Compilation of Register		6,114
Requests Received for Information Contained in Register (all filled)		1,452
Completed Biographic and Facilities Descriptors Integrated into Register		1,320

IX. TRAINING. The ATTC specialized intelligence training and indoctrination program is reported in the following two tables. The first table (a) lists the major training projects. The second table (b) gives the total number of persons and number of hours training given in each of the specialized courses comprising these programs.

(a) Indoctrination and Training Projects:

ATTC Training Project No. 80006  
 ATI Investigator Training Project No. 70018  
 Civilian and Military Training Project No. 70019  
 Security Consciousness Project No. 7009

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## (b) Training Program Accomplishments:

	NUMBER OF PERSONNEL	NUMBER OF HOURS
ATTO Training	82	65,600
ATI Investigator Training	86	30,960
Command and Staff School	64	24
Special G4 Densight Briefing	8	16
ROU Students	23	8
I and E Programs	903	26
Base Orientation	420	6
Air Attache Training	61	616
Reserve Officers Training	28	32
New Employees Indoctrination	37	146
Formal ATI Orientation	45	16
Security Films	645	18
Security Tests	92	92
Security Talks	778	3
Security Briefings	44	28

## X. PERSONNEL AND MANAGEMENT.

(a) Personnel. The problem of personnel shortages has been attacked by intensive recruitment, simplified procedures, realignment of duties and responsibilities into positions that can be filled, intensive training, and contract services. The gain in personnel assigned is shown in the following chart.

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## PERSONNEL AUTHORIZATIONS AND STRENGTH

	3 JUL 51	30 JUN 52
Number of Personnel Authorized	601	677
(1) Civilian	362	346
(2) Military	239	331
Number of Personnel Assigned	142	591
(1) Civilian	265	295
(2) Military	187	296

(b) Management Improvement. Notable progress has been made in improving the efficiency and economy of operation.

(1) Accounting procedures have been installed for estimating project requirements and costs, and for forecasting budgetary requirements based upon previous experiences. More accurate budget presentation has resulted from this change.

(2) A continuing management analysis study of organizational structure and operational effectiveness has been installed. To date, as a result of this study, no major organizational change has been made, but in several work areas, functions have been reassigned and combined to provide for more homogeneous groupings, more economical and efficient operation and conservation of manpower. Standard procedures and practices have also been installed, further reducing the time and cost of routine operations and insuring uniformity of operation.

(3) An analysis of labor costs for a four month period (December 1951 -- March 1952) showed a decided improvement in the ratio of the cost of productive to nonproductive labor. The direct labor cost increased percentage-wise from 49.6 to 60.1; whereas, the indirect labor costs decreased from 50.4 to 39.9 over the same period. The approach to a more nearly ideal ratio of 65 to 35 for intelligence operations is significant.

XI. STATUS OF FUNDS. The status of FY 1952 funds allotted to the AFIC is given in two parts: (a) Contingency funds; (b) Funds for salaries and administration. Additional data for the remainder of the fiscal year will be available 7 July 1952. At that time, an adjusted report will be submitted.

### (a) Contingencies:

Total Allotment	33,000,000
Commitments (as of 6 June 1952)	2,051,728
Obligations (as of 6 June 1952)	1,611,674
Expenditures (as of 6 June 1952)	314,431
Unobligated Allotment (as of 6 June 1952)	1,388,326

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(b) Salaries and Administration:

Total Allotment	\$ 1,537,761
Obligations (as of 9 June 1952)	1,355,101
Expenditures (as of 9 June 1952)	1,201,111
Unobligated Allotment	182,659

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*03*

# HISTORY OF AIR TECHNICAL INTELLIGENCE CENTER

1 JULY 1952 - 31 DECEMBER 1952



**AIR TECHNICAL INTELLIGENCE CENTER**  
**WRIGHT-PATTERSON AIR FORCE BASE**  
**OHIO**

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Copy No. 1  
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*3*

*June 12'*

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*7 June 55*

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Auth:

By:

Date:

(b) (6)

29 January 1953

HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
1 JULY 1952 -- 31 DECEMBER 1952  
(Including TOP SECRET Supplement Number One)

Prepared by (b) (6)

Air Intelligence Office

AIR TECHNICAL INTELLIGENCE CENTER

29 JANUARY 1953

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To carry out its mission, the Center focuses its efforts on these two objectives: (1) prevention of technological surprise from any foreign source, and (2) assisting the research and development agencies of the USAF in the development of countermeasures against such foreign technical development.

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FOREWORD

TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER

For the Period

1 July 1952 - 31 December 1952

This installment of ATIC's history differs from its predecessors not only in content but in format. In the past, Section and Branch activity have been presented as such; in this, at the request of the Intelligence Directorate's Historical Officer, activities are presented on a divisional and office basis, with Branches and Sections merging their activities to present an overall picture. This, it is anticipated, will make it easier to see the forest rather than the trees. It is also designed to eliminate the extraneous and routine as much as possible.

Another deviation may be found in the absence of exhibits. These, too, were omitted by request. It was suggested that the History contain no appendages and that necessary references be incorporated in footnotes. This is understandable when it is considered that the ATIC History will be incorporated with the Directorate's, which, in turn, becomes part of the larger USAF History.

This portion of the ATIC History involved many contributors. It isn't the work of a single individual, but a team operation, with Section, Branch and Division contributors. The names of the authors on

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the title sheet are those of the men who synthesized, edited, proof-read, coordinated and assembled the final version, added the Foreword and Glossary, and supervised the operation.

Even this preamble is a departure - so far - from preceding forewords. These described the events before and during the organization of the Center. Perhaps, for the benefit of those who came in late, portions of this background material should appear here. Its significance is such that it will bear repetition.

The Air Technical Intelligence Center was officially designated as such by General Order Number 31, Hqs USAF, dated 1 June 1951. The order made the effective date of the designation retroactive to 21 May 1951, and defined the Mission of the Center as follows:

"The mission of the Air Technical Intelligence Center is to produce Air Technical and Scientific Intelligence under the operational control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF."

Prior to the date of the official designation cited above, responsibility for the production of air technical intelligence had been delegated to the Intelligence Department of the Air Materiel Command. Since this Department was providing air technical intelligence not only for AMC but also for the Air Research and Development Command and other USAF components, it was considered advisable to place the Center directly under Headquarters, USAF, that it might better serve the United States Air Force as a whole.

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# OFFICE OF THE CHIEF

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OFFICE OF THE CHIEF

**ORGANIZATION:** The Office of the Chief, ATIC, is composed of the Commanding General, the Deputy Commander, the Executive Officer and the Assistant to the Chief. The staff consists of the Inspector General, the Scientific Advisor, the Air Intelligence Officer and the Policy and Management Officer. Subordinated to the Inspector General are the Internal Security Section and the Office of the Air Inspector. Similarly subordinated to the Policy and Management Office are the Personnel, Comptroller and Air Adjutant General Branches.

**FUNCTIONS:** The functions of the Office of the Chief, ATIC are to accomplish the air technical intelligence phases of the overall mission of D/I USAF, as follows:

To provide air technical and scientific intelligence services for USAF as required to prevent technological surprise from any source;

To produce air technical and scientific intelligence studies and estimates of alien capabilities to conduct aerial warfare;

To provide basic data on foreign air weapons and related materiel, necessary in the production of recognition manuals and performance handbooks;

To nominate, indoctrinate, train and provide technical guidance for ATLO's as required for the Air Attache system, and as required for various overseas Commands;

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To conduct technical orientation and specialized training of attache personnel prior to their departure for foreign duty;

To indoctrinate selected Air Force personnel in the techniques necessary to conduct air technical and scientific intelligence operations in the field;

To investigate and analyze reports of unidentified aerial objects or of phenomena of possible concern to the air defense of the US;

To provide administrative services for WADC and AMC for their foreign scientists' program;

To provide air intelligence for AMC, WADC and certain components of ARDC;

To disseminate intelligence information concerning foreign air technological and scientific developments required by USAF research and development program;

To provide, as required, D/I USAF representation on Air Force and Joint boards and committees concerned with technical and scientific intelligence;

To establish requirements for air technical intelligence information, data and materiel and to provide technical guidance to collection agencies;

To participate in certain phases of the domestic exploitation program of other intelligence agencies as directed;

To provide limited translation services to D/I USAF, WADC, CADO and AMC upon request;

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To effect necessary administrative, logistical and funding support, and coordinate with concerned agencies for accomplishment of the assigned mission of the Center.

The overall functions of the office are command and administrative, and no projects are assigned.

The functions of the Scientific Advisor's Office are to advise and counsel the Commanding General relative to the scientific aspects and technical competence of the Air Technical Intelligence Program; to insure complete coordination integration of ATIC activities with other USAF programs related to the offensive and defensive capabilities of the Air potential of the United States; to assure the Commanding General that Air Technical Intelligence production meets the requirements of all using agencies; and to coordinate and recommend disposition action in connection with produced Air Technical Intelligence studies and reports.

Other Staff Office functions are described separately.

Colonel (b) (6) returned from leave and reassumed command of ATIC on 23 July<sup>1</sup>. Colonel (b) (6) departed for Air War College, Montgomery, Alabama, for permanent change of assignment on 9 August<sup>2</sup> and was succeeded by Colonel (b) (6) AO 489660.

(b) (6), 638A, USAF, reported for assignment to the 1125th F/A Group on 16 September for duty as Chief of

1. General Order #5, 23 Jul 52 (ATIMA)
2. Par 3, SO #52, 27 Mar 52 as amended by par 4, SO #79, 9 May 52 (ATIMA)
3. General Order #6, 9 Aug 52 (ATIMA)

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the Air Technical Intelligence Center. General (b) (6) assumed command of this organization on 17 September 1952, vice Colonel (b) (6)<sup>5</sup> relieved.

A Space, Installations and Communications Committee was established on 25 November 1952. This committee was established to take action on problems in these categories which could not be resolved by the Technical Services Division through normal coordination. The Executive Officer, ATIC, is chairman of this committee.

(b) (6) Assistant to the Chief, officially visited the ATL and ATIL offices in Europe, as well as certain personnel at Hq USAFE from 13 July to 18 August. (b) (6) travelled as a member of the D/I USAF Staff Team. The team visited England, France, Germany, Austria and Italy to examine USAF intelligence activities, discuss requirements and assist with problems.

The Organization and Personnel Committee was established on 18 November. This committee was established for the purpose of surveying the mission, functions, and job descriptions of ATIC to insure that each position has a firm and direct relationship to the Center's mission, that the Position Description is written in support of the assigned functional responsibilities, and that the person assigned to the position is carrying out the intentions of the assigned duties.

4. Par 4, SO #170, 27 Aug 52 (ATMP)
5. General Order #7, 16 Sep 52 (ATMA)
6. Ltr Order #0001221, ATIC, 25 Nov 52 (ATMA)
7. Ltr Order #0001199, ATIC, 18 Nov 52 (ATMA)

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# STAFF OFFICES

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POLICY AND MANAGEMENT OFFICE

ORGANIZATION: Colonel (b) (6) was assigned as Chief, Policy and Management Office on 1 Dec 52, vice Lt Col (b) (6) Acting Chief, relieved. As Chief, (b) (6) is on the staff of the Commanding General. The Policy and Management Office is composed of the Personnel Branch, Comptroller Branch and the Air Adjutant General Branch.

FUNCTIONS: The functions of the Policy and Management Office include:

Advising and assisting the Commanding General and operating staff in developing and executing plans and programs to insure accomplishment of ATIC objectives, including uniformity of operations, and effective utilization of manpower, funds and materials.

Supervising budget and fiscal matters with respect to fiscal policies, procedures, records and reports to insure compliance with AF regulations and instructions.

Advising the Commanding General of the current status of funds, the effectiveness of financial programs and other budget and fiscal matters.

Directing and conducting continuing studies within ATIC in order to recommend policies governing organization, manning methods and procedures.

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Advising the Commanding General ATIC on matters concerning the current status of the personnel and administrative practices and policies of the Center.

Supervising, through the Air Adjutant General's Branch the AG functions of the Center, including publication of official directives, authentication of travel requests and other official documents, establishing and monitoring correspondence control procedures, and advising the Commanding General on matters of protocol.

Supervising the administration of matters involving military personnel and maintenance of all military records for the Center.

Supervising the necessary functions in the employment and administration of civilian personnel.

ACTIVITY: At the direction of the Commanding General two committees or boards were established to assist in management of the Center: Organization and Personnel Committee<sup>1</sup> and Personnel Management Board.<sup>2</sup> ATIC office instructions defining the method of operation of these committees and defining ATIC personnel policies and practices have been prepared and are being coordinated with the Base Civilian Personnel Office.

As an aid to operating components, an ATIC Policy Book was begun by the Management Analysis Section. Correspondence, directives, and other source material are being reviewed to extract policy decisions for inclusion. The material is being classified by subject, indexed, and cross referenced. A copy of the Policy Book will be distributed

<sup>1</sup> LO 0001199, 18 Nov 52

<sup>2</sup> LO 0001232, 28 Nov 52

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to the Commanding General and to each division and staff office.

A Supervisory Management Notebook was also prepared and distributed to each division. This notebook is cumulative in nature. In it will be filed material collected by supervisors, and other material subsequently distributed by the Policy and Management Office. In cooperation with the ATIC Indoctrination Branch, an Employee's Notebook is also under preparation.

A system of informal review by representatives of the operating components prior to formal coordination was installed and has resulted in more realistic procedures and clearer, more usable directives. Under this system, representatives of operating components meet with the methods analyst to determine what procedures need revision, which ones need to be abolished, which ones need to be clarified, and if new ones need to be devised. The published procedure is the result of the cooperative planning of this group. The operating representatives also serve as key people for installing and maintaining the procedure and for checking on its effectiveness.

In the second half of the year, there was a noticeable decrease in form requests received, most of the requests being for reprints of established forms. This indicates that, for the most part, necessary local forms have been established. The computing of more realistic stock levels and control of distribution remain problems to be solved.

During the period, the continuing review of organizational structure, alignment of functions, position and manpower requirements, conducted by the Management Analysis Section, progressed satisfactorily. A position classification survey was initiated by the Base 1 October. Results appear on the next page.

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## STATUS OF ORGANIZATION AND POSITION CLASSIFICATION SURVEYS

<u>COMPONENT</u>	<u>ORG. SURVEY</u>	<u>POS. CLASS. SURVEY</u>	<u>RESULTS</u>
<b>Technical Anal. Div.</b>			
Assoc. Equip. Br. Armament Section	Completed 3 Jul 52	not scheduled	1 new position approved. Implementation pending classification survey.
Materials & Methods Section	Completed 29 Jul 52	Completed 26 Nov 52	6 position approved for upgrading. Concurred in by position classifica- tion survey. Related position and personnel actions have been initiated.
<b>Electronics Br.</b>			
Science & Com- ponents Section	Completed 16 Oct 52	In process	12 new positions ap- proved. Implementa- tion of changes held pending completion of classification survey.
Countermeasures Section	Completed 24 Nov 52	Scheduled for 1953	2 new positions ap- proved. Implementation pending classification survey.
<b>Technical Requirements Division</b>			
ATI Program Branch	Not considered necessary at this time.	Completed 14 Nov 52	No changes in position allocation.
<b>Technical Services Division</b>			
Document Ser. Branch Graphic Services & Reproduction Sec.	Considered stable	In process	
<b>Policy &amp; Management Office</b>			
Adjutant General Branch	In process	In process	

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Redistribution of manpower allotments is under consideration, necessitated by a cutback of positions authorized from 440 to 393. To date 26 positions have been cancelled and 21 more need to be eliminated. Completion of this project is held pending action on proposed organizational changes and redistribution of reduced allotments.

Organizational changes proposed by operating components have been reviewed and recommendation to the Commanding General is under preparation. Revision of functional statements and organizational charts, started in November 1952, has not been completed because of these pending organizational changes.

With the establishment of the Inspector General's Office<sup>3</sup> assistance was given to the Inspector General in the preparation of position requirements and functional statements. Functions formerly performed by the AMC Inspector General were absorbed by this office, which evolved from the former ATIC Air Inspector's Office. Greater emphasis will be placed by the Inspector General's Office on organizational inspection.

On 1 July 1952, cost accounting was added to the functions of the Budget and Fiscal Section. Prior to this time, cost accounting services had been rendered ATIC by Hq AMC Comptroller. One civilian, a Government Cost Accountant, was transferred with the function, and one airman, Cost Accounting Analyst, was assigned to the function. Changes were made in the former cost accounting system which reduced considerably the amount of paper work required. Job time reporting by operating components was first changed from a daily to a weekly basis (1 Jul 52), then

<sup>3</sup> GO No. 10, 22 Oct 52

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to a monthly basis (1 Oct 52). Forms and instructions for operating components were revised and published in an office instruction.<sup>4</sup> Resultant annual savings are as follows:

<u>Daily Reporting</u>	<u>Weekly Reporting</u>	<u>Monthly Reporting</u>
250 reports per year per person.	52 reports per year per person.	12 reports per year per person.

With the installation of the A & E Cost Accounting System, 1 July 1952, local report forms were revised and a single ledger system of accounting was installed to cost by projects and functional areas, as well as by organizational components. Manhours required to prepare the new report average 235 per month as contrasted with 509 for the old type of report. In addition, better factual data is available for support of budget estimates, project planning, and management control.

The budget estimates for fiscal year 1954 covering operational requirements of ATIC under Project 731, Project A, were presented and successfully defended by the Comptroller, ATIC, before the Budget Advisory Committee, Headquarters USAF, and in a joint hearing of the Department of Defense Budget Committee and the Bureau of the Budget. Supplementary justification for Project 731, Project A was furnished by the Chief, Budget and Fiscal Section, in company with (b) (6) Assistant to the Chief, ATIC, to Colonel (b) (6) AFOIN-X, on 28 August 1952. Meanwhile, the Secretary of the Air Force established a ceiling for Project 731, Project A for fiscal year 1954 at the same level as the approved budget program for fiscal year 1953. Accordingly, the estimates submitted by the Center were revised in certain areas to meet this figure.

<sup>4</sup> ATICOI 172-1, 1 Oct 52, "Job Time Reporting"

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The budget estimates for Project 481, covering civilian pay, travel, supplies and other items for fiscal year 1954, were presented through the Directorate of Intelligence to the Secretary of the Air Staff and Hq USAF Manpower Commission and approved with minor exceptions.

The annual financial plans and funding programs for Projects 481 and 731, covering all operational requirements for fiscal year 1953, such as civilian pay, military and civilian travel, contractual services, supplies, equipment, transportation and air technical intelligence items, were finalized and programmed, effective as of 1 July 1952. For the first time, the funding program was made to correspond item by item with budget program as submitted for fiscal year 1954. This arrangement will provide year-end budgetary data for evaluating and supporting future estimates and at the same time permit ready adjustment of programmed items by the Comptroller to meet commitments in any area as needed.

In order to insure maximum utilization and economy in the use of appropriated funds, various devices were instituted by the Comptroller, and the Chief of Budget and Fiscal Section, to control expenditures. No travel requests were approved for funds expenditure unless such requests had been previously justified by the initiating division and approved by the Chief, ATIE.

The Center's allotment for long distance telephone calls was distributed to each division and office on a monthly quota basis. Each division and office was required to submit a listing of each call made, by number. Checks were also imposed on all procurement documents to insure the propriety of expenditures and accuracy of costs. These procedures

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have resulted in a noticeable savings in travel costs, a reduction in long distance calls and procurement cost.

The Budget and Fiscal Section prepared an office instruction on the use, accounting and reporting of contingency funds, including funds for secret and confidential expenditures, which was published as a confidential office instruction for limited distribution to overseas stations.<sup>5</sup> On 13 Aug 52, the Section Chief delivered an indoctrination lecture on the use of these funds before a class of fourteen ATLO's in training at the Center. In the past, these lectures have proved highly beneficial in orienting these officers in the proper use of these funds.

By the end of the first half of fiscal year 1953 fully 80 percent of procurement funds allotted the Center had been committed. Approximately two thirds of the total commitment was charged to a single contract, the renewal of Project "Stork." This percentage of commitment is well above the normal expectancy for submitting purchase requests before the 1 March deadline usually established by the Procurement Division, AMC, for executing contracts with year-end funds. However, there has been serious delay on the part of the Procurement Division, AMC, in placing the annual contract for translation services despite the fact that procurement action had been initiated by the Center prior to the start of FY 1953 in an effort to obtain a full 12-months' service from this type of contract. The delay was due primarily to a desire to provide more than one source and subsequent failure to locate qualified bidders. As a result, a six months' backlog of foreign language documents has accumulated for translation.

<sup>5</sup> ATICOI No. 172-2 "Contingency Funds, Project 731" (CONFIDENTIAL) 22 Oct 52

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In December 1952 maintenance of command records was transferred from the 1020th USAF S/A Wing, Fort Myer, Va. to the ATIC Personnel Branch.

During the six month period ending 31 Dec 52, 384 position and personnel actions for civilians were processed by the Civilian Personnel Section. Breakdown of these actions is as follows:

Position establishment	48 (21 basic, 27 identical additional)
Position reclassification	12
Position cancellation	31
Employment (Inhire)	75
Reassignment	34
Promotion	41
Separation	39
Functional Transfer	13
Miscellaneous	91

Of the above 384 actions, 214 required review and analysis by the Management Analysis Section. As of 1 July 1952, 297 civilians were assigned. At the end of the period, 333 civilians were assigned, an increase of 36 during the period.

An intensive drive is being conducted to correct malassignments. This drive was given further impetus by recommendations from the Organization and Personnel Committee, which approved and ordered implemented by the Commanding General. As of 31 Dec 52, only 12 malassignments were known to exist. These malassignments will be corrected as soon as position classification audits have been completed by the Base Salary and Wage Section.

Satisfactory progress was made in improving the communications and records programs under the Air Adjutant General. Procedures for review, recording, and follow-up correspondence were revised and installed. A correspondence control desk was established in the Air Adjutant General's

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Office to function temporarily until it could be moved to the Mail Room. As soon as the Mail Room can be moved to an area adjacent to the AG Branch, this function will be transferred to the Mail Section.

Centralized files for correspondence were established in the Air Adjutant General's Branch to provide a centralized source of reference. Previously, official file copies of correspondence were filed within the component of primary interest, which was designated an Office of Record. As a result of centralizing correspondence files, material is more easily located and the number of Offices of Record has been reduced.

The distribution formula for ATIC publications was revised resulting in more equitable distribution and elimination of waste through reduction in number of copies required. Procurement and distribution of other than ATIC publications to insure timely receipt by working level personnel who have need for the publication, remains a problem which has been further complicated by transfer of the Authority Reference Library from the Adjutant General Branch to the Inspector General's Office on 22 Oct 52.

A study has been initiated to devise a solution. In addition, a suggestion was submitted to D/I USAF that a statement be made in D/I administrative publications concerning applicability to ATIC. The adoption of this suggestion has eliminated much of the confusion that formerly existed relative to interpretation, distribution, and application of D/I directives.

The Records Disposition Project, initiated in the preceding period (1 Jan 52 - 30 Jun 52), was completed. Schedules were revised as necessary and procedures for preparing schedules were clarified with the Records

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Management Officer, Hqs, USAF. Further revision and refinement of disposition schedules are in process. Education of operating personnel in the AF Records Management Program remains to be accomplished.

A standardized format for requesting orders for ATLO personnel being transferred to overseas assignments was devised jointly with the ATI Program Branch. This format simplifies the preparation of order requests and serves as a check list for information required in PCS Orders for overseas movement.

On 28 Aug 52, 2nd (b) (6) replaced Major (b) (6) (b) (6) as ATIC TOP SECRET Officer, Custodian of Non-Cryptographic Registered Documents, and Chief of the Registered Documents Section, Air Adjutant General Branch.

An inventory of all TOP SECRET, Registered, "X", and all other highly sensitive documents under the jurisdiction of the Registered Documents Section was completed 15 Aug 52. Operating procedures for control of these documents were standardized, published, and installed 22 Aug 52.<sup>6</sup> Project 602 pertaining to "X" documents was transferred to the Document Services Branch, Technical Services Division, 25 Sep 52. Stand-by duty on holidays and week-ends for receipt of special incoming TOP SECRET messages was established in October.

<sup>6</sup> ATICOI 205-5, 22 Aug 52, "Control of TOP SECRET, Registered, and 'Restricted Data' Documents".

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OFFICE OF THE INSPECTOR GENERAL

ORGANIZATION: The Office of The Inspector General, ATIC, was organized on 17 October<sup>1</sup>. Concurrently, Lt Col (b) (6) AO 900704, formerly assigned as The Air Inspector, was redesignated as<sup>2</sup> The Inspector General. The Inspector General is on the Staff of the Commanding General. The functional components of the Office of The Inspector General include The Inspector's Office, and the Internal Security Section. Functional responsibility for the latter was transferred from the Air Adjutant General's Branch, Policy and Management Office, to the Office of The Inspector General on 22 October.<sup>3</sup>

FUNCTIONS: To keep the Commanding General informed of the tactical, logistical and administrative efficiency of the Center; To keep the Commanding General advised on the state of morale and welfare matters, as pertain to military and civilian personnel of the Center; to conduct periodic inspections of the Center and to make special investigations of matters when necessary; to conduct personal conferences for military and

1. GO #10, ATIC, 22 Oct 52
2. Par 1, PAM #55, ATIC, 24 Oct 52
3. GO #10, ATIC, 22 Oct 52

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civilian personnel assigned to the Center; to review and analyze inspection reports, board proceedings, policies, office instructions, and other miscellaneous correspondence and directives, and to keep the Commanding General advised concerning their implementation; to assume responsibility for the internal security of the Center; to perform such other duties as are directed by the Commanding General.

Major (b) (6) was assigned as The Inspector (and Acting Inspector General) on 4 December after Colonel (b) (6) went on terminal leave, 1 December, prior to reverting to inactive status.

On 18 December, the first inspection was initiated in the Technical Requirements Division. This inspection was completed on 31 December, and the report is in the process of preparation.

4. Par 2, PAM #67, ATIC, 4 Dec 52
5. Par 1, SO #189, ATIC, 1 Dec 52

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THE AIR INTELLIGENCE OFFICE

FUNCTIONS: The Air Intelligence Office is charged with the performance of all normal A-2 functions, conducting oral briefings and preparing written reports on strategic, tactical, logistical and technical intelligence for Commanding Generals and Staff Officers of the Air Materiel Command, the Wright Air Development Center and the Air Technical Intelligence Center. In implementing these responsibilities the Air Intelligence Office obtains and studies all available intelligence information pertinent to the missions of the serviced Commands; collates and interprets all such information in the light of the missions of these Commands; takes such action as will most efficiently insure that these Commands are advised at all times of alien capabilities, intentions and related factors that may affect them in the discharge of their responsibilities. Such action includes maintenance of the AMC Air Room; preparation of maps, charts and other visual aids; oral briefings; written dissemination of daily, weekly and ad hoc intelligence products.

PERSONNEL: On 1 October, (b) (6) replaced Major (b) (6) as Chief of the Air Intelligence Office.<sup>1.</sup> Major (b) (6)

1. Par 1, PAM No 51, 13 Oct 52

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was assigned on this date to an overseas post. Expanding responsibilities necessitated the assignment of five additional airmen to the Office.

PUBLICATIONS: The Air Intelligence Office continued publication of the daily AIR TECH INTSUM and DIRAMA and the weekly ATIC BULLETIN, all described in foregoing installments of the history of the Air Technical Intelligence Center. Distribution of these publications remained essentially the same.

Principal publication problems remained essentially the same also. Chief among these was the continuing problem of obtaining technical intelligence information to meet the requirements of the weekly BULLETIN. Though the primary purpose of the publication was still to review current air technical intelligence information, and though a complete evaluation of this information was not necessarily a prerequisite for publication, all of the reports for the BULLETIN were subject to a careful preliminary evaluation in the interests of authenticity and accuracy. This preliminary evaluation was especially important in view of the fact that the BULLETIN had been made available to many agencies within the National Military Establishment.

In this preliminary evaluation, the necessity for care and painstaking coordination complicated, of course, the problem of completing timely reports for publication in the BULLETIN. This problem was already difficult because of the extensive processing of most intelligence documents in their transmission from the originators overseas to the analysts and intelligence specialists in the operating sections of

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the Technical Analysis Division; and the process of evaluating and coordinating these documents within the Division entailed further, unavoidable delays in the preparation of material for publication in the BULLETIN.

Moreover, the available source materials failed to produce a large volume of information suitable for use in this periodical. In the course of any one week the reports forwarded from the Technical Analysis Division to Air Intelligence Office for consideration in the selection of material for the BULLETIN rarely exceeded 10 in number. It should be pointed out here that all of these reports were prepared, by operating sections within the Technical Analysis Division, primarily for publication in the division's weekly periodical, PRELIMINARY ANALYSIS OF THIS WEEK'S FOREIGN TECHNICAL DEVELOPMENTS, which was circulated to Air Technical Intelligence Center personnel exclusively. After these reports had been screened for material suitable for dissemination outside the Center, the average number of usable reports per week had been reduced to a figure substantially under 10.

Personnel in the office of the Commanding General, the Technical Analysis Division and the Air Intelligence Office were aware of the problems involved in the publication of the BULLETIN and were endeavoring to work out satisfactory solutions for these problems, but the principal, basic problem -- the problem of obtaining intelligence information that meets the requirements for timeliness and authenticity -- remained unsolved.

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TOPICAL INTELLIGENCE: In fulfilling its assigned responsibilities to AMC and WADC, the Air Intelligence Office provides classified and unclassified intelligence pertinent to the missions of the following: Mutual Defense (MCI); Supply (MCSM); Industrial Resources, Foreign Procurement and Industrial Services Branches (MCPBXS and MCPBXS-1); Psychological Warfare Office (MCAF); Special Weapons (MCSW); Flight Research Laboratory, Metallurgy Group (WCRRL); Aero-Med Laboratory, Personal Equipment (WERDO); WADC Inspector General's Office (WCI); AMC Special Plans Section (MCOPXS); AMC Provost Marshal's Office (MCEP); and Industrial Resources, Manpower Branch (MCPBXM).

The above components have requested and are receiving intelligence in these categories: logistics, training, storage and port facilities, pipe-lines, clothing requirements, maintenance capabilities, air materiel production, strategic minerals, high melting point intermetallic compounds, powder metallurgy, precision casting processes, foreign procurement potentials, off-shore purchasing information, new manufacturing techniques, new products applicable to USAF production, Biological and Chemical Warfare developments, Psychological Warfare techniques, Communist patterns and activities which might result in USAF work stoppages, availability and/or production capacity for machine tools, hydroelectric plants, electrical developments and Arctic floating islands.

From 1 July to 31 December, 1014 intelligence reports were referred to the components serviced, bringing the total to 2445 since the inception of the program. This is exclusive of unclassified material

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forwarded which was not recorded but is estimated at 1400 clippings during the period covered. Several DF's from the serviced offices have been received commenting on the value and useability of the intelligence disseminated.

The Office transcribed pertinent counter-intelligence carried in FEAF cables as well as in other reports and transmitted these to the Provost Marshal (MCEP) and Industrial Resources, Manpower Branch. Overt intelligence, as presented in the press and other publications, is reviewed daily. Pertinent clippings are forwarded, as indicated above, to interested components. News items of strategic and tactical significance are filed by ATIX for use in briefings or as background material for special studies.

The following newspapers are received and reviewed daily: New York Times, Washington Post, Christian Science Monitor, Wall Street Journal, Cleveland Plain Dealer, Dayton Journal-Herald, Dayton Daily News. As received, these periodicals are reviewed and clipped: Aviation Week, The London Economist, Colliers, The Saturday Evening Post.

Another function is the review and selection of appropriate intelligence studies for inclusion as "special articles" in the Weekly Intelligence Briefing Material, disseminated to the Air Materiel Areas, certain Exempted Stations and other interested activities. Sources of these special articles include studies prepared by the Departments of State, Army, Navy, Air Force, Central Intelligence Agency and the British Ministry of Defense. Subjects are selected to provide intelligence

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officers with current and background information suitable for briefing Commanding Generals and their staffs.

Air Intelligence Office personnel, acting on behalf of Major

(b) (6)

ATIC Historical Officer, synthesized, edited and prepared in final form the semi-annual installment of the ATIC History.

SURVEY: In general, survey remained the same as during the previous reporting period.

From 1 July to 3 December, approximately 123 Top Secret documents, 910 incoming Messages and 5513 technical and non-technical documents were perused for the purpose of segregating from a mass of irrelevant material, the data pertinent to the mission of the Air Intelligence Office, ATIC, AMC, WADC and BAGR.

The daily accession list, a typewritten publication handcarried five days a week to the Technical Analysis Division, consists of items of interest screened from incoming messages, intelligence information reports and summaries. Since 1 July, approximately 1597 items have been referred to components of the Air Technical Intelligence Center.

BRIEFING: Briefing functions of the Office were considerably expanded during the period covered to provide dissemination of pertinent intelligence information of wider scope to a larger number of personnel on a need-to-know basis. This expansion of activities involved more extensive use of visual aids, including charts pertinent to the briefings. The policy of including technical presentations of specific interest to

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various AMC and WADC personnel was augmented.

Requests for briefings are being received from all organizations on the base, and other installations throughout the country. To date, all such requests have been met.

In the past six months a total of 91 oral briefings were presented. Of this total, 52 were regularly scheduled weekly presentations. These included 26 addressed to the CG & Staff Officers of Wright Air Development Center and 26 to AMC and tenant organization division level Chiefs.

Regularly scheduled monthly briefings were given to the following: five to variously assigned ATIC airmen, six to the Aircraft and Propulsion Lab airmen, both under the Information and Education program; six to Navy personnel from BAGR, six to the ARDC Indoctrination School, three to the Materials Lab of WADC, and five to AMC Procurement Officers. In addition, two extensive briefings were given to WADC Laboratory Chiefs. Upon request, ad hoc presentations were given the following groups: the Wright Patterson Unit Security Officers, the Strategic Intelligence School, new ATIC employees, medical officers, the AMC Surgeon's Office, and the AMC Commanders.

During this period, approximately 95 command conferences and division level meetings were held in the Air Room. Over half of these conferences and meetings were monitored and recorded by Air Intelligence Office personnel. Most of the conferences were transcribed for future reference by participating personnel. The security of the Air Room was maintained at all these conferences.

The Office maintained the Air Room situation maps and charts on a

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7-day basis. By 1000 hours each day, postings were completed and an oral briefing prepared. This briefing covered the World strategic situation and the Korean tactical situation. ATIC and AMC Staff members, who visited the Air Room for up-to-the-minute intelligence information, were briefed on the basis of coverage desired and available.

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**TECHNICAL  
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DIVISION  
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TECHNICAL REQUIREMENTS DIVISION

ORGANIZATION AND FUNCTION: The assigned functions of the Technical Requirements Division provide for the necessary administrative, logistic, funding and air technical intelligence coordination with concerned agencies for the accomplishment of its assigned mission. The Division is required to organize and operate the Collection Control Branch and the Air Technical Liaison Program Branch; establish and monitor air technical intelligence collection requirements with all Air Force and associated intelligence collection activities, both United States and allied; monitor the administration of the ATLO and Foreign Scientists' Program; and monitor and participate in certain phases of the domestic exploitation program. Finally, the Division is charged with maintaining direct liaison with Air Force activities and other governmental agencies in matters pertaining to air technical intelligence. No changes were made in this Division's organizational structure during the reported period.

The Requirements Section of the Collection Control Branch was assigned the following additional responsibilities during the period covered: (a) Monitorship of the program for evaluating intelligence reports received at ATIC; (b) Acquiring, maintaining, and monitoring general air technical intelligence requirements for ATIC; (c) Monitoring

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the Priority Price List of USSR Material; and (d) the Returnee Exploitation Group (REG) Program.

As a result of implementing action taken during the period covered, Foreign Scientist functions will be transferred from this Division to ARDC not later than 1 March 1953. The transfer originated in a letter written by the USAF Director of Intelligence to the Commanding General ARDC,<sup>1</sup> followed by a conference between representatives of ARDC, AFOIN and ATIC.

PERSONNEL: As of 31 December 1952, there were 50 civilian employees, 95 officers, and 27 airmen assigned to all organizational components of the Division. Although some inconvenience was experienced through the turnover of clerical and stenographic personnel, the majority of positions for civilian personnel have been filled, and obtaining qualified incumbents for authorized positions is no longer a major problem.

On 15 December 1952, Colonel (b) (6) was assigned as Chief, Technical Requirements Division.<sup>2</sup> Lt Colonel (b) (6), who had been the Division chief until that time, was reassigned as Chief, ATL Program Branch,<sup>3</sup> to replace Lt Colonel (b) (6) who was transferred from ATIC.

PROJECT ACTIVITIES:

Project 40001 - Collection of ATI Information: This is a continuing project involving specific requests for information (SRI's). On 1 September 1952, there were 255 active SRI's. During the period

<sup>1</sup> 1 Feb 1952

<sup>2</sup> PAM No. 71, 16 Dec 52

<sup>3</sup> PAM No. 72, 23 Dec 52

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covered in this history, 166 SRI's were initiated and 130 cancelled, leaving 291 active on 31 December 1952. The procedures and functions of the group are progressing efficiently and no recommendations for change are made at this time.

Project 40014 - ATI Collection Guidance Manuals: ICGM-Propulsion was completed on 25 August 1952 but was withheld after review for a chapter on nuclear energy for propulsion. This delay was believed warranted in view of the fact that this field carries one of the highest intelligence priorities. After considerable research, a paper was prepared and submitted to (b) (6) Associated Equipment Branch, Technical Analysis Division, for approval. The manuscript was approved and the manual forwarded to the D/I, Hq USAF, 2 October 1952.

In answer to specific "feeler" questions and requirements submitted to (b) (6) ATIC, on one month TDY to examine and survey USAF intelligence echelons in Europe, it was stressed that a great and immediate need exists for collection guidance instructions.

Deadline for ICGM-Fuels and Lubricants could not be met. As result of conferences held at Hq USAF, 2 December, concerning production schedules and delays on the Fuels and Lubricants Manual, it was recommended that an interim collection guidance publication be prepared. In accordance with paragraph 8, Section II, Hq USAF Intelligence Collection Instructions, a considerable amount of research was done to prepare a draft of Intelligence Collection Guidance Memorandum - Fuels and Lubricants. This was submitted to ATIA for review and approval on 24

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December 1952.

Information was received from ATI that General (b) (6), Hq USAF, in a personal letter to General (b) (6) had expressed deep satisfaction following review of the Armament and Aircraft manuals and stated that they were considered "excellent."

Failure to meet constantly rescheduled deadlines, the constant change of project engineers, setbacks due to higher priorities of ATIA projects, and the difficulty experienced in procuring effective illustrative material, have delayed the completion of collection guidance manuals immeasurably. Because of the foregoing factors, it was impossible to complete the bulk of the manuals by the end of 1952 as originally planned. As of 31 December 1952, four ICCM's had been officially approved.

Project 40018 - Exploitation of US Domestic Sources for Air Technical Intelligence Information: This is a continuing project, carried out jointly by ATIC, CIA, and D/1, Hq USAF. There have been no major changes in the assigned function of the domestic exploitation phase of Project 40018. The following CIA status report reflects a comprehensive picture of the overall status of sources exploited through CIA during the period covered:

	<u>Sources on Whom Requirements Were Solicited by CIA</u>	<u>Requirements Submitted to CIA</u>	<u>No Require- ments</u>	<u>Fulfilled or Cancelled</u>	<u>Still Active</u>
CIA Cases	101	59	44	27	91
REG Sources	19	15	2	10	22
Defectors	11	10	4	0	7
Guides	1	0	1	0	0
ATIC Contacts	<u>2</u>	<u>13</u>	<u>0</u>	<u>8</u>	<u>15</u>
TOTAL	134	97	51	45	135

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The revision of AMC Regulation 200-3 has been fully coordinated by ATIC, CIA, and Hq AMC. This regulation covers the program for Notification of Foreign Travel reported to ATIC by USAF contractors through the six Air Procurement Districts. The results gained are most disappointing when viewed against the excellent potential for the collection of foreign intelligence represented by classified USAF contractor facilities. The efforts which have been made within the Eastern, Northeastern and Midcentral Air Procurement Districts have been gratifying inasmuch as they reflect positive action on the part of personnel charged with the responsibility of implementing the Notification of Foreign Travel Program. On the other hand, results obtained from the Southern and Western Air Procurement Districts have been negligible and indicate a lack of understanding of the purpose, importance, and implementing procedures necessary to insure success of the program. It is felt that only through direct personal contact with the procurement district security personnel will it be possible to establish the Notification of Foreign Travel Program on a firm and efficient basis.

This program will be under continued review by the Requirements Section in order to arrive at an accurate determination of its actual and potential value to the ATIC mission. When sufficient data has been accumulated to effect a meaningful report, recommendations as to the future of the Notification of Foreign Travel Program will be made to proper authorities for appropriate action.

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Project 40016 - Returnee Exploitation Group (REG): In November 1952, the REG Liaison Project was established and assigned to the Requirements Section. The scope of this project is to keep concurrent liaison with the Returnee Exploitation Group in Germany, which is engaged in the interrogation of selected scientific German personnel who have returned from Soviet Russia after having worked there for a number of years on research and development projects. In September, all operational and biographical files used by REG were microfilmed and forwarded to ATIC for reproduction.

More than 70% of the sources exploited by REG have been of primary interest to ATIC, and the information obtained from the sources constitutes some of the best and most timely available information on Soviet research and development progress. The REG Liaison Project intends to utilize the REG files to assist the Technical Analysis Division in the preparation of timely SRI's to be served on REG sources of interest to ATIC, as well as in the selection of future sources which may become available to REG for exploitation.

The history of REG and the implementation of the REG Program at ATIC were presented to the CG, ATIC and will be formally presented to the Chief of the Technical Analysis Division and to key analysts.

In the implementation of the project, concurrent files on all known German scientific personnel will be established and maintained, as well as data and information on all known locations in the USSR where German personnel are engaged in research and development activities.

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Studies on this research and development effort will be prepared for the Technical Analysis Division. Furthermore, close liaison in this effort will be maintained with the ATI Branch at Hq USAFE, since ATLO personnel are charged with the exploitation of REG sources of interest to ATIC.

This project will be reviewed periodically to determine its value to ATIC, and changes may be required to insure optimum utilization of the program.

Project 40021 - General Requirements (BAIR): In September 1952, the Collection Control Branch was assigned the responsibility of acquiring, maintaining, and monitoring all general air technical intelligence requirements for the Center. Such requirements reflect the types of information required on a continuing basis for the production of air intelligence necessary to the fulfillment of ATIC objectives. ATI requirements, along with other AF intelligence requirements, will be consolidated by the D/I, Hq USAF and submitted to the field via the Basic Air Intelligence Requirements (BAIR).

The publication will be used by field collection agencies as an overall basis and guide for local planning and subsequent field action.

This project was formally initiated and approved in September, at which time the Collection Control Branch took immediate steps to establish acquaintanceship between the BAIR monitor of ATIC and the BAIR monitor of the D/I. In October, a trip to the D/I resulted in handcarrying back to ATIC, final draft copies of the BAIR, thereby

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affording ATIC personnel an opportunity to render a quick and final review before publication.

This review resulted in a completely revised and improved chapter on Photography, plus a series of minor additional requirements in various fields of technical intelligence. Also accomplished for inclusion into the BAIR was a revision of existing National Intelligence Survey (NIS) requirements, from the present type guidance material as now used by the producer of finished NIS studies to requirements for NIS type information for use by the field collector.

These changes were handcarried back to the D/I in November, and it is anticipated that the BAIR will be ready for field distribution in January or February 1953.

Project 40022 - Priority Price List: Numerous collection personnel overseas have indicated a very great need for a list of the most critically needed items of Russian aeronautical equipment, arranged by priority, together with an estimate of the amount of money which may be expended for collection of each item. Such a list is needed for two reasons: (a) To guide the collection specialist in allocating his efforts, or the efforts of any particular collection group, in concentrating on a specific collection potential; and (b) To permit the collection specialists to take immediate advantage of opportunities to procure items of Russian manufacture, drawings, specifications or maintenance manuals, without jeopardizing the opportunity of getting such material or information by having to query

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this Center as to the maximum amount of funds that may be expended for any particular item.

This project was formally initiated and approved in September. A priority price list was compiled and submitted to the D/I but was returned "disapproved."

The Operations Section initiated the following new projects under Project 40012 - Collection of ATI Information (General).

"Communications" - To investigate existing equipment and development, and to procure, if possible, portable long and short range ultra-high speed signal transmitting equipment for use in intelligence collection activities.

"Special Microfilm Equipment" - To investigate, test, and procure portable miniature automatic microfilm equipment for use in intelligence collection activities necessitating the copying of documents, photographs, etc., in areas and at locations where large microfilm units are not available, or cannot be used for security reasons.

"CAMLO" - To determine and procure that combination of photographic equipment which would provide, on short notice, adequate photographic coverage for any situation which may arise.

The following projects were completed:

Project 40012 - "Immigrants to Israel" - To establish and implement a plan for the collection of information as to the whereabouts and the knowledgeability of Israeli purportedly living in Israel after deportation from Iron Curtain countries. This project was cancelled for security reasons.

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Project 40016 - Collection of ATI Information (Scientific Personnel):

(b) (6) was considered for employment for one year in Europe. This entire project was turned over to the Central Intelligence Agency for operation.

(b) (6) a specialist in Fluid Mechanics, spent two months in Europe and prepared a Final Comprehensive Report upon his return to the US.

(b) (6) a Nuclear Physics Professor at Ohio State University, toured Europe and obtained all available information and submitted a Final Comprehensive Report to ATIC upon return to the US.

(b) (6) a former "Paperclip" personality, was considered for a tour in Europe as an Electronics Specialist.

(b) (6) a Computer Specialist at Darmstadt Technical High School (Germany), visited the US under the sponsorship of ATIC. He was debriefed by the Harvard Computer Laboratory, WADC, and ATIC. This trip helped in obtaining access to information available at the Darmstadt Technical High School.

A study was completed to determine the best type camera to be used in photographing "unidentified flying objects." One hundred Videon cameras with diffraction gratings have been ordered. A camera and lens assembly, capable of taking a picture at a distance of 17 miles, has been obtained and dispatched to the Air Attache, Turkey.

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ATL Programs: The project "General Recruiting, Processing, and Indoctrination" was revised to exclude those items dealing with the training of ATLO's. These training items are now included in Technical Services Division Project 70024.

During the month of July there were 18 ATLO's in training for overseas assignment; during August, there were 20. One ATLO departed for overseas duty station during July and six departed during August. One ATLO was assigned to Strategic Intelligence School during July prior to overseas assignment and four were assigned during August.

During the period 1 September through 31 December 1952, there were 18 Air Technical Liaison Officers, one airman, and one stenographer trained for overseas assignments. During this same period, 10 Air Technical Liaison Officers, two airmen, and seven stenographers departed to overseas stations. Three Air Technical Liaison Officers were assigned to the Strategic Intelligence School prior to overseas assignment with the ATLO Program.

Air Attaches were returned to the Zone of Interior from Viet Nam Republic of Indochina, Norway, Turkey, Greece, The Netherlands, and Czechoslovakia. These attaches visited the Air Technical Intelligence Center and were debriefed by personnel of the Collection, Requirements, and Technical Analysis functions.

A policy was established between the Air Technical Intelligence Center and Headquarters, Air Research and Development Command whereby all ATLO's returned to the Center, either on temporary duty for

  
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reorientation or on PCS for rotation purposes, would be scheduled to the ARDC Headquarters, Baltimore, for a minimum of one day debriefing.

Approval was received from the Directorate of Intelligence to implement a planned and scheduled program of reorientation of certain ATLO personnel assigned to overseas offices. This procedure was devised to insure that technical personnel in charge of specific technical fields are returned to the ZI for this purpose at the midpoint of their PCS assignments. It is intended that these TDY assignments of approximately five days will provide an adequate and accelerated program of reorientation.

Authorization was received for the establishment of an ATL Office with the Office of the Air Attache in Brussels, Belgium. One Air Technical Liaison Officer position has been established for a general engineer with the authorized grade of Major. No individual had been selected for assignment as of 31 December 1952.

A request was submitted to the D/I, Hq USAF for authority to establish an ATLO position with the Air Attache in Moscow, USSR. If approved, this position will be designated as an aeronautical engineer with authorized grade of Major.

The chart on the following page reflects authorized and assigned overseas ATL strength:

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SEPTEMBER 1952

DECEMBER 1952

OVERSEAS ACTIVITIES	TECHNICAL			ADMIN, STENO & LANG SPECIALIST			TECHNICAL			ADMIN, STENO & LANG SPECIALIST		
	AUTH	ASGD	IN TNG	AUTH	ASGD	IN TNG	AUTH	ASGD	IN TNG	AUTH	ASGD	IN TNG
Austria	24	12	7	18	9	1	24	16	4	20	9	2
Germany	66	43	8	24	19	5	68	42	10	27	23	3
Japan*							2	0	0	0	0	0
Japan	9	6	0	6	3	0	8	6	0	6	2	0
Belgium*							1	0	0	0	0	0
England*	7	6	3	0	0	0	7	7	3	0	0	0
France*	6	3	4	1	1	0	7	3	7	1	1	0
Italy*	1	1	1	0	0	0	1	1	1	0	0	0
Sweden*	1	1	0	0	0	0	1	1	0	0	0	0
Switzerland*	1	1	0	0	0	0	1	1	0	0	0	0
Turkey*	4	2	1	0	0	0	4	2	2	0	0	0

NOTE: \*These offices are under the administrative jurisdiction of the Air Attaches and normally the clerical personnel are furnished by the Air Attache Branch.

PLANNING PROGRAM: As part of the collection planning program, detailed general ATIC requirements for raw technical intelligence relating to atomic energy, radiological, biological and chemical warfare were obtained from ATIA, edited and forwarded to Collection Control Branch, Directorate of Intelligence, Hq USAF, in the new format entitled Basic Air Intelligence Requirements.

A staff study on the utilization of the NATO intelligence organization being formulated by a NATO Ad Hoc Committee was presented for ATIR approval. The plan proposed to establish a close coordination of Air Attaches and ATLO's with the air members of Military Assistance Groups in the NATO countries to keep the US representatives in the NATO intelligence organization informed of appropriate ATIC collection requirements.

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without releasing information unsuitable for foreign national consumption.

A proposal was submitted to consider use of US exchange officers for ATLO duty in England. The exchange officers, because of their knowledge of specific fields, were believed to have superior experience for service in the ATLO field.

Through the efforts of ATIR-2, the installation of gun cameras in F-86's assigned to the Fighter Squadron at Wright-Patterson Air Force Base was assured. The purpose of these installations is to provide suitable photographs during flights resulting from reports or sightings of unidentified flying objects.

Steps were taken to insure that complete and continuing information covering a wide field of subjects and sources would be automatically forwarded to ATLO's. The type of information to be furnished would include knowledge of new equipment useful in collection of technical information, references to collected information from other sources, and information assisting ATLO's in the performance of their functions.

Arrangements were completed with the Air Information Division, Library of Congress, for the collection of Soviet biographical data and for the fullest utilization of the Library in support of the air technical intelligence information effort. Valuable contributions by the Library of Congress have already been made to the air technical intelligence collection effort.

From 1 September 1952 to 31 December 1952, staff studies were prepared on a variety of subjects calculated to advance the collection

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effort. Following are examples of the types of subject matter covered:

- a. Plan for obtaining basic scientific data from the USSR,
- b. Utilization of national associations of the US
- c. Use of foreign chambers of commerce
- d. Exploitation of US Patent Office
- e. Collection capabilities of large oil companies
- f. Exploitation of Swiss libraries
- g. Exploitation of doctorate theses
- h. Exploitation of East German Patent Office
- i. Plan for obtaining Soviet equivalent of technical orders
- j. Library of Congress capabilities
- k. Exploitation of the International Astronomical Union and related organizations
- l. Photographic collection in the Near East
- m. Delineation of functions and responsibilities between the Library of Congress, ATIC, and Battelle Memorial Institute, and ATIC contractor
- n. Utilization of the foreign exchange program in the collection of technical intelligence information.
- o. Acquisition of MIG-15
- p. Utilization of NATO Technical Intelligence Office
- q. Exploitation of Off-Shore Procurement

Extensive work was done in connection with the open literature survey, especially in regard to delineating the extent of commercial contractors' participation in the program.

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Numerous personnel, ATLO's, Air Attaches, and others returning from overseas assignments were debriefed, practical field problems discussed, and pertinent information on specific subjects for collection brought to light.

Arrangements were made for ATIC to obtain technical documents on a 45-day loan basis from Foreign Exchange Branch, ARDC, whenever they obtain documents through foreign exchange procedures.

In general, excellent progress was made during this reporting period in collection plans and in the delineation of air technical intelligence requirements. Of special note is the fact that relations and cooperation with the CIA, Library of Congress, AMC, and ARDC activities have greatly improved.

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**TECHNICAL SERVICES  
DIVISION  
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# TECHNICAL SERVICES DIVISION

ORGANIZATION AND FUNCTIONS: The functions of this division are to provide plans for the development and implementation of the Center's document processing program; to develop and implement plans for the indoctrination of selected military personnel in the administration of ATIC field activities; to administer a special document research program; to receive, store, classify, catalog and ship certain foreign equipment. The division also provides special-purpose equipment and supplies to authorized claimant agencies participating in ATIC activities, either within the US or in foreign areas; provides office equipment and supplies to ATIC personnel; and operates a Flight Operations Office for the Center.

Due to increase in personnel, workload, and additional administrative requirements placed upon Graphic Services & Reproduction Section, the following organizational changes were accomplished to reduce the too-lengthy span of control; (a) a Visual Aids Unit was established to meet the expanding visual aid briefing requirements for ATIC; (b) an editorial clerk was designated as supervisor of the make-up unit; responsibilities involved are to maintain a more rigid control, recording, and assignment of specific projects in order to accomplish a necessary production increase.

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Responsibility for sensitive, or "X" documents, formerly controlled by Registered Documents Section (ATIMA-3) was transferred to Document Processing Section.

Personnel: During the reporting period, (b) (6) (b) (6), (b) (3) (B) was assigned as Chief of the division<sup>1</sup> vice (b) (6) (b) (6) who reverted to inactive status<sup>2</sup>. Capt (b) (6) (b) (6) was relieved as Chief, ATI School Group and assigned as Chief, Plans and Operations and Administrative Office<sup>3</sup> and subsequently placed on TDY to Washington, D.C.<sup>4</sup>, this TDY continuing as the reporting period ends. 2nd Lt (b) (6) was relieved as Administrative Officer and reassigned to the Technical Analysis Division<sup>5</sup>. Major (b) (6) returned from the Near East Seminar at the American University, Beirut, Lebanon<sup>6</sup>, and was assigned as Deputy Chief, Technical Services Division<sup>7</sup>. Captain (b) (6) was assigned additional duty as Acting Chief, Flight Operations Office, during the temporary absence of Captain (b) (6)

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<sup>1</sup>PAM-71, 16 Dec 52

<sup>2</sup>Par 6, SO 194, Hq 1125th F/A Gp (ATIG), 10 Dec 52

<sup>3</sup>PAM-47, 26 Sep 52

<sup>4</sup>LO 1233, 28 Nov 52, and LO 0001312, 22 Dec 52

<sup>5</sup>PAM-48, 2 Oct 52

<sup>6</sup>LO 0000717, 12 Jun 52

<sup>7</sup>PAM-49, 8 Oct 52

<sup>8</sup>PAM-62, 24 Nov 52

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Military strength authorizations are unchanged. Civilian authorization was reduced by cancellation of four positions, in response to the request of the Comptroller<sup>9</sup>.

In an attempt to correct several malassignments and improve the services offered by the Document Processing Section to the analysts of the Center, several personnel transfers were effected. Major (b) (6) (b) (6) was appointed Acting Chief of the Section, as an additional duty, while the Chief of the Routing and Control Group was temporarily assigned the responsibility of supervising the Repository.

Captain (b) (6) was relieved of his responsibility as Chief, Biographic and Facilities Group in order to serve as Administrative Officer in the branch office.

PROJECT ACTIVITY: This period marked an acceleration of the effort to improve procedures in the Document Processing Section (ATISD-1). Major (b) (6), Chief of the Document Services Branch (ATISD) instituted a series of discussions among users of the Section's services, employees at the work level, and supervisors, which covered the steps in document handling, the forms used, and the status of work loads. Recommendations made by these groups were adopted and production figures for ensuing months proved the innovations worth-while.

Statistics compiled during the reporting period by the groups concerned with processing and dissemination of documents showed production increases of from 25 to 32 per cent over the comparable 1951 period. Following further implementation of revisions planned for the locator card filing system, and employment of personnel to fill existing vacancies,

9DF, Subj: "Manpower Distribution" to ATIS from ATIM, dtd 4 Dec 52

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it is anticipated that backlogs in that unit can be substantially reduced.

Procedural changes recently inaugurated in the Repository, as well as better utilization of personnel, space, and equipment, are being reflected in the more effective service provided by this activity. The reference library of Soviet books and periodicals, established about a year ago with a collection of about 20 documents, has outgrown its allotted space. This unit has acquired and cross-indexed 1300 USSR publications.

Through decentralization of other offices on Wright-Patterson Air Force Base, Document Screening Group (ATISD-2A) was enabled to fill its authorized complement of civilian personnel. As a result, the number of documents screened and routed has increased from 6600 to 8600 per month during this reporting period.

The assignment of these additional specialists also made possible the planned assignment of specific fields of responsibility to screeners; e.g., certain screeners were made responsible for examining documents for information of interest to the Electronics Section of the Technical Analysis Division; others were charged with searching for data required by the Aircraft Section; still others screen for information of value to the Associated Equipment Section.

This arrangement has proved effective in that it narrows the scope of responsibility of the screener, thus permitting him to operate more accurately and in greater detail. This plan further provided closer

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liaison between analyst and screener.

Responsibility for distribution of the Subject and Country Code Book was transferred to Document Screening Section. The changes, additions, and deletions suggested by the analysts in the Center were considered for incorporation into the revision of the subject matter code made by ATISD-2A during the previous reporting period and action was taken to have the completed index published and distributed.

The system of recording and filing data in the Biographic & Facility Data Register had long been recognized as inadequate. During November and December these records were completely revised. This revision necessitated a survey of subject matter breakdowns, the reviewing and refileing of more than 45,000 information data cards, and rearrangement of all reference books and folders. Subsequent usage determined that the revised system provided easier access to desired information and subject matter categories.

A major problem - the staffing of the Translation Unit with competent technically trained translators - was solved by employment of three civilian translators. These employees were made available through deactivation of another translation group on this Base.

Addition of these translators was especially timely, as several military language specialists were transferred from the Center, and no translation contract existed during this period. With the translators now available, the Division is prepared to translate 12 foreign languages; Russian, German, French, Spanish, Polish, Swedish, Italian, Serbo-Croatian, Czech, Norwegian, Portuguese, and Bulgarian.

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Most of the authorized positions in Reproduction and Graphic Services Section have been staffed during the past four months. However, increasing demands for the services provided by this Section make it impossible to produce the quality of work desired in the volume required to fulfill all obligations. There has been added emphasis on management charts of various types, and many man hours have been spent in development of suitable charts. No determination has yet been made as to the charting system which will best meet the needs of the Center.

Recent months have shown a noticeable improvement in the quality of reproduction work. This has been accomplished through closer supervision and attention to details. Greater effort has been exerted to improve the facilities of the Section, with the result that several pieces of equipment have been added.

It is planned to continue the studies and surveys of procedures, personnel assignments and record revision, conducted during the reporting period to meet unsolved problems. One of these is the physical separation of Repository personnel and the request clerks in the Document Processing Section. It is expected that within the next several months additional floor space will become available permitting the Repository to move into the hangar with personnel whose work is closely related.

A serious problem existing in the Document Processing Section is the forced suspension of the 10-day follow-up program, a highly satisfactory method for controlling documents routed through the Center. As no civilian positions had been established to accomplish the work involved, airmen

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were utilized. This arrangement was unsatisfactory due to the temporary nature of military assignments. Every effort will be made to have civilian positions authorized so that the 10-day follow-up system can be resumed.

A new document data form (ATIC Form 475) was introduced and implemented by an Office Instruction (11-5). A 5-part, 3-color, snap-out, carbon interleaved form, it is designed to expedite the handling, processing and recording of incoming documents. Considered very superior to its predecessor, ATIC Form 75, its chief advantage is that it permits one complete master record of action taken on all documents received and processed in the Center.

The subject and country codes used in identifying incoming documents were revised and limited distribution made for coordination. After coordination, in September, distribution of the approved subject and country codes was made to personnel of the various technical offices and interested activities of the Center.

In accordance with revised Directorate of Intelligence Office Memorandum 200-7 and verbal instructions from representatives of the D/I, the system for requesting documents from Hq USAF has been revised and approved. AFHQ Form O-228, "Specific Request for Information", is prepared instead of DD Form 96. A special series of reference control numbers is used - WRC - when requesting known documents from Hq USAF.

ATIC Form 479, "Locator Card for Foreign Language Documents," was designed, approved, reproduced, and received for use in the identification

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of foreign language documents as of 13 August 1952.

Microfilming and destruction of 108,000 reference locator cards has been completed. These cards consisted of the AF series 1 through 343,999 , CIA records for 1949, discontinued author files, translation reference file for 1948-1949, and miscellaneous Air Attache records for 1949.

Screening handbooks were prepared and each of the screeners provided with a copy. These handbooks consist of fully tabulated information for the screener's use in coding and routing, together with the continuing and short term analyst requirements.

The receipt from the contractor of a Russian-English aeronautical dictionary marked the completion of a special project initiated in December 1951. This dictionary, which is on 3 x 5 cards alphabetically arranged, provides a man-hour saving means of determining the correct translation of current aeronautical terms.

In the compilation of biographical and facilities data, 4593 documents were reviewed during the last six months of 1952. From these and other sources, 663 personality folder files were prepared and integrated into the register. Complete reports on 168 research and development facilities were prepared and filed. A total of 22,650 personality and facility data cards were incorporated into the register. Technical Analysis Division analysts were provided with 105 complete dossiers on personalities and facilities.

More than 100 selected military personnel, including officer and airmen air attaches, ATLO's and air technical investigators, received

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specialized training in the fundamentals of photography and in the various photographic media applicable to the collection of technical intelligence. These included 15 officer Air Attaches, 10 airmen, 27 ATLO's and 37 investigators.

Photographic research was carried on to determine inexpensive equipment by which photographs of unidentified flying objects and possible radiant energy therefrom could be recorded in silver or dye densities in the form of a spectral image with a single exposure.

Also conducted was a survey of available film emulsions and sensitometric studies to determine the film and developer combination with characteristics most suitable for recording a usable spectral image of unidentified aerial objects.

An optical system for laboratory testing of replica diffraction gratings was fabricated under simulated practical usage for an infinite object. Using this system, 100 replica diffraction gratings were tested to determine photographic effectiveness.

A technical report entitled "A Fine Grain 35-mm Low Contrast High Speed Film Emulsion Developer Combination", was prepared as a result of extensive research and experimentation. The report showed that the effective emulsion speed of Kodak Super XX could be increased two to four times.

The Orientation and Indoctrination project continued to show progress. A part of this program is devoted to airmen assigned to the Center who are given an "Information and Education" course. This function was delegated to the Center by the Base.

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At Lowry AF Base, Colorado, 185 officers were given ATIC orientation as part of the Officer's Air Intelligence Course. Eighty-five officers were oriented at Eglin AF Base, Florida, Another briefing was conducted in Washington for personnel newly assigned to the Directorate of Intelligence.

Division personnel monitored the protocol visits to the Center of Air Vice Marshal Fressanges and Air Commodore Waite, both RAF officers. The formal orientation of new ATIC employees was conducted on 25 November on behalf of 11 officers, nine airmen and 45 civilians.

As part of the Security Consciousness program, 227 posters were designed and posted. Twenty-five security pamphlets also were distributed. Security briefings were given new Center personnel as well as ATLO and Investigator trainees. More than 200 tests on AFR 205-1 were administered.

Other security reminders utilized during this period were the "Security Consciousness Thought for Today" in the ATIC Daily Bulletin, two large illuminated posters, broadcasting of security slogans over the public address system, a security talk to all ATIC personnel and a sign denoting the number of days since the last security violation.

A new feature of the Security Consciousness program was devised and implemented. During the day following a security violation, a red star is displayed on the desk of the offender and a picture of Stalin and the symbol of the branch in which the violation occurred posted in a conspicuous place.

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The Division received and cataloged 1100 new items of foreign equipment. A considerable portion of the equipment is on display and has been viewed by distinguished visitors, reserve officers and air attaches. Sixty shipments were made to contractors and other agencies. Two other projects are associated with this operation, covering the collection of data on Soviet name plates, markings and numbering.

During this period approximately 400 pieces of correspondence were processed pertaining to the Joint Materiel Intelligence Agency (JMIA) function. This required constant liaison with the technical sections regarding the exploitation of foreign, equipment and dissemination of pertinent reports. This was in addition to the dissemination of information regarding equipment obtained by other services or agencies and the requests to these agencies for additional exploitation and reports.

The (UAL) Unit Allowance List was processed, requiring a complete inventory of all items of equipment at ATIC and ATIL offices at USAFE, USFA and FEAFF, as well as a listing of equipment contemplated.

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**TECHNICAL ANALYSIS  
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#### TECHNICAL ANALYSIS DIVISION

FUNCTIONS: The functions of this division are to produce finished air intelligence; to assemble and maintain working files of technical and scientific data essential to accurate continuing appraisal of foreign aeronautical equipment; to provide such basic data on foreign air weapons and related material as necessary to the preparation of recognition manuals and performance handbooks; and to produce technical reports of observations of unconventional aircraft, missiles or of such other airborne objects as might indicate an advance in technological knowledge by a foreign power.

The operations of the Division were more specifically defined in D/I USAF Office Memo, Number 22-5, dated 30 September 1952. The Memo stipulates that the functions of this division are to produce finished air technical intelligence; specifically, to analyze research and development, design and construction, processes of manufacture and performance of ground and airborne weapons and material pertinent to air operations of foreign nations in order to meet ATIC mission objectives and satisfy all using agencies; to assemble and maintain working files of technical and scientific data essential for a continuing appraisal of the capabilities of foreign aeronautical equipment;

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to maintain liaison with other governmental agencies on air technical intelligence matters pertaining to the production of oral or written reports, briefs, estimates and studies necessary to fulfill Air Force Intelligence requirements; to provide basic data on foreign air weapons and related material necessary to the preparation of recognition manuals and performance handbooks; to prepare air technical intelligence publications as required; to compile data on certain aspects of atomic energy, and biological and chemical warfare. BW, CW and AE will be limited to technical considerations related to weapons development such as atomic power plants and the incorporation of warheads with the vehicle. Excluded are BW and CW agents and nuclear material.

ORGANIZATION: The Special Studies Office (ATIA-4) was abolished during this reporting period. As of 31 December, three offices remained: the Administrative, Plans and Operations, and Technical Advisor. The division, in addition to the offices, consists of three branches: Aircraft and Propulsion (ATIAA); Electronics (ATIAE), and Associated Equipment (ATIAS).

Pending at the conclusion of the reporting period was a proposal to reorganize this division to effect a more equitable distribution of the work load among the Division's three Branches. A Staff Study, dated 24 December, was prepared which recommended certain organizational changes and which was subsequently endorsed by the Commanding General. Analysts are divided into three Branches: Aircraft and Propulsion (ATIAA);

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Electronics (ATIAE); and Associated Equipment (ATIAS).

PERSONNEL: On 11 December, Colonel (b) (6) Chief<sup>1</sup>, replaced Colonel (b) (6) as Chief of the Division<sup>2</sup>.

The inability to staff certain civilian technical positions during the period covered was of particular significance to the production of specific intelligence end products. In a continuing effort to overcome this deficiency, many applications were reviewed; but only one technical position was filled during the last six months of the year.

Following is a list of Air Technical Intelligence Specialists for whom the division was recruiting at the end of the reporting period: Aircraft, Guided Missiles, Aircraft Accessories Systems, Turbojet Power Plants, Reciprocating and Compound Power Plants, A/C Instrument and Navigation Equipment, Bombing Systems, Anti-Aircraft Artillery, Manufacturing Methods, Nuclear Physics, Communications, and Electro-Nuclear Systems. An Aeronautical Engineer also was listed.

<sup>1</sup> Par 4, PAM No 53, 16 Oct 52

<sup>2</sup> Par 1, PAM No 69, 11 Dec 52

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ACTIVITIES: Quantitatively, the figures below summarize project activity for reporting period.

	Active 1 July	Initiated 1 July to 31 August	Completed 1 July to 31 August	Cancelled 1 July to 31 August	Active as of 31 August
Aircraft & Propulsion	50	3	2	0	51
Electronics	17	1	1	0	17
Associated Equipment	17	3	2	0	18

	Initiated 1 September to 31 December	Completed 1 September to 31 December	Cancelled 1 September to 31 December	Active as of 31 December
Aircraft & Propulsion	4	7	0	48
Electronics	3	1	0	19
Associated Equipment	3	3	0	18

The following ATIC publications and other end products were issued in the cited technical fields during the six months covered:

	Aircraft & Pro	Electronics	Asso Equip	Total
ATIC Studies	9	1	6	16
Technical Reports	6	1	3	10
Preliminary Reports of Foreign Equipment	4	1	1	6
Air Intelligence Digest Articles	8	10	6	24
Technical Briefs	100	32	104	236
AF 112's	0	2	1	3



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PROJECTS:

STATUS OF THE TECHNOLOGY OF AIRCRAFT METALLURGY IN THE USSR: Four sections have been prepared in rough draft, edited and approved by the monitor. Other sections are nearing completion; however, due to the volume of work, unanticipated at the time the project was initiated, the estimated completion date, 31 December, was not met.

EVALUATION OF SOVIET AIRCRAFT WEAPONS: This work is being performed by Armour Research Foundation under contract and at an estimated cost of \$49,999. Rough draft copies of reports on four guns were received by ATIC on 26 September. Coordination within the Center was completed and recommendations for changes forwarded to the contractor 13 November. A Purchase Request was initiated 8 December to extend the basic contract to provide \$1400 in additional funds.

Due to delays resulting from re-negotiating a new contract by Procurement Division, and a change in the project plan to require printing by ATIC, it has been necessary to re-schedule the deadline date at various times. Present plans anticipate final distribution on 27 January 1953.

Importance of the Project: To analyze and evaluate the following Soviet aircraft weapons including their components, sub-components, and accessories:

- a. 7.62-mm aircraft machine gun, SHKAS
- b. 12.7-mm aircraft machine gun, BEREZINA
- c. 20-mm aircraft automatic gun, SHVAK
- d. 23-mm aircraft automatic gun, VIA

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Such analyses should indicate operational and performance characteristics, assembly and disassembly, and the efficiency of each weapon when oriented in various positions around the bore axis.

SIGNIFICANT PRODUCTION FACTORS IN THE MANUFACTURE OF MIG-15 AIRCRAFT: Reproduction and distribution of this study were completed 26 August 1952 and the project closed 2 September. Delay between the date of approval by D/I and completion of project was occasioned by the poor quality of reproducible illustrations furnished by the contractor. It was necessary for Graphic Services to re-touch all illustrations to make them acceptable for final reproduction.

INVESTIGATION OF COMPROMISED A-1C G.B.R. SIGHT: The project was delayed due to lack of a satisfactory financial arrangement between the contractor, sub-contractor and Air Force. It was further delayed by preparation of the contractor's report in a format unsuitable for direct reproduction as an ATIC Study. Revision of the project was necessary 18 July. Approval was received from D/I on 22 August for distribution which was accomplished 3 November. Project was closed 26 November.

Importance of the Project: The project was initiated to determine the degree of compromise of the A-1C G.B.R. Sight, installed in an F-84 which landed in Czechoslovakia 8 June 1951. As a result of this investigation it was concluded that no thorough engineering analysis of the sight and its components was made by foreign personnel; however, it is possible that sufficient information was obtained by foreign personnel to promote a similar design.

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INVESTIGATION OF FOREIGN FIRE CONTROL EQUIPMENT: This project was initiated to obtain technical analyses of various items of captured foreign fire control equipment. Material included English translations of technical publications, other written matter and physical items of equipment. Emerson Electric Mfg Co was originally awarded the contract through the end of July. This contract was subsequently extended through 31 December. A report was received from the contractor 5 November analyzing the YAK-11 gunsight system. Since format of the report was not acceptable for reproduction as an ATIC Technical Report it is being considered as a Center rewrite.

A Call Letter was forwarded to the contractor 30 September for analysis of the method of gun installation and cones of fire of all turrets of the Soviet TU-4 bomber, based on the characteristics of two Soviet 23-mm NS automatic guns installed in all turrets.

Another Call Letter was forwarded from ATIC 25 August requesting analysis of selected technical and descriptive documents pertaining to the Soviet A-1 Fighter Gunnery Trainer. Since the reports contained notations in foreign languages and contract with Emerson Electric Company did not include translations - it was requested, 7 October, that Procurement Division solicit a proposal from contractor to cover the required translation services.

Importance of the Project: Results of analyses and evaluation of the material will be presented by the contractor in the form of a study containing a detailed description of the material. The study will summarize results of the analyses in terms of performance capabilities

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(such as accuracy, reliability, and ease of maintenance) under simulated operational requirements. These requirements will include effects of temperature, altitude and climatic conditions.

EVALUATION OF 37-mm N & NS AIRCRAFT GUNS BY CONTRACTOR: A technical report was received 24 October and immediately released to Graphic Services and Reproduction Section for production. Distribution of these copies was accomplished 2 December. Since the current distribution only partially meets this requirement, the project will be kept open until the remaining copies, obtained through local printing, are distributed by Documents Processing Section. Estimated completion date has been advanced to 5 January 1953.

MATERIALS APPLICATIONS IN THE MIG-15 AIRFRAME: The contractor's technical report was received by the Center early in October. It was reviewed by the Project Monitor and revisions to certain portions forwarded to the contractor 24 November for final reproduction.

CRITICAL PRODUCTION FACTORS IN THE SOVIET PRECISION INDUSTRY: Project was deferred indefinitely on 24 October. This deferment was necessary to enable the monitor to successfully complete other priority Branch projects. Considerable information obtainable from these priority projects is to be used in the compilation of data for subject project.

EVALUATION OF FOREIGN LANDING GEAR SHOCK STRUTS: Phase I reports on the YAK-11 and MIG-15 landing gears and the Phase II report on the YAK-11 gears have been received. Contractor has stated that the MIG-15 Phase II report should be completed by 30 January 1953.

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STATUS OF SOVIET CERAMICS AS APPLIED TO AIRCRAFT: Arrangements were made for the release to the contractor of information available in Headquarters, USAF. A Quarterly Status Report on progress was received from the contractor in October. Necessity for revision of due dates of the project became apparent at that time. New estimated date for distribution of the study was advanced to 20 May 1953.

STATUS OF SOVIET SYNTHETIC RESINS AS APPLIED TO AIRCRAFT: A preliminary report was received from the contractor in October and the information it contained was considered significant enough to warrant its publication as an ATIC study. Coordination copies of an ATIC Study entitled "Preliminary Report: An Estimate of the Status of Soviet Aircraft Plastics Technology" was submitted through channels for internal coordination on 19 November.

SOVIET ANTI-FRICTION BEARING INDUSTRY: Internal ATIC coordination of this study was completed 8 December and forwarded to D/I, USAF, for information and coordination. Due to the fact that the receipt of certain information from Air Targets Division took considerably longer than estimated, the deadline date for distribution was advanced to February 1953.

AIRCRAFT RUBBER TECHNOLOGY IN THE USSR: The basic study has progressed to the stage where all of the technical information has been assembled in draft form. Dr. (b) (6) of Project Stork, and ATIC personnel reviewed this material at the Center, 19 December, and collated it for reprinting. Summaries and conclusions will be rewritten or rearranged.

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SOVIET CAPABILITIES IN AIRCRAFT INSTRUMENT MANUFACTURING: ATIC requirements for the analyses and evaluation of selected Soviet precision aircraft instruments were outlined as a Project Stork proposal. This Stork activity was reported in full operation as of 29 August. The contractor is contacting manufacturers with a view to having analyses made. One sub-contractor, the Sperry Gyroscope Division, Sperry Corporation, is well advanced and achieving excellent results. Another sub-contractor, the Kollsman Division, Square D Corp, is becoming operational. Progress on the part of both of these Project Stork sub-contractors is considered satisfactory.

Importance of the Project: Project was initiated for the purpose of estimating the status of the Soviet aircraft instrument industry and to predict future Soviet capabilities in their manufacture. This particular study will contribute to a future overall study aimed at estimating current and future Soviet capabilities to produce quality general precision instruments in quantity.

STATUS OF THE NUCLEAR REACTOR PROGRAM IN USSR: A Project Stork proposal was submitted on 11 July outlining ATIC requirements in this field of specialization. As a result of trips in November to General Electric Company's ANP Project, Lockland, Ohio; the Oak Ridge National Laboratory's ANP Project at Oak Ridge, Tennessee, and to CIA, AFOIN-2 and AFOIN-3 in Washington, recommendations to implement this project were made. Action regarding these recommendations was withheld pending the outcome of a proposed ATIC, D/I and AFOAT-1 meeting to determine

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the scope and extent of the ATIC Atomic Energy program, which has not been too clearly defined.

Importance of the Project: The project was initiated to determine if a basic research pattern, comparable to that in the US, is in existence in the USSR in the field of materials and supporting sciences, which may eventually lead to a successful development of a nuclear power plant either for aircraft or guided missiles; and, if such a pattern does exist, to determine its' overall activity, scope, and current level of reactor technology and status of such an enterprise.

SUMMARY OF NEW DEVELOPMENTS IN FRENCH AIRCRAFT GUNS AND ROCKET LAUNCHERS: A proof copy of ATIC Study "New French Aircraft Guns and Related Ammunition" was forwarded through ATIC channels for internal coordination on 16 October. This study was returned on 10 December for preparation of coordination copies and transmittal to AFOIN-2. Due to delays, occasioned by necessary revisions, the completion date was advanced to 23 February 1953.

ATIC CONTRIBUTION TO PROJECT HOPE CHEST: The basic approach to the problem has been written; kinds of information needed for US research and development have been selected. These must be coordinated with R & D agencies. Some effort has been expended in developing indicators of the information categories selected in the guided missile field. A meeting concerning this project is scheduled for 5 January 1953.

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Importance of the Project: To contribute a paper concerning the basic orientation or approach to the USAF intelligence problem with respect to the USSR, and to determine the following: the relative value of the types of information needed for USAF R & D guidance with respect to the USSR; the relative value of sources; and the relative value of techniques (photo recon, etc.) in acquiring the information.

MATERIALS AND METHODS ANALYSIS OF SOVIET 23-mm NS AUTOMATIC AIRCRAFT GUN: Project Stork negotiated with Armour Research Foundation to perform this analysis. The following items are considered functionally critical and are the subject of the analysis: (1) main recoil spring; (2) barrel; (3) link guide and stripper; (4) cam surface of the bolt head and body; (5) feeder cam ("pork chop"); (6) receiver (7) ammunition link; (8) projectile core.

Importance of the Project: At the present time little is known of Soviet practice concerning the manufacture of aircraft weapons. The 23-mm NS gun can be considered largely representative of Soviet practice in this field since it is used in the MIG-15 aircraft. This project was initiated to conduct a materials and methods analysis of selected components of the Soviet 23-mm NS Automatic Aircraft gun.

MATERIALS APPLICATIONS IN SOVIET AIRFRAMES AND ENGINES: Instructions to proceed with the project were received following approval by the CG, ATIC on 16 December. A report giving AMPR weights and weights of engines will be submitted by Aircraft and Propulsion Branch o/a 1 March 1953.

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Importance of the Project: A Disposition Form, dated 31 October, outlining the project was forwarded the Center from AFOIN-3, requesting gross amounts of aluminum, magnesium, steel, copper, critical alloying elements, rubber and plastics required to build certain specified airframes and engines.

The D/F referenced stated, in part: "The determination of materials input requirements for Soviet airframes and engines is of considerable interest to this office. In an analysis of economic capabilities, the relationship between the availability of basic and critical materials and the requirements of an industry is of primary importance."

RUBBER PARTS HAVING A SIGNIFICANT EFFECT ON AIR WEAPON PERFORMANCE: Distribution of this ATIC Technical Report was accomplished and the project closed 21 July.

SOVIET METAL AND ALLOY COMPOSITIONS, PROPERTIES AND APPLICATIONS: Following approval of this ATIC study by D/I, USAF its publication was completed and distribution accomplished 11 August.

AN ANALYSIS OF STALIN PRIZE AWARDS: Rough draft of study has been presented to the Aircraft Group for comments. Upon receipt and evaluation of comments the study will be prepared in final form for coordination.

Importance of the Project: To provide a basis for proper aircraft and propulsion-unit identification. An analysis of the various Stalin prize awards made to the aircraft and the aircraft engine

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designers will provide analysts with a means of assigning unit designations with a high degree of probability. Preliminary investigation disclosed factual information on some aircraft and power plants from this source.

**SOVIET ROCKET POWER PLANT DEVELOPMENTS:** Requests for information to firm up and expand newly received data have been submitted to attaches in England and France.

**Importance of the Project:** ATIC studies on rocket and pulsejet power plants provide a development history in various countries, including the USSR. These data enable ATIC to evaluate the USSR future capability to conduct aerial warfare insofar as rocket and pulsejet engines are concerned.

**HANDBOOK OF USSR CRUDE OILS - PART I - AVIATION FUEL BASE STOCKS:** The initial phase of this handbook - the collection of data and the preparation of rough draft copy - was initiated during the reporting period.

**Importance of the Project:** This information is necessary to determine to what extent particular refining processes may be carried out by the Soviets in an effort to meet their requirements for aviation gasoline, jet fuels, lubricating oils, etc. These data will assist in making an overall estimate of possibilities within the scope of the Soviet Union.

**STUDY OF CHARACTERISTICS OF ALL KNOWN RADIO FREQUENCY SIGNALS OF ALL COUNTRIES:** The project was initiated at the request of the

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Electronics Branch. The final report presents in tabular and graphic form the principal characteristics of electromagnetic radiations of the radar, radio navigation, telemetering, missile guidance, atmospheric sounding (pulse type only), and radio communication (pulse type only) electronic equipment of all countries of the world. Data is crossindexed in tabulations by radio frequency, by pulse repetition frequency, and by designation. Haller, Raymond and Brown, Inc., was awarded a contract to compile the information into report form. The final report "Electronic Equipment Electromagnetic Radiation Data", dated 5 August, contains 636 pages of information value to organizations engaged in countermeasures intelligence, research and development, etc. Distribution of this report was completed on 10 October.

PROJECT 20024 - CLASSIFIED PROJECT (See also TOP SECRET History Supplement): On the investigation and development of new methods of technical intelligence in the field of guided missiles, the new contract established with Haller, Raymond and Brown, State College, Pennsylvania, has indicated significant developments. Among the more important are:

- a. A handbook covering procedures for intercept operators, prepared and distributed to USAFSS.
- b. The study of machine methods in analysis of voice communication is progressing and significant results have been disseminated.

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- c. Consultant services with USAFSS continued. Personnel from USAFSS visited the contractor and arrangements were made for an extensive training program for signals analysis personnel. The training will commence 12 January 1953.

Discussions with the Flight Research Laboratory, WADC, regarding statistical applications were continued. Data were furnished for the trial of several methods for the computation of probable signal source locations through the use of computing machines. The services of the Princeton University Group were obtained for the purpose of aiding in experiments to localize important sources of errors in electronic reconnaissance data. These experiments are expected to be carried out with the cooperation of Air Proving Ground Command.

Liaison with Wright Air Development Center continued during reporting period. Among more important projects included were:

- a. Installation and fabrication of special crystal video receiving equipment in a special application for USAF aircraft. Tests performed by ATIC indicated the equipment is suitable for the intended application.
- b. The exchange of technical data on new methods in analysis of special type signal intercepts. These methods are intended to influence present and future designs of electronic counter-measures equipment.
- c. Coordination and dissemination of "Della-Rosa" results is continuing.

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Laboratory Analysis - New methods for the incorporation of especially constructed Nomographs in analysis of signal intercepts were reported. These new methods depend upon another new technique recently devised for determination of signal strengths of radio frequency transmissions. Results of these efforts have been disseminated to WADC and SAC.

Analysis of Constant Errors in Radio Direction Finding - A revised method for analysis of radio direction finding bearings, where a constant error is involved, is reported. This method, still being developed, has not been experimentally tested, but such plans are proposed. The importance of analysis methods of this type has been disseminated to research and development commands.

Participation in J/SE Activities - Participation in activities of the Joint Signal Evaluation and Analysis Subpanel, Joint Electronic Warfare Panel, continued. During this period, liaison was established with the Army-Navy Electronic Evaluation Group (ANEEG) and also with the Central Intelligence Agency (CIA). Personnel attending the regular monthly meeting of the J/SE will also visit ANEEG and CIA.

SOVIET RADAR PERFORMANCE AGAINST ALLIED (US) AIRCRAFT: This project was initiated on 24 August. The desirability for this type of information had been recognized by ATIAE for some time and limited estimates of Soviet radar coverage diagrams, maximum detection range, radiation beam width, etc., brought about the initiation of the project.

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The principal difficulty encountered was that of determining the radar echo area of selected US aircraft at 73 Mc. This was overcome by model measurement of echo area by a contractor, Ohio State Research Foundation, and was accomplished by coordination with the Aircraft Radiation Laboratory of ARDC, using an already existing ARDC contract, by addition of \$20,000 of ATIC funds.

Echo area measurements were made of models F-84, F-86, B-36, B-47, and B-50 aircraft, these being of most importance to SAC. A final report of the estimated performance of Soviet 73 Mc radars "PEGMATIT", "RUS-2," and "DUMBO" against the above mentioned aircraft was prepared. Distribution of this study, "Estimated Performance of Soviet Radar," was completed on 8 October.

At the request of ARDC, several echo area measurements of a model MX-1626 aircraft were made. The model aircraft echo area measurements made for this project are also useful to research and development projects, as no suitable measurements had previously been made in the 73 Mc band. The only work remaining to be accomplished by the contractor is that of preparation of final reports on the F-86, B-47, B-50 and MX-1626 aircraft.

Project Blue Book: The months of July and August brought an all-time high in the number of unidentified flying object reports received by ATIC through channels. More than 500 were received during this two-month period. Public curiosity necessitated a press conference and this was held on 20 July with Major (b) (6) in charge.

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ATIE representatives were present to answer specific questions.

During the last four months of 1952, the number of such reports fell from a high of 56 per day to an average of about one per day. This decline probably has been due to the cessation of interest in the subject by the press. The reports that came in, however, generally could be classed as "good" and required more time for analysis.

The Monthly Status Reports, discontinued during the summer of 1952, due to the heavy influx of reports, were resumed in the Fall. Reports for the months of October, November and December were written and are in the process of being coordinated.

A conference was held with Major (b) (6), (b) (3) (B) D/I Liaison Officer for this Project. Trips were also made to Maine, New York and California to investigate flying object reports. To date, 100 Videon stereoscopic cameras, equipped with diffraction gratings over one lens, have been procured and received at ATIE. The distribution of these cameras is awaiting coordination with AACB and Air Defense Command. It is proposed that they be placed in certain control towers and radar sites in the US.

**THE SOVIET YAK-11 AIRPLANE:** A technical report has been disseminated in accordance with the distribution list set up by ATIE, 14 November, and the project closed.

**SOVIET SURFACE-TO SURFACE GUIDED MISSILES, 1000 NAUTICAL MILES MINIMUM RANGE:** Study draft was revised to incorporate changes which were indicated by recent intelligence information and further analysis. Study is currently being re-reviewed within ATIA and ATI.

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DESIGN AND PERFORMANCE ANALYSIS BY LYCHMING-SPENCER OF SOVIET RECIPROCATING ENGINES: "Soviet AM-42 Aircraft Power Plant Performance Characteristics," was prepared and distributed 16 November. On 8 December, a trip was made to the contractor to substantiate the proposed program for the dynamometer testing of the ASh-62 IR and the VK-107A, Soviet aircraft engines.

FOREIGN AIRCRAFT ENGINE CHARACTERISTICS SUMMARY HANDBOOK (USSR): Final coordination of the handbook sheets has been accomplished. All the necessary art work is in the Graphic Service and Reproduction Section for preparation of reproducible copy. Upon completion of art work, reproduction and distribution will follow.

ENGINES - FRIENDLY NATIONS AIRCRAFT HANDBOOK: A PIF scheduling this project has been written and approved. Turbojet engine work sheets on friendly foreign nations have been completed in rough draft form. All work sheets covering pulsejet and ramjet engines have been completed with the exception of the Leduc Engine which will be accomplished as soon as supplementary information becomes available from WADC.

RE-EVALUATION OF MIG-15 BASED ON CAPTURED COMPONENTS: The contractor's final technical report is approximately two months behind schedule and will not be received in ATTC before 10 January 1953. The contractor has submitted the final report on the rough stock bill of materials of the MIG-15 and the report is being prepared for distribution. The two MIG-15 intelligence studies, the RD-45 version and the VK-1 version, are in preparation.

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AIRCRAFT TURBOPROP ENGINES - DOMESTIC AND FOREIGN TYPES: This project is in the final stage of completion. The summary is being written and the final draft will be completed in January 1953. Information from Great Britain has been received and included in the study.

PERFORMANCE AND CHARACTERISTICS HANDBOOK: The March 52 issue of the "Soviet Characteristics and Performance Handbook" is being reviewed to make necessary corrections. Work has been initiated on an aircraft performance and characteristics handbook of the satellite countries. A new format for presenting aircraft performance data has been prepared. The first utilization of this format is expected to appear in the satellite handbook, expected to be completed approximately 1 May 53.

NATIONAL INTELLIGENCE SURVEY ON SWITZERLAND: The contribution to NIS on Switzerland was reproduced in final form and forwarded to D/I, AFOIN-2B4, 18 December. However, it is possible this report may be returned for further coordination due to the new NIS organizational procedure recently established.

BRITISH TURBOJET - PRODUCTION, SERVICE AND DEVELOPMENT: Rough draft of the study has been prepared and is presently being coordinated within ATIC. Charts and graphs are in process of being completed in Graphic Services and Reproduction Section.

RECIPROCATING ENGINE SUPPLY AND MAINTENANCE SUPPORT PROBLEM FOR SOVIET AIRCRAFT: During August and September this report was reproduced and distribution made 26 September. In November a trip to

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D/I, AFOIN-3A2, AFOIN-2C5 and CIA was made in conjunction with the dissemination and substantiation of this information. Additional information to help substantiate the report has been received. CIA is contemplating future work based on this report. A further report is contemplated when sufficient additional information is obtained.

ESTIMATED CHARACTERISTICS OF SOVIET AIR WEAPONS - QUARTERLY REPORT: The frequency of this report has been changed from quarterly to a semi-annual basis. The publication, to be dated 1 January 1953, is currently in preparation and is approximately 80 per cent complete. Publication of the report is expected during the latter part of January. The basic format has been changed from a tabulation of information to a narrative type of presentation. The estimates on future aircraft developments will only carry through approximately 1956 and not up to 1960 as in the past.

POTENTIALITIES OF BOUNDARY LAYER CONTROL DEVICES ON SOVIET AIRCRAFT: The acquisition of textbooks, magazines and technical reports, printed in the USSR and Germany, was arranged with Mr [REDACTED] Office of Naval Research, prior to his recent trip to Europe. A few publications have been received with the bulk expected the latter part of January 1953.

Textbook, reports and magazines were purchased out of an allotment of \$250 given to Mr [REDACTED] by ATIC. A paper was prepared for the Commanding General entitled "Status of Boundary Layer Control Throughout the World." This was read before a large gathering at the Air

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Research and Development Center, Baltimore, Maryland, 10 December, and was followed by a discussion relating to W-PAFB's Research and Development program.

For interrogation purposes, a concerted effort is being made to obtain the names and whereabouts of well-known German scientists and engineers, formerly engaged in boundary layer control work in Germany, who subsequently went to the USSR.

No further progress has been made in completing the technical reports concerning the boundary layer control aspects of the MIG-15 and Type 31 aircraft.

**PREPARATION OF HANDBOOKS ON FOREIGN AIRCRAFT OTHER THAN SOVIET:** Additional engineers have been assigned to this project to expedite the preparation of handbooks in the form of studies. During the latter part of October, the French study was prepared in rough draft form, and coordinated during the latter part of November. Work is proceeding satisfactorily on the Italian Aircraft Study which will be prepared in rough draft form during January 1953. The British Aircraft Study is now scheduled to be completed for coordination on 28 April 1953.

**MISSILE PARAMETER STUDY:** The preliminary results for surface-to-air missile trajectories have been completed with applications of the three-point intercept method on the German Wasserfall missile. Further investigation on the effective range is being continued.

**ANALYSIS OF THE SOVIET TYPE 15 AIRCRAFT:** Due to higher priority work, this project was suspended on 14 August. It will be reactivated later.

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COMBAT RADIUS CAPABILITIES OF THE SOVIET MIG-15: This project entailed a study of the combat radius capabilities of the MIG-15 with the VK-1 engine installation, with (1) no external fuel, (2) with 140 gallons of external fuel, and (3) with 250 gallons of external fuel. Charts depicting these capabilities were prepared and forwarded to FEAF on 15 July. A letter dated 31 July was received from FEAF expressing gratitude for the charts received. A complete study on the subject was prepared, coordination has been completed with ATI, and copies are now being prepared to be forwarded to D/I USAF for final approval.

THIRD GUIDED MISSILE PANEL MEETING: The third Guided Missiles Panel Meeting was held on 6 - 7 August to present available intelligence and the results of analysis to a panel of contractors' representatives, observers from other intelligence agencies, and other military organizations and USAF Commands. Minutes of the meeting were prepared and the project terminated following distribution. Copies were hand-carried to four charter panel members in November.

PROJECT STORK: This contract was initiated to gain the Air Force an outside contractual arrangement to provide a source of scientific research, study and analysis of the technical capabilities of a foreign government to wage offensive warfare and to defend itself against air attacks. It also provides for analysis and evaluation of selected foreign air material and related data, studies and reports concerning the technical characteristics and performance, and

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manufacturing techniques as well as material employed in the production of such material. This work is directed by initiating specific sub-projects prepared by various engineers of the Technical Analysis Division.

To date, 128 sub-projects have been initiated under this contract and its predecessors. Of the sub-projects initiated during the reporting period, 70 were completed, 16 cancelled and 42 remain active. Six technical reports, three special reports and nine letter reports were published and distributed during the reporting period. Supplemental funds were added to this contract in the amount of \$321,724.

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AUTH: CG. ATIC  
INIT: MR  
DATE: 30 JAN 53

Project 20024

(Electronic Reconnaissance)

Expansion of Section Responsibilities: A detailed study was prepared recommending the lines along which ATIC operations in the field of electronic reconnaissance should develop, based on a new general policy of Headquarters, USAF showing greatly increased emphasis on this Air Force program. General approval was received. As a result, activities relative to Project 20024 will be considerably expanded in scope, and the Countermeasures Section (ATIAE-3) will experience an increase in both personnel and responsibilities.

Investigation and Development of New Methods of Technical Intelligence in Field of Guided Missiles: A new Contract was established with Haller, Raymond and Brown Inc., State College, Pennsylvania. It is planned that a considerable portion of the studies under this contract will be for the benefit of USAFSS. The various phases of the contract have been coordinated with Haller, Raymond and Brown, ATIAE-3 and USAFSS in several joint conferences. Among the more important phases of the new contract are:

- a. The study of machine methods in analysis of voice communication.
- b. The preparation of an electromagnetic propagation manual.
- c. Revision and introduction of new material in the technical handbook (originally prepared under old contract).

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- d. The development and implementation of a training program for USAFSS personnel.
- e. Consultant services with USAFSS. Major (b) (6), (b) (3) (b) ATIAE-3, continued on TDY during month of August, completing the preparation of analysis procedures at Headquarters, USAFSS.

Application of Statistic Methods to ECM Analysis: The application of statistic methods to intercept analysis was continued in connection with several specific problems. The cooperation of both the Statistical Services Division of AMC and of the Flight Research Laboratory of WADC was obtained.

A statistical comparison was made of data on pulse recurrence frequencies as reported by intercept operators and as measured in the laboratory from audio recordings. Several significant points were brought out.

Arrangements were made for a series of trials of machine methods of analysis of reconnaissance data.

An initial conference was held at Eglin Air Force Base with Air Proving Ground Command. ATIAE-3 representatives were Mr. (b) (6), (b) (3) (b) and Lt (b) (6), (b) (3) (b). A program to evaluate electronic reconnaissance equipment was discussed. It is planned to initiate a new program to study and develop "standards of performance" for existing operational electronic intercept equipment. A series of conferences had been previously held with research and development personnel regarding their participation in the program.

Development of Standardized Air Force ECM Analysis Procedures: Continuing effort was devoted to standardizing analysis procedures in the field of electronics reconnaissance. Mr. (b) (6) participated

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in a conference with personnel of SAC and USAFSS, at Brooks Air Force Base, San Antonio, Texas, for the purpose of developing standard methods of logging, reporting, and analyzing reconnaissance data. The 30-day temporary duty of Major (b) (6) at Brooks Air Force Base was to some extent for the purpose of standardization of procedures.

Liaison with Wright Air Development Center: Liaison with WADC continued during reporting period. Topics discussed included:

- a. Operational use of the AN/AIR-1 Countermeasures receiving set.
- b. Specifications required for production units of the AN/APD-4 (Della-Rosa equipment).
- c. The results of recent WADC visit to the Far East.
- d. Coordination with personnel assigned to new ARDC-WADC Staff field team, before departure to the Far East on liaison duty.

The Development of Intelligence Requirements for Electronic Equipment: Activity in establishing intelligence requirements and specifications of electronic equipment for electronic reconnaissance applications is continuing. Specifications for improved Direction Finder equipment and certain modifications to AN/APD-4 have been coordinated.

Instrumentation of Exploratory Aircraft: The Air Force has assigned the precedence rating 1-1a and project SAC-2B-721 to the instrumentation of a special exploratory type electronic reconnaissance aircraft. The staff planning and design for the instrumentation of this aircraft was completed during the summer. The instrumentation was started at Sacramento, California.

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Preliminary Analysis of Electronic Reconnaissance Data: Regular work related to the preliminary analysis of data from electronic reconnaissance missions continued. This included putting this data in readily available form for subsequent study and analysis, and analyzing direction finder data with a view to determining probable locations of alien radar equipment.

Laboratory Analysis: Regular laboratory investigation of complex radio-frequency transmissions continued. Liaison and exchanges of material with AFSA, Signal Corp, USAFSS and SAC are continuing. Progress in preparation of comments on field experiments in pulse analysis with AN/SLA-1 is continuing.

Special Techniques for Pulse Analysis: The evaluation of a new pulse analysis technique, developed by ATIAE-3, and using the AN/SLA-1, is continuing. Recommendations are being forwarded to the operational unit regarding the value of this technique and the excellent manner in which the project is proceeding.

The Evaluation of Intelligence Data From Operational "Della-Rosa" Missions: The studies under Supplement No. 23 of Air Force Contract W33-038-ac-15012 are continuing. The analysis of the AN/APD-4 (airborne instantaneous microwave direction-finder) data is approximately 75% complete. A representative of ATIAE-3 visited Federal Telecommunications Laboratories, Inc. to coordinate on requirements and recommendations to be included in the interpretation of the results.

Shoran Investigation in the Far East: The investigation of Shoran interference in FEAF is continuing with WADC and Armament Laboratory

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personnel participating in intelligence interpretation of these reports.

Participation in J/SE Activities: Participation continued in the activities of the Joint Signal Evaluation and Analysis Subpanel, Joint Electronic Warfare Panel.

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GLOSSARY

AIR TECH INTSUM -	Air Technical Intelligence Summary
AMC -	Air Materiel Command
AMPR -	A manufactured weight (less engines, armament, wheels, etc. not gov't furnished or furnished by vendor)
ANP -	Air Nuclear Propulsion
ARDC -	Air Research and Development Command
ATI (C) -	Air Technical Intelligence Center
ATIA -	Technical Analysis Division, ATIC
ATIAE -	Electronic Branch, ATIA
ATIR -	Technical Requirements Division, ATIC
ATIX -	Air Intelligence Office, ATIC
ATLO -	Air Technical Liaison Office (Officer)
BAIR -	Basic Air Intelligence Requirements
BAGR -	Bureau of Aeronautics General Representatives
CADO -	Central Air Documents Office
CIA -	Central Intelligence Agency
DIRAMA -	Daily Intelligence Reports to Air Materiel Areas
FY -	Fiscal Year
ICGM -	Intelligence Collection Guidance Memorandum

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NIS -	National Intelligence Survey
PAM -	Personnel Actions Memorandum
PIF -	Project Initiation Form
SRI -	Specific Request For Information
USAFSS -	United States Air Force Security Service
USFA -	United States Forces in Austria
WADC -	Wright Air Development Center

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1st ATC  
History

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TO: DIRECTOR, AIR FORCE

FROM: AIR FORCE INTELLIGENCE CENTER

TO: THE AIR FORCE

DATE: 1951 - 1 - 1

The Air Technical Intelligence Center (ATIC) was established as such by General Order Number 11, Headquarters, United States Air Force, dated 1 June 1951, which sets the effective date of this designation retroactive to 1 May 1951, and defines the mission of the Center as follows:

The mission of the Air Technical Intelligence Center is to process Air Technical and Potential Intelligence under the operational control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF.<sup>1 2</sup>

Prior to 1 June 1951, responsibility for the production of Air Technical Intelligence had been delegated to the Intelligence Department of the Air Materiel Command. Since the Intelligence Department, 410, was providing Air Technical Intelligence to other components of the United States Air Force as well as AEC and the Air Research and Development Command, it was deemed advisable to place the former Intelligence Department, 410, directly under the Directorate of Intelligence, Headquarters, USAF, that it might better serve the United States Air Force.

1. See Appendix, TAB A.

2. Ibid.

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as a whole.

The Air Technical Intelligence Center, in carrying out its mission, focuses its efforts on these two objectives: (1) prevention of technological surprises from any foreign source; and (2) assisting the research and development agencies of the United States Air Force in the development of countermeasures against such foreign technical development.

The principal functions delegated to the Air Technical Intelligence Center are as follows:

1. The support functions of counsel and administration.
2. Collection of technical intelligence information, including foreign technological and related equipment required for the production of technical intelligence.
3. The analysis and evaluation of technical intelligence information.
4. Provision of logistical-type services to support the Center's various activities. This includes reception, processing, and storage of documents; limited services for reproduction of documents; publication of intelligence reports and studies; and specialized training of selected personnel performing Air Technical Intelligence duties.

In order to perform these functions, the Air Technical Intelligence Center has been organized as indicated on the Organizational Chart attached hereto.<sup>3</sup> In addition to four staff offices - Air Inspector's Office,

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3. See Appendix - TAB - B.

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Scientific Advisory Office, Air Intelligence Office, and Policy and Management Office - three main divisions have been established. These are: Technical Requirements Division, Technical Analysis Division, and Technical Services Division. A further breakdown of the functions has been made within the divisions and staff offices to accomplish special tasks. Particular attention was paid, during the reorganization planning, to avoid duplication of effort.

In the history to follow, changes in organization and functions, accomplishments, and problems are presented concerning each component of the Air Technical Intelligence Center.

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The Intelligence Planning Branch maintained the Air Room situation maps and charts on a 7-day week basis with positions completed and an oral briefing covering the North Atlantic and Korean tactical situation, prepared by 1000 hours each day. Members of the JAG Staff who came to the Air Room for up-to-the-minute intelligence information were briefed on the basis of coverage desired.

## Intelligence Publications Branch

Under plans laid in December 1951 by the Office of the Commanding Officer, Air Technical Intelligence Center, the ATIC BULLETIN was established in January 1952. This publication is issued weekly, to disseminate air technical intelligence information to agencies within the National Defense Establishment, mainly to the Air Material Command, the Air Research

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and Development Command, and the Wright Air Development Center.

Planning for publication of the BULLETIN had been based on the premise that the missions of all these agencies, and consequently the overall security of the US, are directly affected by current and anticipated developments in the technology of foreign air power. The BULLETIN was conceived as a means of furnishing interested agencies with information concerning these developments. In the planning it was recognized that the value of this information would be dependent upon its accuracy and its dissemination; and on the other hand it was anticipated that there would be considerable danger in the premature use of unevaluated information. This thinking is reflected in the Foreword, published in every issue of the periodical:

"The ATIC Bulletin is published every Friday by the Air Technical Intelligence Center, Wright-Patterson Air Force Base, to furnish Air Technical Intelligence information on developments, related to the technology of foreign air power—information that is timely and reasonably authentic but not thoroughly evaluated.

"After evaluation and comparison with other data, the isolated fragments of information contained in this Bulletin will, if they are considered pertinent and significant, be integrated into the existing fund of knowledge for eventual incorporation into formal ATIC studies and reports, in an effort to present the best possible current estimates of the situation."

"It should be born in mind that single items of information, such as these, may be misleading in themselves, and that they acquire significance only when they are collated with established facts. It is suggested, therefore, that this Center be consulted

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wherever used in use is made of the information contained in any item that is published herein."

consistent effort has been made to coordinate, through the medium of the "WTD Bulletin", the kind of information that will alert the various agencies to new and important developments, without resort to undue disclosure in the preliminary stages.

Application of the "WTD Bulletin" superceded the dissemination of the "WTD Conference Items", since the Air Technical Intelligence Center has been made available to the various agencies and the Air Material Command since the "WTD Bulletin" is disseminated in all cases of intelligence reports. With the transfer of the Air Technical Intelligence Organization from WDC to the immediate control of the Directorate of Intelligence, Headquarters USAF, it had become apparent that the service previously offered to the various agencies dissemination of the "WTD Conference Items" should be continued and should be extended to include other agencies also, whose missions are affected by continuing developments in the technology of foreign air power. In consideration of these points, the first issues of the "WTD Bulletin" were disseminated mainly to components of the Air Materiel Command and the Wright Air Development Center.

The first issue appeared on 4 January 1952. A total of 64 copies were published, and 53 were distributed outside the Air Technical Intelligence Center. Response of the using agencies was favorable from the start. Distribution of the BULLETIN has been increased steadily to the point where 197 copies are published every week. Of these, 153 copies are disseminated to agencies outside the Center and the rest are used

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1. 6/53

⇒ 15 Sep 52 Reception - Received 172 million,

"10 yr. Plan" Disburse @ 172 million 200

1/53 705 units received 863 // 336 CUS 172M

6/53 634 units 63 CUS 172M

306 + 5 CUS 172M

7/52 331 mil unit / 296 mil

6/53 309 / 296

⇒ 23 Mar 53 Review Securities (KAG xFem) to ARDL

Q

7/12/53

11/26/53 BG. Canvass scene in witness station  
KCS; was not returned/died

634 Report 4.2m

7/53 634 ATX 307 m/c / 327 CID

1126 ATSS DEPT 1 July 53 → 307 / (Am) >  
Res ATSS 1125th BAG / ATX

12/53 4602 ATSS took on Res during at  
the 5.4m (Agree w/ ADC)  
to ATX 200-2

ATX on with office (ATX) serves as A 2  
for Amc (the only ATX station)

1-6/54

Fy52 Budget est. 4.2m

Fy51 Budget Ant 4.1m

1/54 Ant 307 mil / 327 C/D  
ASW 265 / 301

634 total

566

6/54

634

ATL Office	ASW.A	1/54	34 Ants	28 ASW
	GE		78	59
	OP		10	9
			<u>122</u>	<u>96</u>

MIG-15 ANALYSIS  $\Rightarrow$  HALLION

7/12/54

12/7 Recon > <sup>all</sup> ~~front~~ office under CC's Exec off

9/15/54 <sup>Be</sup> ~~Winters~~ assumed command AFM →  
under <sup>responsible</sup> ~~Winters~~ / CW

7/54	ADT	307 mu	/327	CS	//634
12/54		293	327		//620

~~AFM~~

⇒ MIG-15 ~~known~~

8/12/54 RB of AFM 200-2 "UFO Rep-nr"



1-6/55

1 APR 55 DET 1 ONG/ASSN TO 1125TH USAF  
FAC (AFIC)  $\Rightarrow$  RELY TO WORK w/ USAFSS  
6 mil/20 CID PO

	ASSN	293/304	//597	
1/55	ADN	293 mil	/327 CID	620 TONN
6/55		301	/374	675
	ASSN	312/314	//626	

8 JUNE 55 MGEN JOHN A. LAMFORD, USAF DIA OF ENR  
USIA AFIC ELINT LAB

~~21 JUNE 55~~

1828 LKE ONE @ HOME AIR REVER COUN

$\Rightarrow$  CONCEPT 1ST CO OF A HIGH-LEVEL GRID OF  
REINFORCE TUNING 5500 HIGH TUNING & EQUUS

7-12/55

1 AUG 55 under recall: ATIC/CC DENIED JAF  
DIA DIA for RECALL (AFOIN-Y)

→ 6 DEPT

→ 6 STATE OFFICE

// DELEGATED ADAM, WORK FROM  
TECHNICAL

28 NOV 55 former place of AMC - WADL TO EST. ATIC  
CIV BUS OFF 12/1/55

7/55	AMC	301 mil/374 CIV	675	312-314
12/55		307 / 374	681	// 626 AMN
				// 702 AMN
				337-365

LL 108<sup>WADL</sup> in ATIC PROG → 25 CIV/83 mil

8/55 JAF DENIED A. QUALITY & STATE of  
FOREIGN AIRCRAFT in DC

12/16/55 without "300" TOP OFFICIALS of JAF  
ATC IMPROVING in Baltimore

~~9/55 Prof. ALBERT WADL~~

7/14/55 ATICO out in SALZBURG, AUSTRIA,  
DENIED ~~to~~ SIGNED (ALL MEMS)

↳ CPT ROY F. MOSLEY / LT MALCOLM G.

STORY CIVIL WAR FIGHTER in a TWIN ENGINE FIGHT

⇒ <sup>ATIC/CC</sup> WADL EST. An ATIC office in AUSTRIA

12/6/55 ATICO sent to CARO BENSE EG-15 TWIN

17 AUG 55 JAF-18 RECEIVED (NO. KOREAN  
DEFECTION)

~~8/55-12 DISAPPEARANCE of ATIC FIVE @ AN NOON~~

EXPENSE  
B. 263 REVENUE (An Bank/Revenue B. 262)

AUG 55 - REPAIR DELIVERED

NOV 55 - REPAIR COMPLETED COLLECTED 15% LATE.

AMOUNT OF \$

1-6/56

ADH  
684

ADN  
715

7-12/56

DEVER CIV BUS OFFICE



1-6/57

6/30  
ADTH 298 mil / 425 CIV 723  
ASSL 317 / 422 739

12/55 ARIC EST. ITS OWN CIV. PAID OFFICE

ACCOUNTANT APPLICABLE TO (LAWYER)

ARIC SCHEDULE 2200 INTERIOR REPORT FROM HANDBOOK  
ADVICES

Proper due book report & if more book found  
by SECN & sold to public @ nominal price  
RUB 5/5/55 ADDITIONAL ADDED TO RUC IF IT IS TO DATE

7-12/57

12/57     ADH: 343 mil / 430 Lw     773 7072  
           ADH: 329 / 401             730

8/57     ATIC sends on a disconnected to E.T. a  
narrow-band beam for coll, enc, diffen unclassified  
assessments & comments to JF references

Source I / II     EMT collection // analysis

12/57     Sec AF <sup>1/5</sup> assumes PR reply for JFOs; ATIC  
Tech analysis; ADC collection

1-6/58

2nd Lt Col (b) (6) JACOBS/KRUEGER  
@ AWC: Soldier R&D, w/ 555 of Rome, w/ 6000

6/58	NTH	417 mil/645	41	1062	room
	ATTN	361	533	894	

→ # 2/58 NTH ↑ 59 officer/215 civ bullets! S.M. 10/10/58

11/56 ASS-EST Crossing of AERO & WAC FELT  
THUS P&D // 1-6/58 ALUMINUM TO DET of Comm  
for SMC

7-12/58

8 July 58 CoFC Col (b) (6), (b) (3) (B) from  
MAG Harold E. Winter

10 Nov 58 MAG CHAS. S. DOUGHTEN ASSIGNED CND

7/58 NTH 417 MIL/645 CND 1062 TONNE

12/58 NTH 429 / 642 1071

INSPECTION AND CONFORM - 205 DMTA MAN - 5x MORE  
THAN READIX



1-6/59

5/28 Gen (b) (6), (b) (3) (B) Dep Dir CIA visit  
for reorganization/visit with Sec

6/8-10 in Gen I, FU-EN, Dir of I Change AF  
visit

5/16-6/1 MG Douglas Around the world orient/  
WSP M.P GE-TRY-INDO-IND-PAKI-IND-THAI-PI-  
ONG-HAN

6/57 AUTH 429 MIL/642 CIN //1071

2/1 AFIL PACAF office version -/ AFIL STAN

6/59 Status requested of <sup>in units</sup> ~~the~~ Gen of AFIC in FO

7-12/59

9/21/59 name Δ to 'Aerospace' TIC → NATL DEW  
to ADJ W State Rep's to AF

Δ Report to RSD → @ beginning of RSD DEWEL RUGS

ATILCO RCAF/STATE DEWEL ATIL DETT (4)/(3)

12/59 NTH 429 m / 639 C 1068 T

\* 10/59 NTH Rep's for AF program for KNECH  
Spec Source 247 RUGS Off DEWEL to ATIL by AC/I  
WASH

MANIX (Rd for the only) to receive in house, continue  
WGT I course

~~CONFIDENTIAL~~

1-6/60

AF-wide removal of LINCOLN/ROCKWELL 10/55  $\Rightarrow$   
removed 8/10/55

6/2000/1000 of some other entries

7/1/60 DET 1 SMITH DISCOUNT

4/60	429	in	/	639	c	//	1068	-	111	\$10% cut!
6/60	383		/	574		//	957			

ATC major accepts

1/60 work began on 1828/259 ADD

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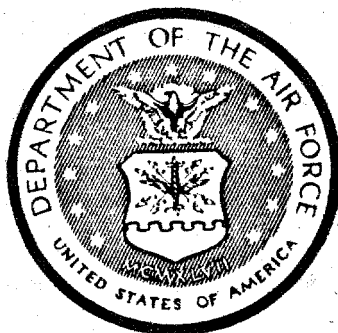
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# HISTORY OF AIR TECHNICAL INTELLIGENCE CENTER

1 JANUARY 1953 - 30 JUNE 1953



AIR TECHNICAL INTELLIGENCE CENTER  
WRIGHT-PATTERSON AIR FORCE BASE  
OHIO

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Auth: CG, ATIC  
By: (b) (6)  
Date: 30 July 1953

*DWE*

HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER

1 January 1953 - 30 June 1953

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Prepared by  
Air Intelligence Office  
AIR TECHNICAL INTELLIGENCE CENTER

30 July 1953

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*for A. R. Mena  
C. 2344*  
753-8026-5

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FOREWORD  
TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER  
For the Period  
1 January 1953 - 30 June 1953

The content and format of this installment of the Air Technical Intelligence Center History does not differ materially from that of the previous edition.

Since there have been a number of changes in the organizational structure of the Center, an organizational chart as of the end of the reporting period has been included, following this foreword. This chart will give the reader an over-all picture of the structure of the Center, not possible to obtain from the piecemeal accounts given for each component in the text.

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**OFFICE OF THE  
COMMANDER**

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OFFICE OF THE COMMANDER

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The function of the Office of the Commander is to direct and monitor the accomplishment of the air technical intelligence phase of the overall mission of the Directorate of Intelligence, USAF. This function includes:

Providing the USAF with air technical intelligence concerning capabilities of foreign countries to conduct air warfare and their defenses against retaliatory strategic air attack, in order to prevent technological surprise to the United States from any source.

Nominating, training, providing technical guidance, and placing selected personnel for collection of technical information needed for the accomplishment of the ATIC mission.

Training Air Attache personnel in photographic techniques and indoctrinating them in the ATIC mission.

Providing basic data on foreign air weapons and related materiel for use in recognition manuals and performance handbooks.

Indoctrinating and training selected AF personnel in techniques of conducting air technical intelligence operations in the field.

The office is staffed by three officers and five civilians and is organized as follows:

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The Commander who directs the activities of the Air Technical Intelligence Center (ATIC).

The Deputy Commander who assists the Commander and acts for him in his absence.

The Executive Officer who administers to the division chiefs and staff officers the directives of the Commander and his Deputy, executes the administrative functions of the Office of the Commander, and supervises the activities of the adjutant and the troop commander.

The Scientific Advisor who counsels the Commander and represents him on technical and scientific matters, and who monitors the technical intelligence products of the Center.

The Civilian Assistant who analyzes plans and programs recommended by the divisions and staff offices relating to major organizational or program changes, counsels the Commander on these proposals, and monitors for him the course of action desired.

Secretarial assistance.

During the period, one change occurred in key personnel. Colonel (b) (6), formerly Chief of the Policy and Management Office, replaced Lieutenant Colonel (b) (6) as Executive Officer, 28 January 1953.<sup>1</sup> At the end of the period, the key personnel were:

Brigadier General (b) (6), Commander Air Technical Intelligence Center and the 1125th USAF Field Activities Group.

---

<sup>1</sup> PAM # 7, 28 January 1953

Colonel (b) (6) Deputy Commander  
Colonel (b) (6), Executive  
Mr. (b) (6) Scientific Advisor  
Mr. (b) (6) Civilian Assistant

## II. ACTIVITIES

INSPECTION OF EUROPEAN THEATER ACTIVITIES. The Commander departed on 16 April and returned 15 May 1953 from an official inspection tour of the ATIL Offices in Wiesbaden, Germany, and Salzburg, Austria, and the ATL Offices in Paris, Stockholm, Rome, and London. General Garland also discussed classified intelligence matters with certain personnel in Norway, Belgium, and the Netherlands.<sup>2</sup>

TEN YEAR PLAN (SECRET) A simpler and more realistic concept of the ATIC mission was approved by the Commander on 15 September 1952. This concept, authored by the Scientific Advisor, is now generally known as the "ATIC Ten-Year Plan."<sup>3</sup> The plan was considered for more than two years before adoption and has been improved by discussion with personnel of Director of Intelligence, Hq USAF, (D/I) and representatives of other Department of Defense agencies. It was presented at the Ninth Air Intelligence Conference on 22 January 1953 at Hq Air Defense Command, Colorado Springs, Colorado. Since the reception was uninformatly favorable, the concept was put into effect on 12 June 1953. The plan is based on the principle of reducing a problem to its most simple form and then

---

<sup>2</sup> LO 0000341, 10 April 1953, as amended by LO 0000357, 15 April 1953, Hq 1125th USAF FAG (ATIC) (ATIG)

<sup>3</sup> D/F to ATIC divisions & staff offices, subj: "Implementation of Proposed ATIC Ten-Year Plan," dtd 10 June 1953.



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limiting all activities to those required for its solution. The mission of the ATIC, in the broadest sense, apart from its contributions to Joint and National Estimates and Surveys and its responses to Headquarters, USAF requests, consists of three objectives, the first two being considerably more important than the third. These objectives are:

Priority I. To estimate the capability of the Soviet bloc (USSR, Satellites, Communist China and North Korea) to wage strategic air warfare on the western nations.

Priority II. To estimate the capability of the Soviet bloc to defend itself against retaliatory strategic air warfare by the western nations.

Priority III. To estimate the capability of the Soviet bloc to wage tactical air warfare on the western nations.

Air Force Regulation 200-5 requires ATIC to provide intelligence estimates of present foreign air technical capabilities for the use of the operational commands. The Center is also required to provide future estimates of maximum foreign theoretical air technical capabilities without specifically identifying any particular air weapon or family of weapons. These future estimates must cover periods which, at the least, are equal to the normal development cycles of air weapons. An arbitrary span of ten years has, accordingly, been selected as a fair compromise between the desires of planners and the limitations of intelligence. This ten-year span will be revised and projected forward twelve months at the end of each calendar year, thus making it self-perpetuating.

ATIC's method of carrying out the ten-year plan is: (1) to list and break down into components a minimum of the different types of air weapons

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and systems necessary to reach the previously mentioned objectives; (2) to initiate a continuous project for the exploitation of each of these types of air weapons and systems, each project producing studies which will be amended and reissued periodically as warranted by later information; and (3) to determine the irreducible minimum number of significant factors on each type of air weapon or system required to permit assessment of their present characteristics or their future maximum theoretical capabilities. These significant factors can be transcribed into requests for information which will be submitted through the D/I collection system for fulfillment by any or all collection agencies of the Government. In addition to the projects mentioned, tie-in projects will be initiated periodically to correlate the regular studies and to provide a review of the situation from a detached vantage point.

It is expected that this program will focus ATIC objectives into fields of major importance, thereby lessening the number of different fields of interest. It is believed that this can be done without lessening surveillance of foreign technical and scientific progress necessary to guard against surprise by unexpected developments abroad.

PROJECT PLANNING AUTHORITY. A planning authority has been established to effect, on a Center-wide basis, (a) the consideration of future activities bearing on the ATIC Ten-Year Plan; (b) the coordination, initiation, planning, revision or cancellation of projects; and (c) the scrutiny of current plans and products for alignment with this plan. This authority has been named "Project Planning Authority" (PPA), and

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includes the following:

Permanent Chairman	Col (b) (6)
Deputy Chairman	Lt Col (b) (6)
Secretary	Mr. (b) (6)
Technical Analysis Division Member	Mr. (b) (6)
Technical Requirements Division Member	Lt Col (b) (6)
Technical Services Division Member	Mr. (b) (6)
Policy & Management Office Member	Col (b) (6)

Each division has, in turn, established its own council, composed for the most part of senior civilian personnel of the branches, one of whom will act as alternate to the key member on the PPA.

The first meeting of the PPA was held on 26 June 1953. Colonels (b) (6) and Lieutenant Colonel (b) (6) of the Directorate of Intelligence, USAF attended this meeting.

The PPA is responsible for establishing its own methods of procedure. Each member of the PPA will coordinate the commitments of his division with the division chief. The PPA does not abrogate the authority of the constituted divisions; rather, it plans the course of action required to carry out the ATIC mission within the organizational structure of the Air Technical Intelligence Center.

METHOD FOR EVALUATING INTELLIGENCE REPORTS. Procedures established by Directorate of Intelligence directive<sup>4</sup> made the intelligence analyst responsible for determining if a written evaluation of an intelligence report is required. This method was not entirely satisfactory because

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<sup>4</sup> D/I Memorandum No 200-22, 22 April 1953.

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of the variance in criteria used by different analysts in making this decision.

To improve this method, the Civilian Assistant developed the following plan: Air Technical Liaison Officers (ATIO's) overseas will indicate on their reports whether or not an evaluation is desired. It is believed that the collector is better qualified to decide what guidance he needs. Recommendation has been made to the Directorate of Intelligence, Hq, USAF, to provide a space on the report form<sup>5</sup> for the collector to indicate his desires concerning an evaluation.<sup>6</sup> Within the Center, a 30-day follow-up system has been installed to insure that desired evaluations are prepared promptly.

#### AIRCRAFT AND INDUSTRIES ASSOCIATION CONFERENCE.

A conference was held at the Center on 30 June for the Aircraft and Industries Association. The meeting was attended by representatives from the majority of the aircraft and heavy industries of the United States. Arrangements for the meeting were made by the Technical Analysis Division and the welcoming address was given by the Scientific Advisor.

#### NOTEWORTHY VISITORS.

Noteworthy persons who visited the Center during the reporting period include: Colonel (b) (6), air ace World War II and the Korean conflict; Colonel (b) (6), arctic explorer; and Group Captain (b) (6), Deputy Director for Intelligence (Technical), Royal Air Force, England.

---

<sup>5</sup> AF Form 112, "Air Intelligence Report"

<sup>6</sup> Ltr to Brig Gen (b) (6), D/I USAF, fr Brig Gen (b) (6), (b) (6), (b) (6) dtd 19 June 1953 re Evaluation Form Program, and reply dtd 26 June 1953 (ATIG-3).



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#### MISCELLANEOUS ACTIVITIES

##### TROOP COMMANDANT

The Troop Commandant activity was made directly responsible to the Commander, 1125th USAF Field Activities Group (ATIC), 9 March 1953.<sup>11</sup> This activity is responsible for the operational efficiency, training, and welfare of all military personnel assigned or attached to the Center. The Troop Commandant further serves as Commander of the Headquarters Squadron, 1125th Field Activities Group (ATIC). First Lieutenant (b) (6) has been the Troop Commandant throughout the reporting period.

##### USAFSS SECURITY SERVICES DETACHMENT

This activity is attached to Brooks Field, Texas, but is located at the Center in order to provide the ATIC with expeditious and secure means for receipt, storage, transmission, and distribution of intelligence material not handled through other channels. First Lieutenant (b) (6) is the officer in charge. Mr. (b) (6) serves as the ATIC liaison representative to this activity.

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<sup>11</sup>

See Policy and Management Office History, pages 18, 26, and 29

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ATID PROGRAM:

In May 1953, Lt Colonel (b) (6), Chief, ATL Program Branch, departed for a 60 day tour of European ATL Offices to study the ATID Program.

After two years of negotiations, authority was granted to the Air Technical Intelligence Center to utilize one of the Air Attache slots in the Moscow Office for the assignment of an Air Technical Liaison Officer. Present plans are to have an ATID trained in the Russian language and assigned to Moscow sometime during 1956.

During the reporting period, 36 ATID's, 8 airmen, and 2 stenographers were trained for overseas assignments. Two officers are being trained for duty as Domestic ATID's. During this same period, 17 ATID's, 8 airmen, and 2 stenographers departed to overseas stations. Seven ATID's were assigned to the Strategic Intelligence School, and one ATID to the Intelligence Officers Course prior to overseas assignment.

Eleven ATL personnel returned to the Zone of Interior for reassignment and three returned to the Air Technical Intelligence Center for reorientation.

Air Attaches from England, Moscow, and Poland visited the Center during the reporting period.

Notification of Foreign Travel Program. The following table shows the number of foreign travel notifications received by the ATIC from the Air Procurement Districts for forwarding to CIA, and the number of these sources utilized by CIA in fulfilling ATIC requirements.

	<u>Notifications Received and Forwarded to CIA</u>	<u>Resulting Domestic Sources Utilized for ATIC</u>
Central APD	28	4
Eastern APD	14	4
Mid-Central APD	8	0
Northeastern APD	47	17
Southern APD	1	0
Western APD	<u>59</u>	<u>26</u>
TOTAL	157	51

Returnee Exploitation Group (REG) Project. In January 1953, the ATIC submitted to Headquarters, USAFE a list of all known German scientific and technical personnel in the USSR who are of priority interest to ATIC. During the reporting period, 25 REG sources were exploited. Of these sources, 21 were of definite interest to the ATIC and requirements for special information were placed on each of these sources.

Overseas Scientific and Technical Meetings. In May 1953, a list was obtained from CIA of all technical and scientific meetings to be held overseas which would be attended by CIA personnel or contacts. Arrangements were made with CIA for the ATIC to receive reports of any of these meetings which appear to have air technical intelligence interest.



Because of possible abuses, the Directorate of Intelligence disapproved the issuance of a price list for priority items of Russian aeronautical equipment. Instead, these items were listed by priority only in Chapter 5M, "Material for Technical Intelligence," of BAIR.

Revision of Document Requirements. The Center's documentation requirements were revised and submitted to the Directorate of Intelligence Screening Panel, 23 March 1953. This was the first revision since 1951. Although other unknown factors could be involved, this revision appears to have resulted in a 10% drop in the number of unusable intelligence reports, received by the ATIC. The total number of incoming reports remains constant, 3800 to 4000 per month.

Status of SRI's. On 1 January 1953 there were 291 active specific requests for information (SRIs). During the reporting period 219 SRIs were initiated and 243 were cancelled, leaving 267 SRIs active on 30 June 1953. In addition, 1365 evaluation forms (both AF-112b and CIA 70-10) were processed and forwarded to report originators.

A study was made concerning the fulfillment of SRIs during the period 1 July 1952 to 1 July 1953. This study included SRIs served on CIA, Air Force commands, and collection offices where ATIOs were assigned. Listed below is a summary of information revealed by the study.

	<u>Number of SRIs Cancelled during Fiscal Year</u>	<u>Percentage of Fulfillment</u>	<u>Average No. of Months SRIs Were Active</u>
CIA	35	42.3	7.9
USAF	171	58.4	7.5
FEAF	31	56.5	8.1
USFA	33	36.9	9.1
ENGLAND	56	79.6	7.3
FRANCE	52	80.5	7.3
SWEDEN	15	61.7	10.4
ITALY	16	50.0	8.2
SWITZERLAND	24	75.4	10.3
TURKEY	8	37.5	12.1



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The SRI project is progressing satisfactorily with the exception that work is often delayed because of the amount of clerical work to be performed with a limited number of personnel.

CIA-ATIC COOPERATIVE EFFORT:

Exploitation of Scientific personnel. An agreement on the manner in which scientific personnel are to be utilized for intelligence exploitation was reached in a conference between ATIC and CIA on 17 February 1953.<sup>5</sup>

A total of 23 scientists have been contacted concerning their desire to participate in this program. Eight were selected and placed under contract for the purpose of providing final research capabilities studies in their fields of specialization. At the present, seven of these scientists are performing travel and research under their assigned contracts. The other scientist will depart for Europe approximately 1 August 1953.

Exploitation of Domestic Sources. The progress of this project during the reporting period is shown in the following table

	Requirements Submitted to CIA	Fulfilled or Cancelled	Still Active
CIA Cases	93	62	124
REG Sources	21	22	23
Defectors	12	6	12
Notifications of Foreign Travel	49	17	47
TOTAL	175	107	206

<sup>5</sup> Memo for Brig Gen (b) (6) dated 21 Feb 53, subject "ATIC Summer Scientists Program for 1953," signed by (b) (6) for E. H. Ashcraft, Chief, Contact Division, Office of Operations, CIA, File, "Summer Scientists Program," ATIC-1.

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Foreign Hardware Collection. The project covering the collection of foreign hardware was alerted three times and put into operation once. During this one operation, all time and equipment commitments were met successfully; however, the results were negative because of theater considerations.

**COLLECTION GUIDANCE:**

BAIR Manual. A step forward in the collection program finally materialized when the long awaited Basic Air Intelligence Requirements (BAIR) manual was issued during the reporting period. Air Technical Intelligence Center contributed heavily to this publication which was distributed to all collection agencies by the Directorate of Intelligence, Headquarters USAF, on 28 April 1953.

To improve and reflect more adequately Air Technical Intelligence Center requirements in the BAIR, the chapters on "Electronics" and "Petroleum" were completely rewritten. These revisions were submitted to Directorate of Intelligence, Headquarters, USAF, and currently are in the process of issuance as BAIR letters. The chapters on "Instruments and Equipment" and "Material for Technical Intelligence" are in the process of revision.

USAF Intelligence Guidance Manuals. During the reporting period, the preparation of intelligence guidance manuals progressed steadily. Two manuals, "Fuels and Lubricants," and "Guided Missiles" were completed and sent to Hq USAF for publication. On 23 March, the project editor traveled to Washington, D. C., to insert additional information on nuclear weapons into the Guided Missiles Manual. On 24 April, minor revisions to some of the illustration plates were forwarded for the Electronics Manual (AFM 200-10), which will be reprinted when the present stock is exhausted.

Work on the Aircraft Equipment Manual will be completed approximately 30 July. This manual is composed of 13 sections and 414 illustrations. One of these sections deals with Boundary Layer Control.

Initial research for the Materials Manual has started.

The 3415th Technical Training Wing, Lowry AFB, Colorado, has requested these manuals for training use. Information has also been received that CIA will use these manuals instead of preparing their own on fields covered by ATIC authorized publications.

Guidance Memorandums. Collection effort was focused on items of current interest by the preparation and issuance of individual guidance memorandums on (a) IL-28 aircraft and associated ground servicing equipment, (b) aircraft instrumentation, (c) electromagnetic radiation data, and (d) nuclear reactor developments and associated research.

Guidance Letters. Intelligence Collection Guidance Letters are being used to keep collectors informed of critical or key items of information still required on selected USSR aeronautical equipment. These letters serve to bridge the gap between general requirements and specific requests for information. To date, these letters have been limited to USSR operational aircraft.

Priority Listings. The Technical Analysis Division is preparing a list of 10 items of information concerning Russian aeronautical efforts which the analysts consider to be of highest air technical intelligence interest. This list will be submitted to the Directorate of Intelligence for incorporating with contributions from other components within the Directorate and distribution to field collectors for guidance. Revisions will be disseminated periodically.



~~SECURITY INFORMATION~~

150 Inch Lens. Negotiations have been under way for the past six months for the manufacture of an 150 inch lens with the following specifications: f25, barrel diameter  $6\frac{1}{2}$  inches, length from front element to the focal plane less than 20 inches with a hyperfocal distance of seven miles, and a field angle of less than 33 minutes. Negotiations are also being conducted for a strip camera capable of photographing up to and including  $360^{\circ}$  of horizontal arc or any portion thereof.

Stereo Cameras. One hundred stereo cameras with spectroscopic gratings were procured for use in conjunction with Project Blue Book<sup>3</sup> and have been under test for the past six months. Much difficulty was encountered in establishing a reliable shelf-life of the gratings. All seemed to deteriorate rapidly after they had been mounted to the camera. This project was turned over to Battelle Memorial Institute for further study and evaluation. Seventy-three of these cameras were transferred to the Technical Analysis Division from where they were shipped to areas where sightings of aerial phenomena have been reported most frequently.<sup>4</sup>

Photographic Research. A new program was established which calls for a regular and frequent search for intelligence photography. The files of intelligence agencies in Washington, D. C. are being examined to determine whether or not any photography is available which would be of interest to ATIC. Thus far, the project has met with limited success. Excellent results have been obtained on intelligence photography of fuels and lubricants interest, and good to poor on electronics, aircraft, industry, and weapons.

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<sup>3</sup> See ATIA history

<sup>4</sup> See also "Project Blue Book," page 77



In Service Training of Collection Planners. In May 1953, a member of the Collection Planning Office was sent to the European Theater for the purpose of visiting various collection activities. Another collection planning specialist was sent to Beirut, Lebanon, in June to attend school. When he has completed the school, he will make a tour of many Near East countries in order to gain a more intimate knowledge of their political, social, and economic conditions.

COLLECTION EQUIPMENT :

Wire Recorders. A project was established to find a miniature wire recorder of a size which can be concealed on the person. The Curtis Wright Corporation estimated that to develop and produce 15 prototype models would cost approximately \$350,000. Four recorders were purchased from the Minifon Corporation, Hanover, Germany. After considering the results of the Minifon tests, the Directorate of Intelligence, Hq USAF, requested the ATIC to order 30 commercial export models of this recorder. When these recorders are received, they will be sent to the 26 Air Attache stations. The other four will be retained within the United States for use as replacements and for training of ATIOs and Air Attaches prior to their departure for overseas duty.

Exakta Camera Lenses. A requirement was submitted by the ATL Office, Austria, for two 80 inch lenses adapted for Exakta cameras. These cameras have a split image rangefinder which is used in conjunction with a ground glass. These lenses enable the operator to focus accurately the object at any distance up to infinity in less time than was previously possible. A third camera with the same specifications is being utilized for experimental photography at the ATIC, and for familiarizing ATIOs with this equipment prior to their departure to overseas duty stations. One 80 inch lens with an Exakta camera was shipped overseas on 26 June for field use.

Sonic and Seismic Aircraft Detections. A plan to determine the feasibility of using sonic and seismic devices for detection and identification of aircraft and rockets was accepted by the Commander, ATIC, and a purchase request for the contract was initiated.

ATIC/CIA Liaison Study: Improved procedures for ATIC/CIA liaison were recommended for the consideration by the Commander, ATIC and his opposite member in CIA.

Name Plate Data. Reviewed name plate data collection to exploit fully the collection of such data. Recommendations to exploit more fully the collection of name plate data were accepted for implementation by Joint Materials Intelligence Agency (CIA, Army, Navy, and Air Force).

REG (Returnee Exploitation Group). The REG Program was reviewed in light of additional information acquired. Comments from USAFE have been requested.

ICI (Intelligence Collection Instructions). Recommendations for revision of the ICI are pending decision from the Directorate of Intelligence, Headquarters, USAF.

Plans for future studies in connection with the collection program include subjects such as the free-riding balloon, very low-frequency (VLF) communications, Mutual Defense aid, electronic tracking, models of foreign aircraft, North Atlantic Treaty Organization, exploitation of international scientific and technical organizations, East German patent office, East German TV, German scientific and technical academic system, boundary layer control, overseas mobilization plan, foreign translations, exploitation of US technical and professional associations, and exploitation of foreign chambers of commerce.

## II. ACTIVITIES

### COLLECTION PLANNING:

During the period covered by this history, the division was instructed to anticipate the probable future character and extent of air technical intelligence collection responsibilities.

All past plans were reviewed to determine their possible future use. A search was made also for all known collection plans that had been considered in the past, and these plans were reviewed and consolidated for ready reference.

Plans generated and completed as staff studies are as follows:

Library of Congress Plan. The plan provides a centralized source for abstracts and annotations of Soviet open literature. The plan was accepted for implementation by the USAF, the Central Intelligence Agency (CIA), and the Library of Congress.

Area and Language Training. A long-range plan for area and language training for collectors and collection planning personnel was approved as recommended.

Foreign Broadcast Information Service (FBIS). A plan to improve handling of intercepts of air technical intelligence value in FBIS, "Daily USSR Reports," has been accepted by CIA for consideration.

Aviation Week. Arrangements were made for the receipt of photographs of foreign aircraft from the McGraw-Hill Publishing Company. The plan was implemented jointly by ATIC and CIA.

Foreign Documents Collection. A plan to eliminate duplicate acquisition was accepted by USAF and will be published as a USAF directive to all its various collection agencies.



The agreement<sup>1</sup> specified that the transfer of the foreign scientists function would be effected not later than 1 April 1953. It was possible, however, to complete all details ahead of the scheduled effective date and the administration of the foreign scientists program actually became the responsibility of Headquarters, ARDC on 23 March 1953. After lost three personnel slots with the transfer of the foreign scientists program: one major, one technical sergeant, and one graded civilian.

On 1 January 1953, authorized strength was 109 officers, 43 airmen, and 57 civilians. As of 30 June 1953, authorized strength was 101 officers, 28 airmen, and 49 civilians. Comparison of these figures indicates a loss of 31 slots.

There has been only one change in key personnel during the past six months. On 19 January 1953, Lt Colonel (b) (6) was assigned Chief, Collection Planning Office, vice Lt Colonel (b) (6) relieved.<sup>2</sup>

Key Personnel at the end of the reporting period were: Col (b) (6), Chief, Technical Requirements Division; Capt (b) (6), Deputy Chief, Technical Requirements Division; Lt Col (b) (6), Chief, Collection Planning Branch; Maj (b) (6), Chief, Collection Control Branch and Lt Col (b) (6), Chief, ATID Program Branch.

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<sup>1</sup> Transfer Agreement (no date) signed by Lt General (b) (6), CG, ARDC, 3 Mar 53, and Major General (b) (6), Director of Intelligence, Hq USAF. File, ORG-4, Policy 1953, ATIG.

<sup>2</sup> PAM #5, 22 Jan 53



TECHNICAL REQUIREMENTS DIVISION

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Technical Requirements Division (ATIR) is comprised of the Office of the Chief, the Administrative Office, the Collection Planning Office, the Collection Control Branch, and the Air Technical Liaison Program Branch. Collectively, these components are charged with these primary functions: (1) establishing, implementing, and maintaining a comprehensive program which will accomplish the necessary planning for, and facilitate in the collection of intelligence information; (2) arranging the implementation of collection plans through liaison contacts with intelligence agencies, and by monitoring the processing of technical intelligence requirements; (3) assuring that requirements are current and complete, and that guidance information and instructional material is available to the collectors; (4) maintaining liaison with Air Force activities and other Governmental agencies on matters pertaining to the collection of intelligence information; and (5) administering the air technical liaison officer program.

Both the organizational structure and the functional statements mentioned above differ from those reported in the history for the previous period. A major change in the assigned functions of this division was the transfer of the administration of the foreign scientists program to Headquarters, Air Research and Development Command.

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**TECHNICAL REQUIREMENTS  
DIVISION  
(ATIR)**

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A draft copy of the new AF subject classification filing system was obtained and plans are underway for conversion of ATIC files to this system when it is issued officially, approximately 1 January 1954.

Central files are being physically decentralized to offices and sub-offices of record. Administrative control of these files will remain centralized in the Adjutant's Office.

TOP SECRET AND REGISTERED DOCUMENTS. Microfilming of certain classified documents was discontinued, thus reducing work load. The information index file for these documents was revised to provide greater and quicker services to users and to improve the control of these documents. The file now includes guides in a greater field of general interest, separated in a larger proportion of specific associations. A color code system is used to indicate dual accountability, location, courier, and assigned number of every sensitive document with the Center. This file also hastens the checkout clearance of outgoing personnel and the authentication of reports. It serves as a balance of log book accounting, hand receipt changes, and the manifest of documents received into the ATIC.

Key personnel at the end of the period were the same as when the office was established at staff level,\* Major (b) (6) being the adjutant and 1st Lt (b) (6), the assistant adjutant and ATIC Top Secret officer.

Plans for internal reorganization of the office are under consideration and will be reported, if finalized, in the next edition of the history.

## II. ACTIVITIES

PUBLICATIONS. A central reference library of all administrative publications was established in April. In June, the system of distribution of publications was revised to provide automatic distribution to using components, according to requirements tables submitted by the components.

PERSONAL MAIL. Combination lock boxes were installed for military personnel, thus eliminating mail call for airmen and window delivery to officers.

RECORDS ADMINISTRATION. An active records administration program has resulted in a conservation of filing equipment and the reduction of stored record material. Records disposition schedules have been revised for approximately 60% of the Center. Approximately 260 linear feet of con-current records were transferred from the AF Records Center to the Hq AMC Staging Area, as directed by higher authority. Records pertaining to the Foreign Scientists Branch were transferred to the Air Research and Development Command.

In April, one employee was sent to Hq USAF for training in records administration.

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\* For key personnel prior to this time, see Policy and Management History



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ADJUTANT'S OFFICE

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Adjutant's Office is composed of four branches: Administration Branch, Mail Branch, Records Branch, and Registered Documents Branch. General functions for this office are to publish and distribute official communications from the Commander, ATIC; to control the receipt and dispatch of mail and messages, the maintenance and disposition of records, and the issuance of orders and authorized publications; to monitor the receipt of Top Secret and Registered Documents; to maintain central files of records not authorized for other offices; and to operate the ATIC forms management program.

The only changes that occurred in the functions of this office during the period were the addition of editing and approving ATIC administration publications and the operation of the ATIC forms management program. These functions were transferred from the Policy Management Office 1 April 1953.

At the beginning of the period, the Adjutant's Office was a branch under the Policy and Management Office. On 9 March 1953, the office was established as a separate staff office,<sup>1</sup> and on 18 June 1953, its title<sup>2</sup> was changed from Air Adjutant General's Office to Adjutant's Office in conformance with AFR 20-8.

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<sup>1</sup> GO #1, 9 Mar 53

<sup>2</sup> GO #4, 18 Jun 53

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PERSONAL CONFERENCES. The regular schedule for personal conferences was maintained.

SECURITY PROGRAM. By means of an active security indoctrination program, security violations were reduced from 21 for the preceding period to 15. Hailing violations were eliminated completely. Violations consisting of unlocked safes and failure to store classified documents properly continued.

The security indoctrination program monitored by the internal security officer consists of preliminary security briefings for all incoming personnel given by the ATI Training Section; in-service indoctrination by unit security officers; and a system of end-of-day checks of safes and other storage equipment.

OFFICE OF THE INSPECTOR GENERAL

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The functions of the Inspector General's Office are: (1) to keep the Commander informed of the current status of matters and conditions affecting the accomplishment of the ATIC mission; (2) to provide command facilities for conducting inspections, investigations, personal hearings and conferences; and (3) to provide for the implementation of the internal security program.

The office is composed of two branches: The Inspector's Branch and the Internal Security Branch.

At the beginning of the reporting period, Major (b) (6) was serving in dual capacity as the inspector and the acting inspector general. On 8 January, Colonel (b) (6) became the inspector general and served in this capacity until 28 January when he was transferred to the Policy and Management Office. At the end of the period, key personnel for the Inspector General's Office were: Major (b) (6), Acting Inspector General and Inspector; Captain (b) (6), Internal Security Officer.

II. ACTIVITIES

ADMINISTRATIVE INSPECTIONS. During the reporting period, administrative inspections were completed for two major components: The Policy and Management Office (15 April) and the Technical Services Division (27 April). A representative of the USAF Auditor General's Office assisted with the inspection of the Policy and Management Office by auditing the Comptroller's Branch.

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<sup>1</sup> PAM 2, 8 Jan 1953 and PAM 7, 28 January 1953

Records Review and Classification Interview for Officers Overseas.

A system was installed for conducting, by mail, the annual records review and classification interview for officers serving in overseas assignments. As a result, the Center completed, for the first time, these reviews and interviews for overseas personnel.

Officer Personnel Requisitioning System. The requisitioning system for officer personnel was revamped and improved to shorten the lag in obtaining needed replacements. Justification submitted to Headquarters, USAF for higher priority on assignment of critical personnel to the ATIC has resulted in raising the precedence category for ATIC from XVI to XI.

Military Personnel Processing. The following military personnel were processed during the first half of 1953:

- 58 Officers separated or reassigned.
- 26 Officers processed in and assigned duties.
- 18 Airmen separated or reassigned.
- 18 Airmen processed in and assigned duties.
- 25 Officers were assigned and processed to overseas ATILO duty stations.
- 13 Officers were returned from overseas ATILO stations and assigned duties or reassigned.
- 12 Airmen were assigned and processed to overseas ATILO duty stations.

Quotas were obtained for 19 officers to attend schools ranging from the Air War College and Air Command and Staff School, through Civilian Professional Schools, to Jet Transition and Squadron Officers Course.



Military Strength. At the beginning of the fiscal year, a total of 331 military personnel was authorized: 207 officer and 124 airmen. At that time, 296 military were assigned: 191 officers and 105 airmen. At the end of the fiscal year, military authorizations totaled 309: 197 officers and 112 airmen, with 296 assigned: 180 officers and 116 airmen. Total military authorizations were reduced 22: officer allotments 10, airmen allotments 12. Seventeen officer vacancies existed, while airmen strength was four over.

Transfer of Functions to Hq Squadron Section. With the establishment of the Troop Commandant as a separate activity, the Headquarters Squadron Section was established as a part of that office. Airmen's records, with three personnel specialists to maintain them, were transferred from the Military Personnel Section to the squadron. Classification and assignment of airmen and the maintenance of airmen's qualifications records remained with the Military Personnel Section.

Air Force Specialty Codes (AFSC). Approval was obtained from Headquarters, USAF for incorporation in the Table of Distribution (T/D) of 105 Limited Resources and Research and Development type officer positions. These AFSC's were needed to facilitate obtaining the professional and technical specialists required for accomplishment of the Center's mission and to permit skill level progression of these specialists under current regulations governing classification. To provide for the skill advancement to director and staff level in the highly specialized field of technical intelligence, a new AFSC, 2006 (Intelligence Technical Staff Officer) was written and was approved by Headquarters, USAF for publication in the next change to AFM 36-1.

Although every effort was made to effect the imposed reduction by the cancellation of vacancies, it was necessary to reduce 19 filled positions. As a result of reduction in force, 22 people left the Center and 3 entered, making a net loss of 19 people.

Use of Overages. The Air Technical Intelligence Center was authorized 18 position overages to extend through 30 June 1953. Twelve of these overages are being utilized to maintain authorized civilian strength. Six overages are being used to obtain technical personnel and provide for an active recruiting program. Eighteen overages have been requested to extend through 30 September 1953.

Employment Actions. Requests have been submitted to fill existing vacancies. Six vacant positions are obligated and the personnel are expected to report for duty within the next month. It is believed that the Center will reach authorized strength within the next six weeks.

Position and Personnel Actions. Five-hundred ninety-one position and personnel actions were initiated during the six months beginning 1 January 1953 and ending 30 June 1953. A breakdown showing the number initiated and the number completed follows:

<u>Type of Action</u>	<u>Number Initiated</u>	<u>Number Completed</u>
Position Establishments	45	23
Position Reclassifications	12	7
Position Cancellations	138	126
Personnel Reassignments	43	51*
Promotions	37	22
Employment	68	33
Separations	60	60
Functional Transfers	66	68*
Miscellaneous	122	118

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\* Includes actions initiated prior to 1 January 1953

Clarification of D/I - ATIC Relationships. In February, a revised directive was published by the Directorate of Intelligence outlining the mission and functions of the Air Technical Intelligence Center.<sup>17</sup> Although no material changes were made in the mission and functions of the Center, relationships, authorities, and specific subject matter responsibilities were clarified, making necessary revision of functional statements for several ATIC components.

Reorganization of Training Administration Section. A proposal for reorganization of the Training Administration Section, ATI Indoctrination Branch, Technical Services Division is under study.

PERSONNEL:

Civilian Strength. At the beginning of the period, 336 civilians were assigned; 63 vacancies existed. At the end of the period, 306 persons were assigned; 5 vacancies existed. The reduction in assigned strength and vacancies was the result of reduction in force action directed by departmental order.

Reduction in Force. The ordered reduction from 374 authorized civilian positions to 311 was effected by an across-the-board cut of five percent, which was applied to all major components of ATIC. This method was necessary because time did not permit careful study and review of personnel needs in relation to functions and workload.

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<sup>17</sup> D/I Office Memorandum No. 22-5, 11 February 1953

Change of the Air Intelligence Office from staff level to operations level;

Transfer of the Troop Commandant from Policy and Management Office to a separate activity reporting directly to the Commander.<sup>1</sup>

Internal changes within the Technical Analysis Division.<sup>2</sup>

#### ORGANIZATIONAL PLANNING STUDIES

Several major studies of organizational functions and structure were accomplished by the Policy and Management Office during this period.

Complete Analysis of the Air Technical Intelligence Center. This study was completed and reported to the Commanding General in February.<sup>3</sup> Recommendations are pending his approval.

Science and Component's Section (Electronics Branch, Technical Analysis Division). Although this study was completed in October 1952, it was not implemented until June 1953. This study resulted in a major change in the position structure for this section.

Document Processing Program. Revamping of the document processing program is under consideration.<sup>16</sup> If part or all of the document processing functions are moved from Technical Services Division to the Technical Analysis Division, as proposed, a major reorganization will result in both areas of operations.

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<sup>1</sup> GO 1, 9 March 1953

<sup>2</sup> See History of Technical Analysis Division

<sup>3</sup> Memorandum for Record from ATIM to Brigadier General (b) (6), 11 February 1953

<sup>16</sup> Technical Intelligence Information Files (TIIF) Project.



reporting. Requests for changes to the T/MA are submitted to the Policy and Management Office for review and recommendation to the Commander, ATIC.

UTILIZATION OF MILITARY PERSONNEL:

As a further means of insuring that manpower is effectively utilized, position descriptions have been prepared for military personnel in the same format and manner as used for civilian positions. Qualification standards have been formulated for assignment to these military positions. These standards include not only the appropriate AFSC but also the specialized training and experience required for the position. Initial placement is made in accordance with these standards and periodic placement reviews are conducted to insure that military personnel are correctly assigned and effectively utilized. In addition, officer personnel when leaving an assignment prepare a "Vacating Officer's Job Activity Guide" giving supplemental detailed information on his duties for use in orienting the replacement.

REVISED ORGANIZATIONAL CHARTS:

Revised organizational charts for the ATIC were published and distributed 22 January 1953. Major changes reflected in the 1953 edition of these charts from the 1952 edition were:

Transfer of the Adjutant's Office from the Policy and Management Office to staff level;

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were presented to top level supervisors at two conferences (4 February and 11 February 1953). Later, groups of supervisors prepared sample performance requirements for inclusion in the final form of the manual and conducted briefing meetings for lower level supervisors. The preparation of performance requirements began on 9 March and was completed on 20 March 1953. The testing and standardization of requirements will continue through 5 February 1954. A total of 13 months will be required for the entire project.

The ATIC Performance Requirements Program calls for a breakdown of the duties of a position into component parts or "tasks" with a standard prescribed for the satisfactory performance of each task. These requirements are prepared jointly by the employee and his immediate supervisor. Thereafter, performance requirements are reviewed quarterly at a conference between the supervisor and the employee, and the employee's work performance is evaluated against the standards established. The employee is given a written summary of the conference on a locally devised form.<sup>12</sup> These quarterly conference records are used by the supervisor in determining the employee's annual performance rating. Other uses being made of the written performance requirements include: preparation of position descriptions, supplemental data for position audits, preparation of organizational and work flow studies, substantiating data for commendatory and disciplinary actions, planning work load distribution and accomplishment, and determining qualifications standards for applicants.

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<sup>12</sup> ATIC Form 119, "Work Performance Evaluation Conference Record."

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**SURVEY AND REAUDIT OF ATIC CIVILIAN POSITIONS:**

The position classification survey and reaudit of ATIC civilian positions was completed by the Wright-Patterson Civilian Personnel Office, 30 June 1953. Approximately 15% of the positions required redescription. Since a complete audit of positions had not been made since they were established on a projected basis two years ago, this small percentage reveals that the original planning of position structure had been essentially sound and that the organization is being maintained on a stabilized basis.

**UTILIZATION OF MANPOWER:**

At the beginning of the reporting period there had been no change in manpower authorizations for the Center from those established at the beginning of the fiscal year: a total of 705 military and civilian allotments. Estimated manpower needs computed in February 1953 totaled 863, a 22.4% increase. Department of Defense cutbacks in April and May reduced authorized strength to 634. The Center is now operating with approximately 10% less manpower authorizations than were available a year ago, and 26.5% less than estimated needs.

Adjustments to the imposed manpower ceilings were made by shifting manpower authorizations in accordance with priority emphasis on workload. In order to insure that reduced manpower authorizations were used effectively, manpower controls were put into operation. A quarterly Table of Manpower Authorizations (T/MA) is furnished each major component, prepared from the Table of Manpower Distribution approved by Headquarters, USAF. These quarterly tables show how authorizations are utilized by AFSC and provide a basis for sound planning and adequate

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The two factors creating the most favorable impressions are the caliber of personnel working in the Center and treatment as an individual by supervisors. The initial survey will be completed 30 September 1953. Continuance of the project will depend upon turnover rate and value received from the questionnaires.

#### DEVELOPMENT OF SUPERVISORS AND KEY PERSONNEL:

In conjunction with the Wright-Patterson Civilian Personnel Office, an active program of education and development of supervisory and key personnel has been established. Supervisory conferences on management problems and employee relations are held regularly. A survey has been made of training needs, and courses are being planned to meet these needs. Courses scheduled to begin in the next fiscal year are: Effective Writing, Production Management and Work Simplification; Effective Dictation; and ATIC Report Clinic.<sup>14</sup>

#### MONTHLY MEETINGS FOR PERSONNEL:

As a means of improving morale, monthly meetings of both military and civilian personnel have been established. At these meetings, the Commander and his staff explain functions, accomplishments, and difficulties. These meetings provide an effective means of communication between top management and employees and help make employees feel that they are a vital part of the organization.

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<sup>14</sup>

For ATIC Report Clinic, see history of Air Intelligence Office



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On 17 June 1953, representatives of the AMC Civilian Personnel Division visited the Center and conferred informally with the project monitor and the division administrative assistants who were responsible for planning and implementing the program, which is the first of its kind at the Wright-Patterson Air Force Base. At the suggestion of AMC Civilian Personnel Division, a study is now being planned to estimate the cost and effectiveness of the program, six months after the beginning of experimental operation. This study is scheduled to begin October 1953. When the study is completed, a report will be made to Civilian Personnel who, in turn, is contemplating submitting the program to the Air Materiel Areas and to Headquarters, USAF for consideration for wider adoption. Consideration is also being given within the Air Technical Intelligence Center to extending the program to include military positions, as well as civilian positions.

#### **SURVEY OF SEPARATED PERSONNEL:**

In January a program was begun to survey separated military and civilian personnel to obtain their opinion of the Air Technical Intelligence Center and to determine factors causing satisfaction and dissatisfaction with the ATIC. Questionnaires have been sent to all personnel who have separated from the Center since September 1952. Usually the questionnaire is sent thirty days after separation. To date, approximately 50% of the persons contacted have replied. The rate of reply from military personnel has been twice that from civilian personnel. Although a statistical study of the replies has not been completed, definite trends are appearing. The one factor causing the greatest dissatisfaction is lack of utilization of highest skills.

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administration and control of contracts. Since issuance of this directive, all ATIC contract records have been brought up to date, a standing operating procedure for the summer scientists program has been established, 12 contracts have been let and 16 more are being renegotiated. Thirty-seven contracts totalling \$2,500,000.00 are now current.

Efforts are being made to eliminate piecemeal submission of purchase requests, improper use of funds, informal commitments which must be formalized later, and insufficient internal coordination on contract matters. Plans have been made for a series of lectures to project monitors on contract matters and procedures. The contract administration officer is planning to visit contractors to inspect their facilities and to discuss progress and problems.

#### PERFORMANCE REQUIREMENTS PROGRAM.

In January, the Policy and Management Office assumed monitorship of the ATIC Performance Requirements Program. This program originated through order<sup>10</sup> from the Commander to establish written performance standards for all civilian positions. The Commander's order was issued upon recommendation of the Organization and Manpower Committee established 18 November 1952.<sup>11</sup> Together with the representatives from the Technical Analysis, Technical Requirements, and Technical Services Divisions, plans for the project were formulated and a tentative draft of instructional material was prepared. The project plans and instructional material were

*turn to page 24*

<sup>10</sup> DF from Brig General (b) (6), (b) (3) (C) to Policy and Management Office, 9 December 1952, Subject: "Performance Ratings."

<sup>11</sup> See ATIM History, 1 July 1952 - 31 December 1953.

Cost Accounting System. Further improvement was made in the ATIC cost accounting system to provide reporting services which show actual manhours spent monthly on each ATIC project broken down by major operating components, as well as in the total indirect expense, such as administration and supervision. This revised reporting procedure made possible discontinuance of reporting costs by functional areas and operating components--statistics that were of little value for management purposes--and a reduction in manhours required for preparation of cost reports. In addition to the monthly cost report for active projects, the total cost of all closed projects is reported monthly to the Scientific Advisor. A third improvement consisted of presentation of cost and funding statistical data in graphic form to the Commander.

CONTRACT ADMINISTRATION.

The office of Contract Administration Officer was established within the Comptroller's Branch, 26 March 1953, to expedite the processing of ATIC contracts and to control the processing of contractual documents within the Center. The Contract Administration Officer advises operating components on the proper procedures for initiation of purchase requests, insures that documents relating to contract services are properly prepared, processed, and channeled; maintains a record of the status of ATIC contracts; and serves as coordinating and liaison agent between the project monitors and the AMC Procurement Division. In April, an ATIC directive<sup>9</sup> was issued establishing responsibilities and procedures for pre-contract negotiations and the

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<sup>9</sup> ATICOI 70-1, 7 April 1953

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## II. ACTIVITIES

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### BUDGET AND FISCAL PROGRAMS:

New Budget Format. A new format for submitting budget estimates for air technical intelligence requirements under Project 731 - Project A, Contingencies Appropriation, was developed for use in the preparation of 1954 estimates. The format was approved by the Department of the Air Force and was published in the new AF Manual of Budget Administration.<sup>8</sup> As a result of the adoption of this new format, the procedure for preparation of ATIC financial plans and funding programs and the ATIC cost reporting system were revised to conform with and support the new budget format. This change in procedure provides a better means of comparison of prior, current, and future budget-year requirements.

Defense of the Budget. The Comptroller, ATIC, and the Civilian Assistant to the Chief, ATIC served as supporting witnesses to the Director of Intelligence before the Congressional Committees conducting hearings on the FY-1954 budget estimates for the United States Air Force.

Budget Estimates for FY-1955. The budget estimates for FY-1955 were formulated and submitted to Headquarters, USAF in April 1953. These estimates for Project 731 funds were slightly more than those for FY-1954, principally because of a planned increase in overseas collection activities, while the estimates for Project 481 (civilian pay, travel, and supplies) remained virtually the same. Because of manpower restrictions, no increase in civilian personnel, with resultant increase in personnel costs, is planned for FY-1955.

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<sup>8</sup> AFM 172-1 (Proposed) - Sec 20804 B

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Other personnel changes during the period were as follows:

On 20 March 1953, Major (b) (6) was assigned to the Comptroller's Branch as Statistical Services Officer, and Major (b) (6) (b) (6) was assigned as Chief, Military Personnel Section, replacing Major (b) (6), (b) (3) (B) who has transferred to Middletown Air Materiel Area, 17 March 1953.<sup>4</sup> On 23 March 1953, Major (b) (6) title was changed from Statistical Services Officer to Contract Administration Officer.<sup>5</sup>

On 30 April, Captain (b) (6) was assigned as Acting Comptroller, vice Lt Colonel (b) (6) who left for an overseas assignment 5 May 1953.<sup>6</sup> Later, 14 May 1953, Captain (b) (6) assignment was changed from Acting Comptroller to Finance Staff Officer because of Hq USAF disapproval of a Comptroller for the ATTC.<sup>7</sup>

On 1 May 1953, Major (b) (6) left the Military Personnel Section for an overseas assignment.

At the end of the period, the key personnel for the Policy and Management Office were:

Chief, Colonel (b) (6)  
Personnel Officer, Lt Colonel (b) (6)  
Finance Staff Officer, Captain (b) (6)  
Contract Administration Officer, Major (b) (6)

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<sup>4</sup> PAM 14, 20 March 1953

<sup>5</sup> PAM 15, 26 March 1953

<sup>6</sup> PAM 21, 30 April 1953

<sup>7</sup> PAM 23, 14 May 1953

On 28 January 1953, the following changes occurred in key personnel:<sup>3</sup>

Colonel (b) (6), former Inspector General, became the Chief of the Policy and Management Office, replacing Colonel (b) (6), (b) (3) (B) (b) (6) Jr., who was assigned as Executive in the Office of the Commander.

Lt Colonel (b) (6) was relieved of assignment as Deputy Chief, Policy and Management Office, but retained his assignment as Comptroller.

Major (b) (6) moved from position of Chief, Management Analysis Section, Comptroller's Branch, and became the Air Adjutant (Chief, Air Adjutant General's Branch) replacing Major (b) (6) who was made Assistant Air Adjutant General.

Lt Colonel (b) (6) Jr., formerly Executive in the Office of the Commanding General, became the Personnel Officer (Chief, Personnel Branch) in lieu of Major (b) (6) who was assigned as Chief of the Military Personnel Section. Major (b) (6) replaced 1st Lieutenant (b) (6) Jr., who was assigned as Troop Commandant with additional duties of Commanding Officer, Hq Squadron Section, 1125th USAF Field Activities Group (ATIC).

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<sup>3</sup> PAM 7, 28 January 1953

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## POLICY AND MANAGEMENT OFFICE

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The functions of the Policy and Management Office are: to control, guide, administer and recommend concerning activities of the ATIC pertaining to budget requirements, funds expenditure, management analyses, manpower distribution and utilization, contract reviews, functional alignments, preparation and issuance of policy directives; and to provide the ATIC with military and civilian personnel services (not provided under tenancy agreement with WPAFB).<sup>1</sup> These functions are essentially the same as those performed at the beginning of the period except for the editing and review of administrative publications and the operation of the ATIC forms management program which was transferred to the Adjutant's Office, 1 April 1953.

At the beginning of the period, the office was composed of three branches: Comptrollers Branch, Personnel Branch, and Air Adjutant General's Branch. On 9 March 1953, the Air Adjutant General's Branch was removed from the jurisdiction of this office and established as a separate staff office. On the same date, the Troop Commandant was transferred from the Personnel Branch and made directly responsible to the Commander, 1125th USAF Field Activities Group (ATIC).<sup>2</sup>

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<sup>1</sup> ATIC Manual 20-1, "Organization and Functions," 22 Jan 53

<sup>2</sup> GO # 1, 9 March 1953

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# **STAFF OFFICES**

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**TECHNICAL SERVICES  
DIVISION  
(ATIS)**

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TECHNICAL SERVICES DIVISION

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL. The division, in addition to its offices, consists of three branches: the Document Services Branch (ATISD), ATI Indoctrination Branch (ATIST), and the Materiel Services Branch (ATISE). Each branch consists of three sections, each responsible for the performance of operations which when totaled add up to the overall division function. The functions of the division are: to provide plans for the development and implementation of the Center's document processing, screening, and reproduction program; to administer a special document research program; to develop and implement indoctrination and training program for selected military personnel such as ATLO's, ATI Investigators, Air Attaches, and other groups; to receive, store, classify, catalog, and ship certain foreign equipment; to provide a special equipment and supply service for authorized claimant agencies participating in ATIC activities, either within the U.S. or in foreign areas; to provide office equipment and supplies to ATIC personnel; and to provide a Flight Operations Office to schedule administrative and transport flights required by ATIC, to schedule and control flights by foreign aircraft that may be assigned ATIC, and to handle 60-2 flight requirements of rated personnel assigned to ATIC.

The authorized division strength changed from 62 military and 118

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civilian at the beginning of the period to 77 military and 117 civilian at the end of the period. This change occurred in April when the ATIC proposed Table of Distribution was approved by Headquarters, USAF. The assigned strength changed from 70 military and 125 civilian to 64 military and 109 civilian at the end of the period. This change was due to normal attrition and a reduction in force policy.

Major (b) (6), (b) (3) (B) Deputy Division Chief, departed 8 June on leave prior to an overseas assignment. This position was held vacant until the return of Major (b) (6), formerly Chief of the Military and Civilian Training Section. Major (b) (6), Chief, Document Screening Section, was reassigned 9 March as Chief, Document Processing Section and Major (b) (6) was assigned Chief, Document Screening Section. Captain (b) (6) Administrative Officer, Document Services Branch, departed 30 June for an overseas assignment. Replacement for this position has not arrived. Captain (b) (6) was assigned Chief, Flight Operations Office, on 5 March and Assistant Chief, ATI Indoctrination Branch on 26 March. Captain (b) (6) was assigned Chief, Photographic Section, on 4 March.

Key personnel at the end of the period were:

Lt Col (b) (6) Chief, Technical Services Division  
Major (b) (6) Chief, Document Service Branch  
Major (b) (6) Chief, Indoctrination Branch  
Captain (b) (6) Chief, Material Services Branch

## II. ACTIVITIES.

DOCUMENT SERVICES. The Biographic and Facilities Group was moved to

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provide necessary additional space for relocation of the ATIC Repository near the Document Processing Section. This provides a more centrally located area of operation for document handling and effects a saving in time and effort for personnel in this office.

The Biographic and Facilities cards produced by the contractor under Project Stork continue to present a filing problem. Because of the shortage of personnel required to process and file these cards, a continuing backlog exists. The ATIC Commander has directed that a central technical information file be maintained by the Technical Analysis Division. This file is being implemented.

An index of ATIC publications has been initiated for the purpose of informing all interested military commands and authorized agencies of the publications produced in ATIC to date. Supplements to this index will be issued quarterly.

A project is in process to coordinate and catalog all visual aids used in ATIC. This project is 25 per cent complete.

A central subject and country locator file using the technical index code has been started. The document screeners' working knowledge of the code coupled with the responsibility for the file will enable maximum possible benefits to be derived from these files. The screeners, in addition to filing, will locate specific documents as requested by the intelligence analyst thus enabling a close screener-analyst relationship.

TRAINING. The ATI Investigator Training Program has been recognized as

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an official Air Force school and is now known as the Air Technical Intelligence School.<sup>1</sup> Two courses have been established, Intelligence Technical Officer (Course No. 2064) and Technical Intelligence Technician (Course No. 2570). The present student quota is 75 officers and 100 airmen to be graduated by 30 June 1954. Two classes, a total of 12 officers and 25 airmen, graduated from the school during this reporting period.

Twenty-eight student officers were given ATLO training, 19 of which have completed their training and are assigned to ATLO or Air Attache offices overseas. One hundred and eight hours of instruction in the French language was provided for three officers and the same amount in the German language for ten officers.

The new photographic training laboratory was completed in March. This laboratory will permit the giving of specialized photographic training, as applied to technical intelligence collection, to groups of 22 students. The first class of 18 students utilizing the new laboratory completed their training 16 March.

Aerial photographic training for Air Attache designers, as requested by the D/I, began on 2 June. Six Air Attache designees received instructions in the aerial use of the K 20 and Leica camera.

Two new training programs, Security and Military Administration, have been initiated to give all ATIC employees a minimum of five hours instruction in each program.

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<sup>1</sup> R & R from D/I dated 16 February 1953, Subject: Formal Training of Technical Intelligence Personnel.

The 59 new employees, military and civilian, assigned to ATIC during this period, received orientation and indoctrination training.

The Airmen I & E Program, held one hour each week, has been designed to utilize experienced personnel within the organization who have traveled extensively and who have knowledge of various phases of world affairs. A recent survey of the effectiveness of the Information and Education Program, as presented to the airmen assigned to ATIC, revealed that the materiel and presentations have been excellent.

Seven groups consisting of a total of 35 Air Attaches (officers) received special orientation and specialized photographic instructions during the reporting period. In addition, 13 airmen attaches received similar training.

A total of 22 visiting officers received orientation and specialized briefings within the Center.

To promote the security consciousness of ATIC personnel, 102 security briefings were presented and a total of 210 security posters were designed and posted.

PHOTOGRAPHIC EQUIPMENT. A 120 inch long focus lens has been modified for adaptation to technical intelligence photography. Tests have been completed under conditions of field usage. The camera was calibrated, special supplementary equipment devised, an operating manual prepared, and one photographer given specialized instruction in the operation of this equipment.

For the first time, facilities are available in the Center to achieve optimum processing of film. By sensitometric analysis the

best photographs possible are obtained from the negatives furnished regardless of exposure errors. By this method the division was able to produce the best films received to date of the May Day Air Show in Moscow.

Tests on three Hieland Strobosar V Speedlights developed on contract have been completed. One Kilfitt reflex housing and auxiliary lens was purchased for tests after a survey of available American and foreign supplementary Leica equipment was completed. An identification and focusing attachment used by CIA was modified for use with the Leica camera. The speedlight used with the reflex housing, auxiliary lens, and focusing attachment was found to be satisfactory in all respects as applied to the photography of markings data. One of these units is presently in use in a program to obtain complete photographic coverage of factory markings of all foreign equipment held in ATIC. Four thousand photographs have been taken to date.

Delivery of 150 Speedlights is expected within 30 days, completing this contract. Acceptance tests will be made prior to distribution to Air Attache Offices, ATLO Offices, and Air Intelligence Service Squadrons, as determined by D/I, Headquarters, USAF.

A survey of late developments in the field of microfilming systems with specific reference to ATIC requirements has been accomplished.

FOREIGN EQUIPMENT. A noticeable increase in Joint Technical Intelligence Sub-Committee activity has prevailed. This is indicated by an increase in the number of requests made by other services and agencies for additional information on foreign equipment being exploited by ATIC. Percentage-wise, ATIC is the largest contributor to the foreign equipment exploitation program.

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The major acquisition of foreign equipment during this period consisted of two shipments of items and samples from the two MIG-15's which landed on the Danish island of Bornholm.

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**TECHNICAL ANALYSIS  
DIVISION  
(ATIA)**

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TECHNICAL ANALYSIS DIVISION

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Technical Analysis Division participates in the planning of over-all air technical intelligence objectives to accomplish the mission of the Air Technical Intelligence Center (ATIC); analyzes raw intelligence information and produces intelligence estimates which will prevent technological surprise, assess alien capabilities to conduct air warfare, and predict the status and trends of development in alien countries; develops and controls a technical and scientific integrated pattern of air technical intelligence produced by the various technical sections; furnishes guides, authoritative opinions, counsel and advice to personnel participating in the collection and production of air technical intelligence; and critically reviews the end product in order to justify and support the technical competency of work emanating from the technical sections.

On 9 March 1953, the organizational components of the Air Technical Intelligence Center were redesignated as indicated:<sup>1</sup>

<u>Old Designation</u>	<u>New Designation</u>
Associated Equipment Branch (ATIAS)	Weapons and Industry Branch (ATIAW)
Material and Methods Section (ATIAS-3)	Industry Section (ATIAW-3)
Aircraft Group, Performance and Characteristics Section	Aircraft Section (ATIAA-2) Aircraft and Propulsion Branch

<sup>1</sup> GO 1, ATIC, 9 March 1953

Old DesignationNew Designation

Guided Missile Group, Performance and  
Characteristics Section

Guided Missile Section (ATIAA-4)  
Aircraft and Propulsion Branch

Nuclear Energy Section  
Associated Equipment Branch

Special Weapons Section, (ATIAM-4)  
Weapons and Industry Branch

On 9 March 1953, the organizational components of the Air Technical  
Intelligence Center were realigned as indicated:<sup>2</sup>

ComponentResponsible to

Equipment (ATIAW-5)  
Section

Weapons and Industry Branch  
Technical Analysis Division

Aerial Phenomena Section (ATIAE-5)

Electronics Branch  
Technical Analysis Division

Aeronautical Sciences Group

Aircraft Section, Aircraft and  
Propulsion Branch  
Technical Analysis Division

At the end of the period, the Technical Analysis Division was organized as shown on the chart following the foreword.

The Table of Distribution, June 1951, allotting 126 civilians and 33 officers to the Technical Analysis Division was revised during this reporting period in March 1953, to include 112 civilians, 45 officers and 8 airmen. The June 1951 Table of Distribution was considered unrealistic, since it did not reflect the operations and activities which have developed in the past two years. The recent Air Force Reduction in Force adversely affected the ability of this organization to perform its assigned mission. The following essential functions were greatly affected by this personnel cutback:

<sup>2</sup>

GO 1, ATIC, 9 March 1953

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Atomic Energy, as applied to Weapons and Propulsion.

Biological and Chemical Warfare.

Antiaircraft Artillery Effectiveness.

Producibility of Aircraft and Guided Missile Airframes.

Aeronautical Applications and Technology of Plastics and Rubber.

Aircraft Metallurgy.

Vulnerability Studies.

Fire Control Systems.

Estimates for Aircraft, Missiles, and Propulsion Activity in All Foreign Countries.

Geophysics.

Countermeasures.

Airborne Radar.

Communications.

The cutback of civilian positions completely eliminated provisions for recruiting personnel to perform these functions; therefore, it was necessary for ATIC to increase the use of contractual facilities to support its analysis evaluation program.

On 8 May 1953, Major (b) (6)<sup>3</sup> Air Technical Intelligence Officer, was assigned Acting Chief, Aircraft and Propulsion Branch, relieving Major (b) (6)<sup>4</sup> Chief, Aircraft and Propulsion Branch.

On 25 May 1953, Lt Colonel (b) (6)<sup>5</sup> was assigned duty Deputy Chief, Technical Analysis Division for a period of 180 days

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<sup>3</sup> PAM 22, Par 7, 8 May 1953

<sup>4</sup> PAM 22, Par 8, 8 May 1953

<sup>5</sup> PAM 24, Par 2, 25 May 1953



temporary duty.

On 29 May 1953, Major (b) (6) was assigned duty as Assistant to Division Chief, Technical Analysis Division.

At the end of the period, key personnel for the division were as follows:

Colonel (b) (6), Division Chief  
Lt Colonel (b) (6), Deputy Chief  
Major (b) (6), Assistant to the Division Chief  
Mr. (b) (6), Technical Advisor  
Mr. (b) (6), Advisor for Plans and Operations  
Major (b) (6), Acting Chief, Aircraft & Propulsion Branch  
Lt Colonel (b) (6), Chief, Electronics Branch  
Mr. (b) (6), Acting Chief, Weapons and Industry Branch

## II. ACTIVITIES

Quantitatively, the figures below summarize project activity for the reporting period.

	Initiated 1 January to 30 June 1953	Completed 1 January to 30 June 1953	Cancelled 1 January to 30 June 1953	Active as of 30 June 1953
Aircraft & Propulsion	8	7	1	49
Electronics	8	6	0	21
Weapons and Industry	6	6	1	19

The following ATIC publications and other end products were issued in the cited technical fields during the six months covered:

6

PAM 25, Par 2, 29 May 1953

	Aircraft & Propulsion	Electronics	Weapons & Industry	Total
ATIC Studies	8	1	3	12
Technical Reports	5	8	6	19
Preliminary Reports on Foreign Equipment	8	1	2	11
Air Intelligence Digest Articles	3	5	24	32
Technical Briefs	40	27	165	232
AF 112's	1	0	1	2

A more detailed description of the division's project activity follows:

~~(Restricted)~~ Status of the Technology of Aircraft Metallurgy in the USSR (30022). It was originally planned to publish the results of this project as a single-volume ATIC study, but owing to the amount of material to be reported, a decision was made to publish six studies and a summary outlining the status of Soviet aircraft metallurgy in each of the following fields: aluminum, magnesium, titanium, stainless steels and high temperature alloys, steels, and research and development. Of these studies, the one on aluminum was approved for publication on 10 June; the study on magnesium is being coordinated, and the study on stainless steels and high temperature alloys was received from the contractor on 18 June 1953. ~~(Restricted)~~

~~(Restricted)~~ Aircraft Rubber Technology in the USSR (30049). Two Technical Reports have been distributed in connection with this project, although they are only interim reports which it was considered advisable to release prior to issuance of the basic study. These reports were TR-AE-14, (Unclassified) "Examination of a Foreign-Aircraft Rubber

*unclasp*  
Tire Casing," and TR-AE-18, (~~Confidential~~) "Analysis of Soviet Thiokol Sample," distributed on 19 March 1953 and 30 March 1953, respectively. Because of the amount of data which would become available for inclusion in the basic rubber study and because the form in which the study will be published could not be anticipated at the time the original project plan was submitted, the man-hours and deadline dates as originally planned were exceeded. Therefore, the project was rescheduled in June 1953. (~~Confidential~~) *unclasp*

(~~Restricted~~) Status of Soviet Synthetic Resins as Applied to Aircraft (30046). The original deadline date for distribution of the final report could not be met; therefore, the project was rescheduled in June 1953 with projected completion date of 3 February 1954. In the interim, distribution was accomplished on 7 April 1953 of ATIC Study 102-AE-52/13-34, (~~Confidential~~) *unclasp* "A Preliminary Report: An Estimate of the Status of Soviet Aircraft Plastics Technology." (~~Confidential~~) *unclasp*

(~~Restricted~~) Status of Soviet Ceramics as Applied to Aircraft. (30045). The contractual facilities submitted preliminary copies of an ATIC Study on 4 May 1953. This study was found generally acceptable, with minor revisions. Proposed distribution date for this report is 30 September 1953. (~~Restricted~~)

(~~Restricted~~) Status of the Technology of Aircraft and Guided Missile Instrumentation in the USSR, its Satellites, and other Countries (30057). This project was initiated for the purpose of monitoring contractual support of ATIC studies on instrumentation. Specific attention

was given toward determining the state of the art in the fields of automatic flight control systems, flight instruments systems, and engine instruments systems, as applied to aircraft and guided missiles. The subject, number and type of reports to be prepared by contractor (Battelle Memorial Institute) will be determined on a country-subject priority basis after careful consideration of the information available. Therefore, no definite cut-off dates for the acquisition of information and the completion dates of individual reports and the documentation phase were established. Tentative dates, however, were proposed for completed studies; on the USSR by 30 June 1954; Satellites, 31 December 1954; NATO bloc countries, 30 June 1955. This schedule is contingent on the acceptance of this project in its entirety by the contractor. ~~(Confidential)~~ *Unclass*

The establishment of the status of technology of aircraft and missile instrumentation will make it possible to determine each country's capabilities in launching a successful guided missile and/or long-range bomber aircraft attack. ~~(Confidential)~~ *Unclass*

~~(Confidential)~~ *Unclass* Soviet Capabilities in Aircraft Instrument Manufacture (30050). The acquisition phase of this project has been completed by the contractor. However, the contractor's backlog of reports has necessitated delay of final preparation of this report until September 1953, with distribution to be accomplished in December 1953. ~~(Confidential)~~ *Unclass*

~~(Restricted)~~ Critical Production Factors in the Soviet Precision Industry (30042). This project was continued in a deferred status during the six month period ending 30 June 1953. On 9 - 10 March 1953



a visit was made to the manufacturing facilities of Sylvania Electric Products Company, Exporium, Pennsylvania, and conferences were held with management staff of that company for the purpose of determining the feasibility of deriving analog ratios for use in estimating foreign production capabilities. Data was collected regarding production planning factors which will be used in preparing the final study.

~~(Confidential)~~ *Unclass*

~~(Restricted)~~ Soviet Anti-Friction Bearing Industry. (30048). The study, produced as a result of this project, was a joint effort of ATIC and the Battelle Memorial Institute (contractor). Conclusions reached in the study were quite satisfactory, although not completely substantiated, and were based on technical analysis of Soviet aircraft bearings supplemented by studies of bearings, bearings markings, intelligence documentation and literature of Soviet origin. Following distribution of ATIC Study 102-AE-52/2-34, (Secret) "An Estimate of the Technical Capabilities of the Soviet-Aircraft Anti-friction-Bearing Industry," the project was closed on 24 April 1953. ~~(Secret)~~ *Unclass*

~~(Restricted)~~ Evaluation of Soviet Aircraft Weapons (30025). Four technical reports produced by Armour Research Foundation, Chicago, Illinois, under the provisions of this project, were received in ATIC on 14 April 1953. Because of reproduction difficulties, publication could not be accomplished until June 1953. This contract has frequently been delayed since its inception because of difficulties with the contractor. It is believed that these difficulties were caused by lack of understanding on the part of the contractor of the ATIC's needs. ~~(Restricted)~~

~~Secret~~ *Unclass*

~~(Secret)~~ Evaluation of 37-mm N and NS Aircraft Guns by Contractor (30039). This project was closed on 2 March 1953 following the accomplishment of final distribution of ATIC Technical Report No. TR-AE-7, ~~(Secret)~~ "Evaluation of Soviet Automatic Aircraft Guns, 37-mm NS and 37-mm N," on 5 February 1953. ~~(Secret)~~ *Unclass*

~~(Restricted)~~ Materials and Methods Analysis of Soviet 23-mm NS Automatic Aircraft Gun (30054). Technical Report TR-AE-16, ~~(Secret)~~ *Unclass* "Metallurgical and Methods Study of Selected Components of the Soviet 23-mm Aircraft Gun," was received in draft form from the contractor, Armour Research Foundation, on 9 February 1953. Personal contacts with the contractor during the final stages of this study, resulted in the receipt of a highly satisfactory product. Report was received 18 May 1953 and is in reproduction at this time. ~~(Restricted)~~

~~Secret~~ *Unclass* Characteristics and Performance of the Soviet 23-mm NR Automatic Aircraft Gun (30061). The purpose of this project was to accomplish the preparation of an air intelligence technical report on the characteristics and performance of the Soviet 23-mm NR automatic aircraft gun installed in a late model MIG-15 aircraft. This is a new type gun on which no information had previously been received in ATIC. Since, based on preliminary investigation, this gun appeared to be a completely redesigned model with considerably improved performance over its predecessor, the 23-mm NS gun, the desirability of furnishing performance data to users of ATIC information became evident. ~~(Secret)~~ *Unclass*

(Unclassified) Investigation of Foreign Fire Control Equipment  
(30037). The first report on this general subject, ATIC Technical  
Report TR-AE-17, (Restricted) "Analysis of YAK-11 Gunsight Components,"  
was issued on 15 May 1953. ~~(Restricted)~~ *unclass*

Work has been nearly completed by the contractor (Emerson Electric  
Co.) on a report, "The Installation of 23-mm guns in TU-4 Turrets," but  
has not yet been received.

A new contract with the Crosley Division of the Avco Manufacturing  
Corporation on this general subject has been approved and three Call  
Letters have been issued against this contract. Analyses are to be  
performed as follows: Call Letter #1 - Evaluation of the fire control  
system of the MIG-15; Call Letter #2 - Testing of the type GSK-1500  
foreign aircraft generator; Call Letter #3 - Evaluation of the A-1 and  
A-1p gunnery trainer manufactured by Zeiss in Jena, East Germany.

*unclass*

*unclass* ~~(Confidential)~~ Materials Applications in the MIG-15 Aircraft (30041).

An extra charge, in connection with this project, of \$1,066.00 by the  
contractor, Cornell Aeronautical Laboratories, was necessitated by  
spectrographic analyses which were not originally anticipated. Total  
cost of the contract was \$10,460.00. This amount was considered un-  
usually reasonable in view of the fact that the average cost for a summary  
bill of materials runs from \$18,000.00 to \$47,000.00. Work performed by  
the contractor in this case included various items which are not ordinari-  
ly required. The project was closed on 11 March 1953 following distribu-  
tion on a limited basis of twenty-seven copies of ATIC Technical Report  
TR-AE-6, ~~(Confidential)~~ *unclass*, "Rough Stock Bill of Material and Materials Study  
of the MIG-15 Airplane." ~~(Confidential)~~ *unclass*

~~unclas~~  
~~(Secret)~~ ATIC Contribution to Project Hope Chest (30053). A paper entitled "An Approach to the Prediction Problem of Air Intelligence" was submitted to the working group of Project Hope Chest on 28 January 1953. This contribution was in keeping with the original agreement among members of the working group concerning the basic needs of intelligence. The results of this preliminary investigation indicate that research of this kind is valuable. While the report was not regarded as a finished product, it will, with some modifications, be useful to management in planning the various functions within the ATIC. On 24 February 1953, Project 30053 was considered completed. ~~(Confidential)~~ ~~unclas~~

~~unclas~~  
~~(Secret)~~ Special Study of USSR Aircraft for Escape and Evasion Bulletin (10135). A review of progress to date revealed that additional time is needed for the completion of proposed reports; consequently, the project plan was rescheduled in June 1953, with a new completion date set for 11 November 1953. ~~(Restricted)~~

The YAK-9P and YAK-11 reports have been completed and distributed. The IL-10 report has been completed by the contractor and is in process of review. ~~(Secret)~~ ~~unclas~~

The MIG-15 report is pending. ~~(Secret)~~ ~~unclas~~

~~(Restricted)~~ Soviet Aircrew Equipment (30060). This project was originally established as ATIC Project 10086, based on a request from the Director of Intelligence to the Commander, AMC, 18 December 1950. It has been carried in a deferred status since that time. However, interpretation and integration of raw intelligence within ATIC indicates that it will be reasonable to expect the distribution of a study in April 1954.



This will be a basic study on Soviet Aircraft Equipment (personal equipment and cabin equipment, such as pressurization, oxygen systems, and ejection seats). Emphasis is to be placed on outstanding differences from U.S. or British methods, performance, and quality, and the absence of provisions considered essential by USAF. ~~(Confidential)~~ unclar

Because of the lack of a current intelligence summary on Soviet aircraft equipment capabilities, and because of the importance of this kind of equipment in maintaining the safety, efficiency and general well-being of aircraft personnel under adverse and emergency conditions, the findings of this study will be of great value in estimating USSR capabilities in conducting long-range high-altitude bomber operations and high-speed interceptor operations at extreme altitudes. ~~(Confidential)~~ unclar

~~unclar~~ ~~(Confidential)~~ Materials Application in Soviet Aircraft and Engines

(30055). An informal preliminary report on the information obtained thus far on this project was made 10 June 1953.<sup>7</sup> The problem, as presented to AFIC, was to adjust the gross input materials requirements of the U.S. equivalent to Soviet aircraft, to reflect Soviet practices. Owing to some of the complexities involved, time was not sufficient to allow final assessments in the amount of gross materials required. This will be accomplished when the project is completed. ~~(Secret)~~ unclar

~~unclar~~ ~~(Secret)~~ Relative Cost of Soviet MIG-15 Aircraft (30056). This

project was initiated to present data in a letter report form which would reflect the relative dollar value of the Soviet MIG-15 as compared to that of the F-86-E airplane. This information was requested by the Weapons System Evaluation Group (AFOSI-WSEG) and was a contribution to a general survey of

<sup>7</sup> Letter, "Materials in Soviet Aircraft," 10 June 1953

the Soviet economy being conducted by the Secretary of Defense. The data was forwarded on 6 March 1953,<sup>8</sup> and the project was closed on 12 March 1953. ~~(Secret)~~ *uncla*

The purpose of the survey, of which this report was a part, is to determine the effect of full mobilization on the Soviet economy. As a result of the study, it was found that the ratio of Soviet to U.S. man-hours requirements to produce the MIG-15 airframe was estimated to be 1.54 to 1, which appeared to be significant enough to warrant consideration in preparation of the economic study. ~~(Secret)~~ *uncla*

~~(Restricted)~~ Status of the Nuclear Energy Program in the USSR (30051).

The plan of this project was revised in May 1953 to restrict the scope of the contractor's<sup>9</sup> contribution to the acquisition phase. This revision was necessary because of certain intelligence documents that could not be made available to the contractor. The problem of release to contractors of certain classified information has not been resolved. Under present conditions, it is necessary to furnish contractors with summaries of intelligence information that cannot be released directly to them. Without access to full information, contractors cannot participate in all phases of a project.

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<sup>8</sup> TR-AE-6 "Rough Stock Bill of Material and material of the MIG-15 Airplane; TR-AE-3 "MIG-15 Production Study"; Table of material weight for the MIG-15 engines, the RD-45 and VK-1; Table of manufacturing and installation costs of known electronic installations in the MIG-15; Table of comparison between MIG-15 and F86E; and Table of comparative costs of armament for the F-86F and the MIG-15.

<sup>9</sup> Battelle Memorial Institute

(Unclassified) Evaluation of Foreign Landing Gear Shock Struts (30044).

All reports concerning both phases of the project have been received from the contractor. Because of production difficulties encountered by the contractor, the original date, 26 December 1952, for completing work on this project was not met. It is planned to publish two ATIC studies from information now at hand. One study will cover design, operations, and assembly; the other study will cover materials and methods. It is anticipated that these studies will be released prior to November 1953. ~~(Confidential)~~

~~(Confidential)~~ *Unclassified*

~~(Restricted)~~ Summary of New Developments in French Aircraft Guns and Rocket Launchers (30052). ATIC Study 102-AE-52/12-31, ~~(Restricted)~~ "New French Aircraft Guns and Related Ammunition," produced as a result of this project, varied from the coverage intended at the time the project was initiated. The report did not include information on rocket launchers. The omission was caused by the fact that the translated documents used in drafting the study included only limited performance data on rockets and no data on the launchers. Following distribution of this study, the project was closed on 12 May 1953. ~~(Restricted)~~

~~(Restricted)~~ Soviet AM-42 Aircraft Engine Manufacturing Methods Analysis (30043). Since the initiation of this project, intelligence in the field of power plant manufacturing became available which tended to reduce the relative value of the AM-42 methods analysis from the point of view of this Center's using agencies. It was therefore decided that the cost which would be required to complete the project was not warranted in view of the intelligence value of the intended end product; accordingly, the project was closed 9 June 1953 without further action. It is well to note,

however, that the contractor's (Lycoming-Spencer) methods analysis has proved to be of considerable value as an indicator of the general level of applied production technology in the Soviet aircraft engine industry.

~~(Confidential)~~ *Unclass*

Classified Project (20024). A proposed expansion of countermeasures research activities under Project 20024 failed to materialize because of reduction in force. As a result, the exact work requirements and recommendations have been presented on future efforts related to countermeasures research. ~~(Confidential)~~ *Unclass*

During this period, this project consisted of the following phases:

Investigation and Development of New Methods of Technical Intelligence in Field of Guided Missiles. Contract AF 33(600)-15660 has been extended to allow for the construction of antenna systems for use by USAF Security Service (USAFSS). Other phases of the project are nearing completion or have been completed. An extension of the contract is now under consideration for investigating new techniques for collecting and analysing data, to be performed by Haller, Raymond and Brown, Inc. One phase of this effort will be coordinated with Melpar, Inc., who are doing sound structure analysis. ~~(Secret)~~ *Unclass*

Development of Standardized Air Force Electronic Counter Measures (ECM) Analysis Procedures. Effort is continuing in the standardization of analysis procedures in electronic reconnaissance and has recently been extended to include the other services through action by the Joint Signal Evaluation and Analysis Sub-Panel (J/SE) of the Joint Electronic Warfare Panel. ~~(Confidential)~~ *Unclass*



Liaison with Wright Air Development Center (WADC). Liaison with WADC continued during reporting period along the following lines:

The Flight Research Laboratory and the Aero Medical Laboratory are studying the application of statistical techniques and punched card systems to intercept analysis. Flight tests proposed by the Analytical Research Group of Princeton University are awaiting the availability of a special aircraft.

Discussions have been held with personnel of Aircraft Radiation Laboratory concerning development of a flying spot-video recorder. At the present time there is no positive action being taken for the development of a video recorder for airborne use.

WADC is continuing to give assistance in the instrumentation of the special laboratory B-29 being outfitted at Sacramento. ~~(Secret)~~ *Unclass*

The Development of Intelligence Requirements for Electronic Equipment. Intelligence requirements of all services have been brought to the attention of the Joint Technical Intelligence Subcommittee (JTIS) through the J/SE. Among the items of particular interest to the Air Force were: video recording equipment, airborne audio tape recorders, improvement in direction-finding equipment, improvement in analysis techniques for the AN/APD-4, and the concurrent development of basic equipment and analysis equipment. ~~(Confidential)~~ *Unclass*

Instrumentation of Exploratory Aircraft. The instrumentation for this aircraft was modified slightly. The present schedule calls for mock-ups to be completed by 1 May 1953 and flight tests to begin by 15 September 1953. The only equipment difficulty foreseen at this time is the Della Rosa (AN/APD-4) (XA-1) installation. Delivery of this equipment has been postponed to early 1954. ~~(Confidential)~~ *Unclass*

Analysis of Electronic Reconnaissance Data. Regular work related to the analysis of data from electronic reconnaissance missions continued. This included putting this data in readily available form for subsequent study and analysis, analyzing direction finder data with a view to determining probable locations of alien radar equipment, and laboratory analysis of recorded data. Efforts toward reduction of the routine portion of the work are being emphasized in view of the limited available manpower. ~~(Secret)~~ *Unclass*

Reporting Procedures. In a conference with Military Capabilities Division, Signal Integration Branch, D/I (AFOIN-2C4), an arrangement for the preparation of the periodic reports on this project was agreed upon whereby the ATIC would prepare message to AFOIN-2C4 on each mission; monthly report to AFOIN-2C4 on each month's activity; and the annual study or technical report with the present distribution. Distribution of analysis results (Secret version) by the Air Technical Intelligence Center to research and development agencies was not affected by these changes.

(Unclassified)

Special Mission Analysis. Analysis of reports on a series of special missions flown has yielded a new approach to radar location which is being exploited. Because of the volume of data and the low priority placed upon its processing, regular laboratory operations have been considerably delayed. ~~(Confidential)~~ *Unclass*

Intra-Service Coordination. In a conference at Headquarters, Strategic Air Command, 21 April 1953, the part that USAF Security Service (USAFSS) is to play in electronic intelligence was outlined. In addition, two men from USAFSS were trained in special analysis techniques during April 1953.

~~(Confidential)~~ *Unclass*

The Evaluation of Intelligence Data from Operational "Della-Rosa" Missions. A final report under Supplement No. 23 of Air Force Contract W33-038-ac-15012 has not yet been received and is now several months overdue. Preparation of the "Della-Rosa" report still awaits the contractor's final report. (~~Confidential~~) *Unclass*

Interference and Jamming Investigation. The investigation of numerous reports of jamming has led to a conclusion that nearly all the incidents have been caused by interference, with the exception of several unsuccessful deception attempts, and the continuing, and, perhaps more active, deliberate jamming of the Voice of America. (~~Secret~~) *Unclass*

Participation in J/SE Activities. Participation in the activities of the Joint Signal Evaluation and Analysis Subpanel, Joint Electronic Warfare Panel continued. (~~Restricted~~)

Project Blue Book (10073). During the first six months of 1953, 249 reports of unidentified aerial objects were received by the Air Technical Intelligence Center (ATIC). The most productive month was February, with 76 reports. This is in contrast with widespread public opinion that since "saucers" are no longer in the newspapers, the Air Force receives no reports. Probably more significant than this is the fact that 55% of all reports received thus far in 1953 came from military observers. Of the remaining 45% from civilian sources, 8% involved some type of radar detection. (Unclassified)

On 20 May 1953 the project monitor completed a briefing tour of all the Air Divisions in the Air Defense Command (ADC). This briefing tour was set up in the fall of 1952 to educate ADC personnel in the philosophy and background of Project Blue Book, and to show them how to improve their reports.

Ground visual questionnaires were distributed to ADC intelligence officers with briefing copies to enable them to brief interested personnel in their units. The project monitor, in his briefings, emphasized that analysis of a sighting could be done at division or Aircraft Control and Warning level, eliminating all but the hard-core unknowns to be forwarded to the ATIC for further analysis. All divisions of the Western Air Defense Force, the Central Air Defense Force, and the Eastern Air Defense Force were briefed. ADC produces 35% of all Flying Objects Reports.

In addition to three ADC temporary duty tours, trips were made to Darlington, Wisconsin, and to Red Lion, Ohio, during the reporting period to investigate flying saucer incidents. In both cases the objects in question turned out to be conventional.

In January a scientific advisory panel was called together in Washington by the Central Intelligence Agency (CIA) to review the problem of unidentified flying objects. Members of the panel, including many high-level scientists, reached the following conclusions:

- (1) National security agencies should institute policies on intelligence training and public education, designed to prepare the material defenses and the morale of the country to recognize most promptly and to react most effectively to true indications of hostile intent or action.
- (2) The evidence presented on unidentified flying objects shows no indication to date that these phenomena constitute a direct threat to the national security.
- (3) A continued emphasis on the reporting of these phenomena, in these times, results in a threat to the orderly functioning of the Government.
- (4) National security agencies should take immediate steps to strip the unidentified flying objects of the special status or mystery they have unfortunately acquired.



Generally the ATIC agrees with these conclusions and at the present time is attempting to implement the panel's suggestions. (~~Secret~~) *Unclass*

Seventy-three gridless Videon cameras were distributed to Airways and Air Communications Service (AACS) tower sites and ADC radar sites on 1 June 1953. The original plan for these cameras was to take a diffraction grating picture of an unidentified object which would enable a spectroscopist to identify the spectrum bar. However, it was found that the Videon diffraction gratings deteriorated soon after being received at the ATIC, because of inexpert mounting. It was concluded that the cameras would be used for obtaining photographic intelligence on unidentified objects, without the gratings. When a suitable grating is obtained, the cameras will be recalled and the gratings mounted. (Unclassified)

The International Business Machine (IBM) statistical analysis of all sightings from 1947 through 1952 continues for Project Blue Book. It is estimated that a final written report will be submitted on 15 August 1953. Statistical curves of probability, indexes of comparison on unidentified objects, and a general commentary on the results of the IBM study will be included in the report. It is believed that this study will be extremely significant in the future evaluation of reports and perhaps in the operation of Project Blue Book. (Unclassified)

The ATIC has received two notable reports of unidentified objects during this six month's span. A sighting at Port Austin, Michigan, on 17 February 1953 involved both radar and visual detection. It appeared to be a simultaneous sighting and has not as yet been explained. On 3 March 1953, three F-84 pilots from Lake AFB sighted an unidentified object at 25,000 feet.

One of the fighter pilots exposed 30 feet of gun camera film in photographing the object. Following extensive analysis, this sighting is now considered to have been a vapor trail from probably two or more high flying jet aircraft. (Unclassified)

McMillin Observatory of Ohio State University, which is cooperating in Project Blue Book by an astronomical program, has ascribed 25% of all sightings in April, May, and June to the planet Venus. (Unclassified)

(Restricted) Preparation of Handbooks on Foreign Aircraft, Other Than Soviet (Project 10150). Publication of the French Handbook, "A Study of the French Aircraft Program," was completed 20 February 1953 (ATIC Study Number 102-AC-52/40-31). ~~(Restricted)~~

The Italian Handbook, "A Study of the Italian Aircraft Program," was forwarded for publication during the second week in May 1953 (ATIC Study Number 102-AC-52/43-21). ~~(Restricted)~~

The British Handbook, "A Study of the British Aircraft Program," was forwarded for publication during the second week in May 1953 (ATIC Study Number 102-AC-52/52-37). ~~(Restricted)~~

(Restricted) Maintenance of Performance and Characteristics Handbook (Project 10128). Corrections were made to the 1952 edition of the USSR Aircraft Handbook and will be reflected in the handbook format sheets being prepared for the 1953 revision. ~~(Restricted)~~

The format used in the "All Other Countries Handbook," has been adopted as standard for all handbooks and will replace the old format as future revisions are made. Revisions initiated during this reporting period were made in the old type format. (Unclassified)

~~Secret~~ *Unclass* Re-Evaluation of MIG-15 Based on Captured Components (Project 10115). The Cornell Aeronautical Laboratory's research on the MIG-15 aircraft was completed on 13 January 1953, and the final report received. Since receipt of this report, more information on the MIG-15 aircraft has become known and it is planned to integrate this information into the Cornell report before it is published. ~~(Confidential)~~ *Unclass*

~~(Confidential)~~ *Unclass* Analysis and Evaluation of Foreign Aircraft (Project 10174). Proposal for establishing a project to obtain a contractor to conduct physical analysis of foreign equipment was approved 10 June 1953. This project will cover any variety of specific work projects that require work to be accomplished by a contractor. ~~(Restricted)~~

~~(Restricted)~~ Soviet ASH-621r Engine (Project 10101). During the past six months the contractor, Lycoming-Spencer Division, AVCO Manufacturing Corporation, has completed the dynamometer testing of the Soviet ASH-621r aircraft engine. On attempting to start and run the engine on 3 March 1953, a link rod failure occurred terminating the testing of this engine. Another ASH-621r was sent to the contractor on 4 March 1953 and the test was successfully completed. The contractor submitted preliminary copy for Technical Report TR-AC-25, "Performance Characteristics of the Soviet ASH-621r Aircraft Engine," on 4 June 1953. A failure report will be included in TR-AC-25.

~~(Confidential)~~ *Unclass* TR-AC-19, "Description Report of Soviet ASH-621r Engine". Final draft of this report is being completed by the Contractor (Lycoming Spencer). ~~(Confidential)~~ *Unclass*

~~(Restricted)~~ Soviet ASh-21 Engine (Project 10104). The contractor (Lycoming Spencer) has completed the dynamometer testing of the ASh-21 and has submitted the final copy of TR-AC-21, "Performance Characteristics of the Soviet ASh-21 Aircraft Engine," ~~(Confidential)~~ *Unclass*

~~(Restricted)~~ Soviet VK-107A Engine (Project 10105). On 18 June 1953, a trip was made to the contractor (Lycoming Spencer) and the initial testing of the VK-107A was undertaken. ~~(Confidential)~~ *Unclass*

~~(Restricted)~~ Soviet AM-42 Engine (Project 10109). TR-AC-18, "Description of the Soviet AM-42 Engine," has been submitted for publication and distribution. The engine used by the contractor (Lycoming Spencer) for analysis has been returned to ATIC. ~~(Confidential)~~ *Unclass*

~~(Restricted)~~ Soviet M-11 Engine (Project 10130). The final technical report prepared by the contractor (Lycoming Spencer) was distributed 8 January 1953 and the project terminated 17 June 1953. (Unclassified)

~~(Restricted)~~ Foreign Propellers, Soviet (Project 10107). Contract Number AF 33(038)-26090, United Aircraft Corporation, Hamilton Standard Division, was terminated 19 May 1953. The total cost of this contract for the analysis of three propellers was \$18,667.00. The equipment used by the contractor has been returned to ATIC. ~~(Confidential)~~ *Unclass*

A new contract AF 33(600)-24034 has been awarded to Curtiss-Wright Corporation, Propeller Division, as of 9 April 1953. A trip was made to the contractor on 19 June 1953 to initiate the first call against this contract for the analysis of two propellers. This equipment is presently being shipped to the contractor. ~~(Confidential)~~ *Unclass*



~~(Restricted)~~ Maintenance and Publication of "Estimated Characteristics of Soviet Air Weapons" Quarterly Report (Project 10140). The 1 July 1953 issue of the semi-annual report on "Estimated Characteristics of Soviet Air Weapons" was completed and forwarded for publication during the first week in June 1953. ~~(Restricted)~~

~~unclas~~  
~~(Secret)~~ Soviet Surface-To-Surface Guided Missiles, 2500 Nautical Miles Maximum Range (Project 10139). During the period January 1953 thru June 1953, Project 10139 was actively pursued. The project proposal was initiated on 30 December 1952 and final approval was obtained on 3 April 1953. At that time it became apparent that Project 10125, "Soviet Development of the V-2," should be incorporated into Project 10139 since both were related.

~~(Confidential)~~ ~~unclas~~

Intelligence information that has been received from the German returnees from Ostoshkov has illuminated the Soviet exploitation effort of the German technical guided missiles experts to such a degree that now estimates became mandatory. Also, because of the similarity of Project 10139 to Project 10099, "Long Range Surface-to-Surface Guided Missiles, 2500 Nautical Miles Minimum Range," it is planned to incorporate Project 10099 with Project 10139. ~~(Secret)~~ ~~unclas~~

In relation to Project 10139, nine possible Soviet ballistic missile configurations were submitted to the Computational Laboratory (WCRU), together with the developed non-linear differential equations (ORAG) for solution of the missiles flight trajectory. ~~(Confidential)~~ ~~unclas~~

~~(Restricted)~~ Foreign Aircraft Engine Characteristics Summary Book-USSR

(Project 10112). Final coordination was accomplished and two performance sheets were changed to incorporate the latest available information. Upon approval of these sheets, this Study, 102-AC-53/3-34, "Known Soviet Aircraft Engines (Designation Characteristics)," will be forwarded for publication.

~~(Confidential)~~ *unclass*

~~(Restricted)~~ Synthetic Aviation Gasoline in Soviet Germany - Boehlen Plant

(Project 10117). ATIC Study No. 102-AC-53/2-23, "Synthetic Aviation Gasoline in Soviet Germany - Boehlen Plant," was approved for publication on 11 June 1953. This study, although evaluating primarily the performance of the Boehlen Plant, projects its findings into the USSR by analyzing the technological increment which the USSR has obtained by operating this particular plant. The extent of this increment is established, particularly as it applies to the processing of newly discovered crude oils in the Ural-Volga region into aircraft fuels. ~~(Secret)~~ *unclass*

~~(Restricted)~~ Soviet Specifications for Aircraft Petroleum Products

(Project 10118). ATIC Study No. 102-AC-53/6-34 entitled "Soviet Specifications for Aircraft Petroleum Products," was completed the first week of April 1953 and is now being coordinated. This study contains a compilation of the latest available USSR specifications published in 1951. Its purpose is to permit evaluations of USSR samples of aircraft petroleum products which have been and are being collected for analysis by USAF and other agencies. Deviations of the actual USSR quality as against the USSR quality requirements can thus be established, and the progress that the USSR is making in the manufacture of aircraft petroleum products, by its own standards, can thus be ascertained. ~~(Restricted)~~

~~(Restricted)~~ Handbook of Some Soviet Crude Oils - Part I - Aviation Fuel Base Stocks (Project 10166). ATIC Study No. 102-AC-53/9-34, "Analysis of the Aviation Fuel Potential in Some USSR Crude Oils," was submitted for within-Center coordination on 25 June 1953. This study analyzes the compositions of 86 USSR crude oils as published in the open USSR literature. It is designed as a tool to assist in making overall estimates of the USSR capabilities in the production of aviation fuels. ~~(Confidential)~~ *Unclass*

(Unclassified) Aircraft Group Performance Methods (Project 10092). The project monitor visited England during the period 1 January through 21 February 1953 for the purpose of obtaining performance data on British aircraft. Specifically, the purpose of the visit was to obtain a sufficient amount of data necessary to determine the performance of six "super-priority" British aircraft under USAF Military Specification 5011A for comparison with similar USAF aircraft; to become familiar with British performance techniques; and to contact the Deputy Director of Intelligence, Technical, (DDI, Tech) to review latest intelligence on Soviet aircraft. ~~(Confidential)~~ *Unclass*

A comprehensive report<sup>10</sup> of this trip was prepared. Data obtained from England on performance methods is under study for possible incorporation, where feasible, into our methods. ~~(Confidential)~~ *Unclass*

~~(Restricted)~~ ATIC Contribution to NIS on Switzerland (Project 10154). ATIC's contribution to this survey has been approved for issuance as an ATIC Research and Development Study. ~~(Confidential)~~ *Unclass*

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Aircraft and Propulsion Branch Operations Report, 6 March 1953, "Visit to England to obtain performance Data on British aircraft."

~~(Restricted)~~ ATIC Contribution to NIS on China (Project 10167). The ATIC's contribution was completed during June 1953. Both Nationalist and Communist China were covered. This is the first contribution in which ATIC was responsible for integration of Army, Navy, and Air Force contributions to Section 72 of the NIS. ~~(Confidential)~~ *unclass*

(Unclassified) ATIC Contribution to NIS Chapter VIII, Section 83 (Project 10170). A chart of characteristics and performance of operational Yugoslav aircraft and a brief comment on Yugoslav material in advanced stages of development was completed during June 1953. ~~(Confidential)~~ *unclass*

~~(Secret)~~ *unclass* ATIC Contribution to NIS on Poland, Bulgaria and Romania (Project 10175). This project was established during the later part of June 1953. Coverage of the three countries constitutes National Intelligence Survey (NIS), Chapter VII, production for fiscal year 1954. ~~(Secret)~~ *unclass*

~~(Secret)~~ *unclass* Combat Radius Capabilities of Soviet MIG-15 (Project 10155). ATIC Study No. 102-AC-52/35-34 was published 1 April 1953. (Unclassified)

~~(Restricted)~~ Weight Estimation - Soviet Aircraft (Project 10158). The project monitor attended the National Advisory Committee for Aeronautics (NACA) Conference on Loads, Flutter, and Structure during the week of 5 March 1953. (Unclassified)

The first section of the Summary of Methods was completed during the second week in May. Formula development and card indexing for this project is continuing. ~~(Restricted)~~



~~(Restricted)~~ Range and Radius of Soviet Glider-Towplane Combination  
(Project 10111). Addendum #1 to ATIC Study 102-AC-51/11-34 was completed  
for final coordination on March 1953. ~~(Restricted)~~

(Unclassified) Document and Information Research (Project 9998). During  
the period 1 January through 19 June 1953, 7,952 documents were received  
for processing: 3,747 documents were abstracted and from this number, 6,868  
abstracts were made and filed. ~~(Restricted)~~

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#### AIR INTELLIGENCE OFFICE

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL. At the beginning of the period, the Air Intelligence Office was located at staff level in the ATIC organizational structure. During the month of January, this office was changed from staff level to operations level with no change in functions.<sup>1</sup>

The internal organization of this office did not change during the period. It is composed of four branches: Intelligence Briefing Branch, Intelligence Survey Branch, Intelligence Publications Branch, and Special Intelligence Branch.

The general functions of the Air Intelligence Office are: (1) To exploit all available intelligence information and products pertinent to the mission of the Air Technical Intelligence Center; to collate and interpret this data in light of the mission, and take action that will most efficiently insure that the Center is advised at all times of alien capabilities, intention, and related factors that may affect it in the discharge of its responsibilities. (2) To provide intelligence services needed by Headquarters, Air Materiel Command; the Wright Air Development Center; and other components of the Department of Defense located at the Wright Patterson Air Force Base. Specific functions assigned to each of the branches are as follows:

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<sup>1</sup> ATIC ORGANIZATION CHART, 22 January 1953.

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INTELLIGENCE BRIEFING BRANCH. To assure the timely analysis and dissemination of high-precedence intelligence information; obtain and study all available intelligence information pertinent to the mission of the ATIC, AMC, WADC, and other components of the Department of Defense located at WPAFB; collate, evaluate, and interpret this information in the light of the mission of these commands; furnish or present intelligence estimates of enemy and world situations; control the use and maintenance of the Air Room; prepare and maintain visual aids; monitor oral technical intelligence presentations by other components of ATIC, as requested; conduct special instruction for major commands, on air technical intelligence and related fields.

INTELLIGENCE SURVEY BRANCH. Obtain knowledge of topical intelligence requirements of the ATIC, AMC, WADC, and other using agencies; take appropriate action to obtain required topical intelligence information; collate and perform preliminary analysis and evaluation of topical intelligence information; determine and assure proper dissemination to authorized ATIC, AMC, WADC, and other using agencies at WPAFB; and accomplish accession lists of topical and technical intelligence products pertinent to ATIC components and other using agencies.

INTELLIGENCE PUBLICATIONS BRANCH. Produce and edit written topical and technical air intelligence products in the accomplishment of the intelligence mission of the Air Technical Intelligence Center, Air Materiel Command, Wright Air Development Center, and other components of the Department of the Defense at WPAFB; administer the publication and dissemination of these products; and perform specific tasks related to foregoing functions.

SPECIAL INTELLIGENCE BRANCH. Perform final detailed analysis and evaluation,

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and furnish topical intelligence information pertinent to the mission of the ATIC, AMC, WADC, and other components of the Department of Defense located at WPAFB; interpret processed information in the light of the mission of these commands; determine means of dissemination and disseminate topical intelligence to claimant agencies; prepare, accomplish and perform the historical functions of ATIC and other tasks related to foregoing functions.

At the beginning of the period the office was headed by Major (b) (6), (b) (3) (B) as civilian assistant. On 25 March 1953, Major (b) (6) left for an overseas assignment and was replaced by Major (b) (6) formerly assigned to the Photographic Section of the Technical Services Division.<sup>2</sup> No further changes occurred during the period.

II. ACTIVITIES.

INTELLIGENCE PUBLICATIONS. Issuance of two daily publications, "Air Technical Intelligence Summary" (INTSUM) and the "Daily Intelligence Report", (DIRAMA) and one weekly publication, "ATIC Bulletin," continued.<sup>3</sup>

ATIC REPORT CLINIC. Recognition of the problems involved in the preparation of effective reports and other communications led to the planning of a new program designed to aid personnel of the Air Technical Intelligence Center in preparing written reports, correspondence, and oral briefings. On 8 June 1953, the Commander issued a communication to division and office chiefs describing preliminary plans for establishment of the

<sup>2</sup> PAM #16, 1 April 1953.

<sup>3</sup> For purpose and content of these publications, see Air Technical Intelligence Office History, 1 July 1952 - 31 December 1952.



new program under the title, "ATIC Report Clinic," and assigning responsibility for planning and conducting the program to the Air Technical Intelligence Office. The plans call for a program which will stimulate and direct a continuing, Center-wide effort to discover and remedy defects in communications, both written and oral, emanating from the Center. Methods to be used in the accomplishment of this purpose are: (1) analysis and constructive criticism of specific reports and correspondence, in a continuing series of weekly, 30-minute group meetings to be attended by interested ATIC personnel; (2) Private conferences with ATIC personnel seeking constructive criticism of their writing and aid in the preparation of effective reports and correspondence; (3) rehearsals of oral presentations, with criticism and suggestions for improvement in style, delivery, and organization of material. At the end of June, plans for establishment of the program were being completed.

BRIEFINGS. The briefing functions of this office were considerably expanded within the reporting period to fulfill commitments made the latter part of 1952 to provide additional briefing services to the various laboratories of the Wright Air Development Center (WADC). During the reporting period a total of 151 oral briefings were presented as compared to 91 briefings for the preceding period.

AIR ROOM SERVICES. Command conferences and division level meetings held in the Air Room dropped from 95 to 91 during the period. The functions performed by the Air Intelligence Office for these conferences remained the same as for the preceding period, as did the other services provided by this office in the Air Room.<sup>4</sup>

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<sup>4</sup> See Air Technical Intelligence Office History, 1 July 1952 - 31 December 1952.

SURVEY SERVICES. The screening of technical and non-technical documents, and incoming messages for items of interest to the components serviced continued. Approximately 5277 documents and 1768 messages were screened during the period and 903 items referred by means of the Daily Accession List.

SPECIAL INTELLIGENCE SERVICES. In addition to the survey services provided for documents and messages, 1388 reports of information gleaned from "open" sources (magazines and newspapers) were furnished using agencies, - other components of the ATIC, components of WADC, and components of Hq AMC and the Air Materiel Areas (AMA's).

On 27 May 1953, the Plans Division, Materiel Program Coordination (MCOP) was added to the list of AMC components serviced. Hereafter, MCOP will provide the contact point with the ATIC for items of special intelligence needed by the various AMC components. If study of the items in relation to Air Force logistics should be made, MCOP will distribute the item, together with action instructions, to the responsible component. In addition to the clippings and special items, the Air Intelligence Office will furnish MCOP with a listing of documents for review.

During the reporting period greater emphasis was placed on dissemination of counter-intelligence, especially subversive and sabotage techniques. When this material was available, it was routed, in the form of special articles, to intelligence offices in Air Materiel Areas, Hqs AMC Provost Marshal, Manpower Branch, Security Policy Division, AMC, and to Plans Division Materiel Program Coordination. Material pertaining to domestic emergencies, base defense and passive defense, has been requested by the Plans Division, Materiel Program Coordination in order that that

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component may furnish realistic guidance to various AMC facilities for emergencies.

A survey of Air Materiel Areas, conducted in March, revealed prevailing satisfaction with information being provided by the Air Intelligence Office in its regular publications and these special services.

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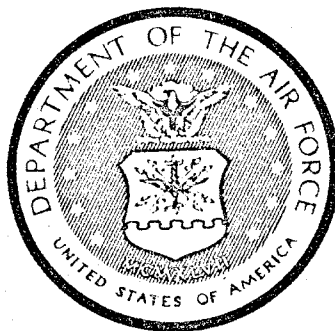
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# HISTORY OF AIR TECHNICAL INTELLIGENCE CENTER

1 JULY 1953 - 31 DECEMBER 1953



**AIR TECHNICAL INTELLIGENCE CENTER**  
WRIGHT-PATTERSON AIR FORCE BASE  
OHIO

Copy No. 4

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FOREWORD  
TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER  
For the Period  
1 July 1953 - 31 December 1953

The general plan and format of this installment of the Air Technical Intelligence Center History is essentially the same as that used in the preceding installment. One change has been made in style. In the interest of brevity, cross reference has been made by means of footnotes to page numbers in the preceding installment to eliminate repetition of content fully described in the preceding issue.

As in the preceding installment, a chart has been included following this foreword. Although there have been several changes in the key personnel listed on this chart, the organizational structure shown is the same as that existing at the end of the preceding reporting period.

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# **OFFICE OF THE COMMANDER**

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## OFFICE OF THE COMMANDER

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The functions and staffing pattern of the Office of the Commander, during the period, officially remained essentially the same as that reported in the preceding edition of the history.<sup>1</sup> However, to care for an emergency situation that arose toward the end of the period - the sudden and serious illness of the Commander, Brigadier General (b) (6) - temporary shifts in the principal duty assignments of key personnel had to be made.

Upon the departure of Colonel (b) (6),<sup>2</sup> Executive, for permanent change of station to the Air War College, Air University, Montgomery, Alabama, 1 July 1953, Colonel (b) (6),<sup>3</sup> Chief of the Policy and Management Office, was detailed to the position of executive and performed these additional duties until 27 July 1953 when Colonel (b) (6),<sup>4</sup> reported for duty and was assigned as executive. On 19 August 1953, Colonel (b) (6),<sup>5</sup> was relieved as executive

<sup>1</sup> History of the Air Technical Intelligence Center, 1 January - 30 June 1953 pp 6 - 7

<sup>2</sup> Hq 1125th USAF FAG (ATIC): SO 35, 19 March 1953 and SO 89, 9 June 1953

<sup>3</sup> Hq 1125th USAF FAG (ATIC): PAM 31, 20 July 1953

<sup>4</sup> Hq 1125th USAF FAG (ATIC): PAM 32, 23 July 1953

<sup>5</sup> Hq 1125th USAF FAG (ATIC): PAM 37, 19 August 1953

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and assigned as chief of the Technical Services Division. On  
1 September 1953 Colonel (b) (6)<sup>6</sup> was assigned as executive.  
The position of deputy commander, vacated by reassignment of  
Colonel (b) (6), (b) (7) (D)<sup>7</sup> was filled 11 September 1953, by Colonel  
(b) (6)<sup>7</sup> who reported for duty the preceding day.

On 26 November 1953, the Commander, Brigadier General (b) (6)  
while returning from Maxwell Air Force Base, Montgomery, Alabama, via  
Washington, D. C., became seriously ill and was admitted to the  
Walter Reed Medical Center in Washington, D. C. Since the deputy  
commander, Colonel (b) (6), was on ordinary leave at the time, the  
executive, Colonel (b) (6) assumed command until Colonel (b) (6)  
return. Colonel (b) (6)<sup>8</sup> assumed command 30 November 1953. Since  
it was apparent that Brigadier General (b) (6) would not be able to  
return to duty for some time, if at all, Colonel (b) (6)<sup>9</sup> was reassigned  
from executive to deputy commander, and Captain (b) (6)<sup>10</sup> was  
assigned as administrative assistant to the commander. Captain  
(b) (6) was formerly assistant chief of the Military and Civilian

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<sup>6</sup>  
Hq 1125th USAF FAG (ATIC): PAM 41, 11 September 1953

<sup>7</sup>  
Hq 1125th USAF FAG (ATIC): PAM 41, 11 September 1953, and American  
Embassy, Stockholm, Sweden: SO 31, 9 June 1953

<sup>8</sup>  
Hq 1125th USAF FAG (ATIC): GO 20, 30 November 1953

<sup>9</sup>  
Hq 1125th USAF FAG (ATIC): GO 21, 30 November 1953

<sup>10</sup>  
Hq 1125th USAF FAG (ATIC): PAM 53, 4 December 1953

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Training Section of the Technical Services Division. The position of executive was left vacant. All these shifts in assignment were made on a tentative basis pending definite information on Brigadier General (b) (6) return.

On 16 December, oral notice was received that Brigadier General (b) (6) would not return.<sup>11</sup> Since no orders were issued by Headquarters USAF relieving Brigadier General (b) (6) of command and designating his successor, the tentative assignments continued at the end of the period.

At the end of the period, key personnel in the Office of the Commander and the capacity in which they were serving were:

Brigadier General (b) (6)	Commander - absent
Colonel (b) (6)	Acting Commander
Colonel (b) (6)	Acting Deputy Commander
Captain (b) (6)	Temporary Administrative Assistant
Mr. (b) (6)	Scientific Advisor
Mr. (b) (6)	Civilian Assistant

(Uncl)

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See page 12

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## II. ACTIVITIES

### (Uncl) PROJECT PLANNING AUTHORITY AND THE TEN YEAR PLAN:

The Project Planning Authority (PPA), established during the  
12  
preceding period, began to carry out its assignment of planning the  
13  
implementation of the ATIC Ten Year Plan. (Uncl)

This group began by defining and interpreting in more specific detail the technical terminology and concepts embodied in or allied to the Ten Year Plan. They then developed tentative criteria for evaluating and classifying current projects and for approving and planning future air technical intelligence projects, in conformance with the goals specified under "Priorities" in the Ten Year Plan.  
14  
These tentative criteria were applied to the classification of current projects and a study was started to determine what projects should be continued, what ones discontinued, and what ones modified. (Uncl)

A study of the requirements placed upon the ATIC for production of air technical intelligence was started. The aim of this study is to eliminate or reduce those requirements that do not conform to the priorities specified in Ten Year Plan and to bring the utilization

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12  
History of the Air Technical Intelligence Center, 1 January -  
30 June 1953, pp 10-11

13  
Ibid. pp 8-10

14  
Ibid. p 9

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of resources into conformance with this plan. One phase of this general study is concerned with collection sources and problems, another with the allocation and expenditure of budgetary allotments, and another with the supply and distribution of manpower. (Uncl)

Various activities within the Center are cooperating in the various phases of this study. The Technical Analysis Division has assisted in classifying projects according to the Ten Year Plan's priorities and in evaluating the assistance received from contractors. The Policy and Management Office has supplied workload, manhour, and cost data. The Technical Requirements Division has assisted in studying collection sources and defining collection problems. (Uncl)

To date, one study has been completed and was submitted to the Commander with recommendations on 23 November 1953. This study concerned the utilization of a major contractual source. (Uncl)

Although little progress was made during the period in the actual implementation of the Ten Year Plan, much progress was made in identifying the problems involved and in laying the basic ground work for development of definite plans to clarify the purpose and mission of the ATIC and to direct its activity toward accomplishing the objectives specified in the Ten Year Plan.

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(Uncl) EVALUATION OF INTELLIGENCE REPORTS. The procedures developed during the preceding period for expediting and improving the evaluation of intelligence reports, received through collection sources,

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<sup>15</sup>  
History of the Air Technical Intelligence Center, 1 January - 30 June 1953  
pp 11-12

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proved so effective that it was no longer deemed necessary for the civilian assistant to monitor directly this project. The proper preparation of intelligence-report evaluations is now a subject for special attention by the ATIC inspector general. (Uncl)

(Uncl) OVERSEAS TRIPS. During the period two of the office's key personnel, the scientific advisor and the commander, made trips to Europe where they attended meetings of scientific and aeronautical groups and visited air technical liaison offices. (Uncl)

(Uncl) Scientific Advisor. Mr. (b) (6) departed for Europe on 2 September 1953 and returned on 10 October 1953. During this period he attended the Fourth International Aeronautical Conference as a delegate for the United States Air Force. This conference was sponsored by the Royal Aeronautical Society and the Institute of Aeronautical Sciences and was held in London, England, 8-14 September 1953. The program for this conference included a visit to the Flying Display and Exhibition of the Society of British Aircraft Constructors at Farnborough, England, 8, 9, and 10 September 1953. During his stay in England, Mr. (b) (6) also visited various aircraft manufacturing plants to gain further knowledge of the progress being made in aeronautical research and development, and in manufacturing techniques; the Ministry of Supply and the Air Ministry to discuss intelligence problems of mutual interest; and the USAF Air Technical Liaison Office. On the continent,

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Mr. (b) (6) visited air technical liaison offices in Wiesbaden, Germany; Paris, France; and Rome, Italy, to discuss classified intelligence projects and problems related to the production of air technical intelligence. (Uncl)

(Uncl) Commander. Brigadier General (b) (6) departed for Europe on 30 August 1953 and returned 13 September 1953. While abroad he attended meetings of the Advisory Group for Aeronautical Research and Development (AFARD), 3 to 11 September 1953, in London, and the Flying Display and Exhibit in Farnborough, September 8, 9, and 10, 1953. Representatives of all the North Atlantic Treaty Organization Nations were present at the AFARD conference. Brigadier General (b) (6) also visited the Air Technical Liaison Office in Wiesbaden where he conferred with USAF air technical liaison personnel from Germany and Austria. (Uncl)

(Uncl) SIXTH ANNUAL BOMBING ACCURACY CONFERENCE. Brigadier General (b) (6) addressed the Sixth Annual Bombing Accuracy Conference at Maxwell Air Force Base, Montgomery, Alabama, on 23 November 1953. During his return to Wright-Patterson Air Force Base, via Washington, D.C., he became ill and was hospitalized. (Uncl)

(Uncl) NOTEWORTHY VISITORS:

On 7 July 1953, Mr. (b) (6), Special Assistant for Intelligence to the Secretary of the Air Force, visited the Air Technical Intelligence Center, accompanied by Brigadier General (b) (6), Acting Director of Intelligence, USAF. The purpose

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of Mr. (b) (6) visit was to gain firsthand information on the mission of ATIC, ATIC projects in existence, the progress and status of these projects, and projected plans. (Uncl)

Colonel (b) (6) noted authority on Arctic region, visited ATIC on 21 September 1953, to advise concerning collection possibilities in that region. (~~CONFIDENTIAL~~)  
(unclas)

Dr. (b) (6), President of Flug-Und Fahrzeugwerke Aircraft Company of Switzerland, and Mr. (b) (6), First Secretary of the Swiss Legation in Washington, D. C., visited the Air Technical Intelligence Center on 23 September 1953. The visitors were questioned regarding certain foreign aeronautical developments known to them.

(~~CONFIDENTIAL~~)  
(unclas)

Major General (b) (6), Director of Intelligence, visited the Center on 16 December 1953, where he met with the ATIC staff to review policies and projects, and announced that Brigadier General (b) (6) would not return to ATIC upon his release from Walter Reed Medical Center. He stated that Colonel (b) (6) would continue in command until further notice. (Uncl)

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## MISCELLANEOUS ACTIVITIES

## TROOP COMMANDANT AND HEADQUARTERS SQUADRON SECTION

During the period of 1 July 1953 through 31 December 1953, no change occurred in the functions of the Troop Commandant, but considerable change took place in personnel. The Troop Commandant's Office and the Headquarters Squadron Section underwent a nearly complete turnover in administrative personnel during this six month period. Despite a noticeable decrease in personnel, the section was able to maintain the same workload as in the preceding period.

First Lieutenant (b) (6) took over as Troop Commandant<sup>1</sup> and Commander, Headquarters Squadron Section, on 21 September 1953 replacing First Lieutenant (b) (6)<sup>2</sup>, who was reassigned to the Institute of Technology with duty station at the University of Pennsylvania at Philadelphia.

Although the section was understaffed in the Orderly Room by the end of December 1953 with three airmen positions open, the prospects looked very good for the section to be completely manned by the end of January 1954.

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<sup>1</sup>  
1125th USAF FAG (ATIC): PAH 42, 17 September 1953

<sup>2</sup>  
1125th USAF FAG (ATIC): SO 117, 20 August 1953

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On 10 November 1953, the Orderly Room was moved out of the Center to the Wood City Area. (Uncl)

USAF SECURITY SERVICES DETACHMENT. No change occurred in the organization, functions, and key personnel of this activity from that reported<sup>3</sup> in the preceding edition of the history.

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<sup>3</sup>  
History of the Air Technical Intelligence Center, 1 January - 30 June 1953, p 13.

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**STAFF OFFICES**

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## POLICY AND MANAGEMENT OFFICE

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

At the beginning of the period, the Policy and Management Office consisted of two branches: The Comptroller's Branch and the Personnel Branch. On 14 September 1953, the Comptroller's Branch was discontinued and the two sections of that branch were redesignated branches: Budget<sup>1</sup> and Accounting Branch and Management Analysis Branch. The Personnel Branch continued to be a component of the Policy and Management Office, making a total of three branches.<sup>2</sup>

In conformance with the organizational change, functional statements of the Policy and Management Office and its components were revised and published 14 September 1953 in ATIC Manual 20-1,<sup>3</sup> and are as follows:

Policy and Management Office

"Provides the Commander and his staff with management services and advice. Informs the Commander of the effectiveness of established management and administrative programs and systems and the value of proposed organizational and management plans. Advises on budget requirements, funds expenditures, contract legality and administration,

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<sup>1</sup>  
Hq 1125th USAF FAG (ATIC): GO 11, 14 September 1953

<sup>2</sup>  
See ATIC Chart, 1 November 1953, p 3

<sup>3</sup>  
ATICM 20-1, ATIC Organization, Function and Locator Guide

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operational problems, organizational alignment, functional assignments, manpower distribution and utilization of personnel. Reviews policy from higher authority and advises on implementation within the ATIC. Recommends management policy and practices to improve efficiency and economy of operations." (Uncl)

Budget and Accounting Branch

"Provides budget, accounting, statistical, and cost accounting services. Advises on funds requirements. Develops, presents, and justifies budget estimates and financial plans. Obtains authority to expend and suballot ATIC funds. Funds the requirements of the ATIC for operations and contingencies, including SECRET and CONFIDENTIAL expenditures. Assures the availability and legality of funds to be expended. Maintains records of and computes operational costs. Establishes controls and follow-up procedures to assure efficient utilization of the project control system. Develops and maintains a reports control system. Develops graphic presentations for use in studies and analysis, for budgetary support, and for portrayal of current trends and conditions." (~~CONFIDENTIAL~~)

(unclas)

Management Analysis Branch

"Provides management engineering services to improve the efficiency and economy of operations. Analyzes organizational structure, manpower requirements, methods and procedures.

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Evaluates the effectiveness of existing management and administrative programs and recommends improvements. Plans and installs Center-wide management improvement programs. Advises operating components on management problems concerning position and personnel needs, management of personnel, work simplification, methods and procedures. Distributes manpower allotments." (Uncl)

Personnel Branch

"Provides the Air Technical Intelligence Center with personnel services. Advises divisions and staff offices concerning civilian and military personnel matters. Performs normal military personnel functions other than those assigned to the Troop Commandant. Conducts liaison with Wright-Patterson Air Force Base concerning civilian personnel services provided under tenancy agreement, and augments those services as required." (Uncl)

On 28 October 1953, responsibility for the preparation of the ATIC history was transferred from the Air Intelligence Office to the Policy and Management Office. Lt Colonel (b) (6) was designated the historical officer.

On 1 July 1953, the Policy and Management Office was authorized 6 officers, 8 airmen, and 13 civilians, a total of 27. During the

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DF dtd 28 October 1953, from ATI to ATIM

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period, one additional civilian position was authorized, making a total manpower authorization at the end of the period of 6 officers, 8 airmen, and 14 civilians. Personnel strength changed from 4 officers, 9 airmen, and 10 civilians at the beginning of the period to 6 officers, 7 airmen, and 14 civilians at the end of the period.

Because of the reorganization of the office, on 14 September 1953,<sup>5</sup> the following changes occurred in key personnel:

Captain (b) (6) formerly acting chief of the Comptroller's Branch, was made the chief of the Budget and Accounting Branch.

Major (b) (6) Contract Administration Officer, was reassigned from the Comptroller's Branch to the Office of the Chief, Policy and Management Office.

On 27 November 1953, Lt. Colonel (b) (6) was changed from<sup>6</sup> personnel officer to deputy chief of the Policy and Management Office.<sup>7</sup> Major (b) (6) replaced Lt. Colonel (b) (6) as personnel officer.

At the end of the period, key personnel for the Policy and Management Office were:

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<sup>5</sup>  
Hq 1125th USAF FAG (ATIC): GO 11, 14 September 1953

<sup>6</sup>  
Hq 1125th USAF FAG (ATIC): PAM 52, 27 November 1953

<sup>7</sup>  
Ibid.

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Chief	Colonel (b) (6)
Deputy Chief	Lt Colonel (b) (6)
Contract Administration Officer	Major (b) (6)
Chief, Personnel Branch (Personnel Officer)	Major (b) (6)
Chief, Budget and Accounting Branch	Captain (b) (6)

The position of chief of the Management Analysis Branch was vacant.

(Uncl)

## II. ACTIVITIES

### BUDGET AND FISCAL PROGRAMS:

(Uncl) Financial Planning. Financial plans for first half of the fiscal year 1954 were revised quarterly to meet changing requirements so as to stay within the annual budget authorizations and quarterly allotments. Financial plans for contingency expenditures were phased to provide for major commitments during the second quarter, in order to allow sufficient time for negotiation and execution of contracts and special purchases prior to the annual procurement deadline for obligation of current-year funds. In all cases these plans were based upon actual obligations during the first and second quarters and foreseeable requirements for the third and fourth quarters. (Uncl)

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(Uncl) Monthly Report of Funds and Operating Costs. This report was completely revised to include graphical presentations showing status of funds and operating costs by budget project, object class, functional area, manhour utilization, and organizational component. All essential information on ATIC funds was incorporated in one report and funds use shown graphically against a planned program. (Uncl)

(Uncl) Use of Cost Data. Cost data accumulated under the ATIC cost reporting system have been utilized much more extensively and frequently by operating divisions in planning work projects during this period than during the preceding period. This increase in use of cost data is indicative of a growing cost consciousness on the part of both administrative and planning officials, with resulting economy in utilization of funds and manpower. (Uncl)

(Uncl) Status of Funds. The status of funds for the six-month period is as follows:

Contingency Funds - F731

Annual Budget Authorization . . . . .	\$ 2,450,000
Commitments . . . . .	1,932,363
Obligations . . . . .	388,341
Expenditures . . . . .	160,167
Unobligated balance (commitments) . . . . .	517,637

Administration Funds - P481

Annual Budget Authorization . . . . .	\$ 1,751,664
Obligations . . . . .	815,741
Expenditures . . . . .	691,330
Unobligated balance . . . . .	934,923

(~~SECRET~~)  
(uncl)

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(Uncl) REPORTS CONTROL. A reports control system is in the process of being established in the Center. Because of personnel turnover, this project had to be deferred several times since it was started in January 1953. As a result, a resurvey had to be made of current reporting requirements. The resurvey was completed in December 1953. (Uncl)

(Uncl) CONTRACT ADMINISTRATION:

Twenty-seven contracts totaling approximately \$2,000,000 are current. Contracts totaling approximately another million dollars are being negotiated, one of which will extend beyond the current fiscal year.

Lectures on contract matters and procedures have been made to project monitors. Most contractors and several administrative contracting officers in the field had been visited by the end of the period. (Uncl)

(Uncl) PERFORMANCE REQUIREMENTS PROGRAM:

In November a survey was made to determine the effectiveness of the Performance Requirements Program. Questionnaires were sent to all ATIC supervisors, military or civilian, who had civilian employees under their jurisdiction. The questionnaire was designed to obtain supervisory opinion on the value of the program and to determine the use being made of the program by individual supervisors. Although

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analysis of the replies to this questionnaire has not been completed, sufficient data has been compiled to reveal that a majority of the supervisors feel the program has been beneficial and should be continued. (Uncl)

Preliminary analysis of the questionnaires also reveals that civilian supervisors have a better understanding and are making greater use of the program than military supervisors; supervisors find the program more useful for new employees than for older, more experienced employees; the program is more easily applied and is more helpful in the supervision of clerical employees, who require rather close and detailed supervision, than in the supervision of technical and professional employees, who work more or less independently. Those who favored the program agreed that it is an effective tool in improving supervisor-employee relations, in developing efficient employees, and in improving work productivity of individual employees. (Uncl)

Some supervisors reported that they had used the written performance requirements to streamline and simplify work procedures, to adjust workload assignments, and to correct deficiencies in organization within their respective areas. (Uncl)

Some of the other values reported are reduction of break-in time for new employees to about one-half of the time formerly required and lessening of the supervisory load by making unnecessary repeated, oral instructions. (Uncl)

Higher level supervisors reported that they had used the written performance requirements and conference evaluation records to evaluate the quality of lower level supervision and to determine training needs in supervisory responsibility and techniques. A significant number of the supervisors thought the program could be improved by shortening the written requirements and developing more definite and realistic standards for measuring employee performance. (Uncl)

The questionnaire replies revealed that follow-up action to insure the effectiveness of the program had been neglected. Plans are underway to correct this deficiency. The ATIC Performance Requirements Program will be a topic included in the orientation of all new personnel, military or civilian, and special conferences for supervisors will be held prior to each semi-annual performance evaluation conference period.

Extension of the program to include military personnel is now in progress. (Uncl)

(Uncl) SURVEY OF SEPARATED PERSONNEL. This survey continued but there was a noticeable decrease in the percentage of replies received. Information contained in the replies indicated that there had been noticeable improvement in working conditions and personnel policies. The percentage of favorable replies increased substantially. (Uncl)

(Uncl) DEVELOPMENT OF SUPERVISORS AND KEY PERSONNEL. This project progressed steadily, emphasis being mainly on indirect means of conveying to supervisors the responsibilities of supervision and principles

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of management, and closer check by division and staff office chiefs on the supervisors under their jurisdiction. (Uncl)

(Uncl) MONTHLY MEETINGS OF PERSONNEL. Five mass meetings of personnel were held during the period. The purpose of these meetings was mainly inspirational and educational. At one of the meetings the film "We Saw It Happen" was shown and at others, movies and slides taken by the Commander during his European tours. It is felt that general morale was greatly improved by these meetings. (Uncl)

(Uncl) SURVEY AND REAUDIT OF CIVILIAN POSITIONS. Because of the reduction-in-force program, the survey and reaudit of civilian positions was suspended during the period. (Uncl)

(Uncl) REVISED ORGANIZATIONAL CHARTS:

A revised organizational chart for the ATIC was published 15 July 1953. This chart was essentially the same as the one included in the preceding edition of the history. When the next revision of the chart was made, 1 November 1953, the format was changed to that of an organizational directory chart and included the name of the chief and his telephone number for each organizational component shown on the chart. Major organizational changes reflected in the November 1953 chart were:

Change of Comptroller Branch to the Budget and Accounting Branch with the Management Analysis Section being removed and established at branch level. (Uncl)

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<sup>8</sup>  
History of the Air Technical Intelligence Center, 1 January - 30 June 1953

<sup>9</sup>  
See Sec III, "Policy and Management Office" p 16

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Reorganization of the Air Intelligence Office into two branches  
 10  
 instead of four. (Uncl)

Change of title for the Countermeasures Section of the Technical  
 11  
 Analysis Division to Signal Analysis Section. (~~CONFIDENTIAL~~)  
 (uncl)

Combination of the ATI Equipment Section and the Office Equip-  
 ment Section of the Technical Services Division to form the ATI Supply  
 12  
 Section, and the establishment of the Maintenance and Services Section.  
 (Uncl)

(Uncl) ORGANIZATION, FUNCTIONS, AND LOCATOR GUIDE. In addition  
 to the revised organizational charts, an organizational directive,  
 ATICM 20-1, "Organization, Functions, and Locator Guide," was issued  
 20 July 1953. This manual contained a statement of the functions of  
 each segment of the ATIC down through section level, together with  
 the current organizational chart, manpower data, and a symbol and  
 directory sheet. Pages have been revised and issued as organizational  
 changes were made. (Uncl)

ORGANIZATIONAL PLANNING STUDIES:

(Uncl) New Organizational Concept. A completely new organiza-  
 tional concept for the Air Technical Intelligence Center was developed  
 and submitted to the Commander, 23 November 1953. Decision is pending.  
 The new concept, if adopted, will result in major organizational changes  
 and realignment of functions throughout the Center. (Uncl)

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10  
 See Section IV, "Air Intelligence Office" pp 85-86  
 11  
 See Section IV, "Technical Analysis Division" p 58  
 12  
 See Section IV, "Technical Services Division" p 48

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of the bumped employees were separated and one separation is pending; eight were placed within the Center (two at the same grade and six at a lower grade); two were transferred to Headquarters, Air Materiel Command at a lower grade; and two bumping actions were canceled. (Uncl)

(Uncl) Change in Position Structure. During the period, action was taken to establish 71 new civilian positions, cancel 39 old positions, and to reclassify 72 positions. Of this number, 58 establishments, 47 cancellations, and 36 reclassifications were completed by the end of the period. This change in over one-third of the Center's civilian positions was caused by position classification audits, realignment of functions, and shifting workload. (Uncl)

(Uncl) Change in Civilian Personnel. During the period, 49 civilians were separated, 44 were hired in. At the end of the period 19 in-hiring actions were pending. Thirty-one employees were promoted, 23 changed to lower grade, and 34 reassigned with no change in grade. This excessive rate of personnel change made operation extremely difficult. (Uncl)

(Uncl) Military Classification. A team of airmen was sent TDY to the USAF Test Center to accomplish a personnel resources test (AFPRT) for AFSC 20570, Technical Intelligence Technician. This was accomplished in September 1953. After 1 January 1954, this test will be used Air Force-wide as a mandatory prerequisite for awarding of AFSC 20570. (Uncl)

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Classification board procedures were stabilized by obtaining a determination from Headquarters Command that base facilities will be used, with a technical advisor being furnished the Board from this Headquarters. This change has resulted in elimination of the ATIC Classification Board and a marked improvement in classification procedures and quality. (Uncl)

(Uncl) Deactivation of 1126th AISS. Effective 1 July 1953,<sup>13</sup> the 1126th Air Intelligence Services Squadron was deactivated. Personnel of the 1126th AISS (3 officers and 1 airman) were reassigned to Hq 1125th USAF Field Activities Group without change in primary duty or station. (Uncl)

(Uncl) Awards and Decorations. Out of the twenty-one annual performance ratings of Outstanding approved for civilian employees on the Wright-Patterson Air Force Base, five were granted to ATIC employees:

Mrs.  
Mrs.  
Mr.  
Mr.  
Mr.

(b) (6)

In addition to the superior accomplishment pay increases granted concurrently with the "Outstanding" ratings, superior accomplishment pay

<sup>13</sup>

Hq Command, USAF, Bolling AFB, Washington, D. C.: GO 27, 20 April 1953

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increases were granted to two other ATIC employees: Mr. (b) (6) and Mr. (b) (6). Presentation of these awards was made by the Commander at mass meetings of employees. (Uncl)

(Uncl) CENTER SPACE ALLOCATIONS. Throughout the period, changes in the location of offices continued, to provide more working space, better office arrangements, and more convenient locations. (Uncl)



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## ADJUTANT'S OFFICE

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The organization and functions of the Adjutant's Office remained the same as reported in the preceding edition of the history. Plans for reorganization of this office have progressed but have not been finalized and submitted for approval. (Uncl)

Major (b) (6) continued as adjutant until 8 September 1953. Upon Major (b) (6) departure for language school, 1st Lt. (b) (6) was appointed adjutant, pending the arrival of a field grade officer to replace Major (b) (6). On 16 September 1953, W/O (b) (6) reported for duty and was assigned as assistant adjutant. On 2 November 1953, the field grade officer replacement, Major (b) (6) arrived and took over as adjutant. Lt. (b) (6) was reassigned as assistant adjutant and W/O (b) (6) was transferred to the Mail Branch. (Uncl)

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<sup>1</sup>  
History of the Air Technical Intelligence Center, 1 January - 30 June 1953, p. 33

<sup>2</sup>  
Hq 1125th USAF FAG (ATIC): PAM 40, 10 September 1953

<sup>3</sup>  
Hq 1125th USAF FAG (ATIC): PAM 42, 17 September 1953

<sup>4</sup>  
Hq 1125th USAF FAG (ATIC): PAM 49, 2 November 1953

<sup>5</sup>  
Ibid.

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Key personnel at the end of the period consisted of Major (b) (6), adjutant, and 1st Lt. (b) (6), assistant adjutant. (Uncl)

## II. ACTIVITIES

At the beginning of the period the Adjutant's Office was hampered by the lack of space and personnel. During the period, additional space was provided, the office was rearranged, and four vacancies (two civilian and two military) were filled. Although the manpower problem has not been completely solved, noticeable improvement in the operation of the Adjutant's Office has resulted from the acquisition of additional space and personnel. (Uncl)

(Uncl) PUBLICATIONS. A program for review and revision of ATIC administrative publications is now in progress. A six-month review date has been established for each publication to insure publications are kept current. Further refinement is being made in the quantities of ATIC and other publications needed for distribution to ATIC activities. During the period, the Adjutant's Office issued 89 Special Orders affecting 756 individuals, 483 Letter Orders and Travel Orders affecting 629 individuals, 21 General Orders, and 127 Daily Bulletins. (Uncl)

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(Uncl) FORMS MANAGEMENT. The acquisition of a forms analyst has helped considerably in expediting this program. By the end of the period, all local forms had been reviewed, and those no longer current or necessary canceled. A revised forms index was sent to publication, 29 December 1953. (Uncl)

(Uncl) CORRESPONDENCE CONTROL. Policies and procedures for coordination and signature of correspondence have been clarified and instructions have been issued to operating personnel. Further improvement in the control of correspondence has been achieved by transferring the review and processing of outgoing correspondence from the Administrative Branch to the Mail Branch. (Uncl)

(Uncl) RECEIPT AND DISPATCH OF MAIL. Additional space made possible a more efficient arrangement of the mail room. Procedures pertaining to the processing of mail and the duties to be performed by each of the mail room employees have been revamped and clarified. As a result, workload has been expedited and the receipt and dispatch of mail accelerated. (Uncl)

(Uncl) RECORDS ADMINISTRATION:

During the reporting period, the files of the Center were decentralized and filing systems were standardized. Correspondence files which originated during the previous reporting period were removed from the Central File, returned to the authorized offices and suboffices of record, and filed in accordance with the standardized system. (Uncl)

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It is believed that the Air Technical Intelligence Center was one of the first Air Force activities to implement the new Air Force Subjective Classification Filing System. A draft copy of this system, <sup>6</sup> later published in an Air Force manual, was secured and used as a guide for surveying and tentatively classifying existing files and for training the Center's clerical personnel in the classification of file material and the uniform interpretation of file codes. In December the adjutant and the ATIC records officer attended a records conference held by the Mail and Records Management Division, Air Adjutant General's Office, Hq USAF where they obtained additional information and clarification on the provisions of AFM 181-4, as well as on other records management problems. (Uncl)

(Uncl) TOP SECRET AND REGISTERED DOCUMENTS. On 13 July 1953, ATIC Top Secret Control began functioning as a tenant organization operating separately from the Air Materiel Command Top Secret Control Office. The existing Top Secret Officer became the ATIC Top Secret Control Officer with responsibility for the receipt, processing, dispatching, filing, destruction, and control of all TOP SECRET documents received by or originating within the Air Technical Intelligence Center. A complete inventory of all Top Secret, Restricted Data, and

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<sup>6</sup>  
AFM 181-4, "Maintenance of Current Records," 1 September 1953

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registered documents physically located within the branches and sections of the Air Technical Intelligence Center was accomplished in November. On 17 December 1953, responsibility for the receipt, storage, and issuance of Registered Documents classified SECRET and lower was transferred to the Documents Processing Branch of the Technical Services Division. (Uncl)

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## INSPECTOR GENERAL'S OFFICE

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

There was no change in the organization and functions of the Inspector General's Office during the period. Colonel (b) (6)<sup>1</sup> was assigned to duty as inspector general, 10 August 1953, vice Major (b) (6)<sup>2</sup>, who was relieved from duty as acting inspector general and assigned duty as inspector. Colonel (b) (6) returned to the ZI in July 1953 from London, England, where he had been assigned as an Air Technical Liaison Officer (Industrial), in the London Air Attache Office. (Uncl)

## II. ACTIVITIES

(Uncl) ADMINISTRATIVE INSPECTIONS. Administrative Inspections were completed for the following activities: the Documents Service Branch of the Technical Services Division, the Intelligence Office, the Electronics Branch and the Weapons and Industry Branch of the Technical Analysis Division. (Uncl)

(Uncl) PERSONAL CONFERENCES AND INVESTIGATIONS. Eight official complaints were received by the inspector general in personal conferences during the reporting period. After prompt investigation of

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<sup>1</sup>  
Hq 1125th USAF FAG (ATIC): PAM 34, 11 August 1953

<sup>2</sup>  
Ibid.

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each incident, a satisfactory agreement was reached by all concerned. Three administrative investigations were conducted during this period. The recommended actions were accepted and the investigations were brought to satisfactory conclusions. (Uncl)

(Uncl) SECURITY PROGRAM. Security clearances were requested for 96 new personnel entering the Center and security clearances for 126 personnel leaving the Center were canceled during the reporting period. Compliance with Executive Order 10450<sup>3</sup>, which requires a pre-employment National Agency Check to be completed before new personnel can be placed in a sensitive position, retarded somewhat the speed with which security clearances could be obtained. (Uncl)

The security indoctrination program, that was put into effect during the first six months of 1953, has aided in reducing the number of security violations from 15 committed during the preceding period to 7 for the current period. Security violations continue to be caused mainly by carelessness. (Uncl)

Elimination of the security classification of RESTRICTED as of 15 December 1953<sup>4</sup>, necessitated a review of all security information in the RESTRICTED category. The review of RESTRICTED material generated within the Center was 85 per cent complete on 15 December 1953 and within three weeks following, 100 per cent complete. (Uncl)

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<sup>3</sup>  
27 April 1953

<sup>4</sup>  
Executive Order 10501, 5 November 1953

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During the reporting period, interpretations concerning the<sup>5</sup> application to ATIC operation of revised security regulations were disseminated to all ATIC personnel. (Uncl)

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<sup>5</sup>

AFR 205-1, 24 July 1953, and EO 10501, 5 November 1953

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## II. ACTIVITIES

(Uncl) COLLECTION PLANNING. Significant activities related to collection planning during the reporting period are summarized as follows:

(Uncl) Foreign Aircraft Models. The possibilities were explored of utilizing model aircraft and three-dimensional photography for the evaluation of evidence collected in the interrogation of intelligence sources. The project was closed because information furnished by air technical liaison officers (ATLO's) returning from Germany indicated little value in the use of models for interrogation purposes.

~~(CONFIDENTIAL)~~ *unclas*

(Uncl) Soviet Fly-By. Photographic and acoustic coverage of the Soviets' May Day "Fly-By" was accomplished and evaluated. Significant results of this project have been reported through normal channels.

~~(CONFIDENTIAL)~~ *unclas*

Among plans still under development at the end of the reporting period were the following:

(Uncl) Foreign Documents Collection. A plan to unify the collection of foreign language publications originating in Europe, in order to improve coverage and eliminate duplication of collection effort. (Uncl)

(Uncl) US Missions Abroad. A plan to stimulate the flow of additional air technical information through the Mutual Defense Aid Program, North Atlantic Treaty Organization, and Off-Shore Procurement Program. ~~(CONFIDENTIAL)~~ *unclas*

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**TECHNICAL REQUIREMENTS  
DIVISION  
(ATIR)**

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TECHNICAL SERVICES  
DIVISION  
(ATIS)

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## TECHNICAL REQUIREMENTS DIVISION

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The organization, functions and key personnel of the Technical Requirements Division did not change during the period. (Uncl)<sup>1</sup>

On 1 July 1953, this division was authorized 101 officers, 28 airmen, and 49 civilians. During the period, authorizations for officers were cut to 97. Civilian and airmen authorizations remained the same. The division is fairly well staffed with a total of 82 officers, 29 airmen, and 43 civilians assigned. (Uncl)

At the end of the period, key personnel for the Technical Requirements Division were:

Chief

Deputy Chief

Chief, Collection  
Planning Office

Chief, Collection  
Control Branch

Chief, ATL  
Program Branch

(b) (6)

<sup>1</sup>

History of Air Technical Intelligence Center, 1 January - 30 June 1953  
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### III. REQUIREMENTS DIVISION OPERATIONS

The first steps in accomplishing the mission of the Center are the determination of requirements for scientific and air technical intelligence information, and to locate, recommend, and evaluate means of obtaining that information. (Uncl)

The Technical Requirements Division is responsible for these functions, and during the first half of 1955 the Division made considerable progress in developing new sources of information and improving methods of acquisition. (Uncl)

#### (Uncl) INTELLIGENCE SOURCE EXPLOITATION:

#### (CONFIDENTIAL) Domestic Exploitation Program:

HAZ (u) The Center continued to expand and improve its operations under the Domestic Exploitation Program during the first half of 1955. This program is designed to exploit individuals and groups who visit Russia and the satellite countries. ~~(CONFIDENTIAL)~~ (u)

On 18 January 1955 a representative of the Requirements Division of the Center attended a briefing at the Office of Operations, Central Intelligence Agency. This briefing was conducted by Dr. (b) (6) who explained the CIA functions and methods of operation in connection with the exploitation of visitors to the Soviet and satellite areas.

~~(CONFIDENTIAL)~~ (u)

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The Domestic Exploitation Program includes a project for exploiting the groups of U.S. journalists who have toured Russia in the past few months. Requirements have been placed on CIA to furnish technical information obtained by those journalists during their tours. CIA was also requested to select a cooperative editor or publisher of some large U.S. aviation magazine, and arrange for his inclusion in the next group of journalists to visit Russia. Plans were also made to attempt to arrange a visit to areas of the Soviet bloc by a group composed entirely of technical and aviation writers and editors. The success of these plans is dependent upon the ability of such persons to obtain Soviet visas. ~~(S)~~ (U)

On 1 March 1955, a sub-project pertaining to the exploitation of non-Soviet bloc visitors to the U.S. was initiated. Under this program, notifications of visits of foreign nationals are received by the Director of Intelligence prior to the visit. The D/I then forwards these notifications to CIA where requirements are formulated, if practicable, and placed on the facility which the foreign national will visit. It is anticipated that in the near future these notifications will be forwarded to this Center where SRI's will be initiated on visitors of interest and forwarded to CIA for action. Under present arrangements, Reports of Visits of Foreign Nationals are sent to the Center following the visits. These reports are

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uplicated and forwarded to CIA for their information. Arrangements are currently being made whereby copies of these reports will be sent to the Air Attache of the country concerned for use in forming closer relations with knowledgeable foreign scientists and to establish entree into research and development establishments in the country in which he is assigned. ~~(SECRET)~~ (u)

(Uncl) Scientific Meetings and Trade Fairs:

Scientific Meetings and Trade Fairs have been a valuable source of technical information. During the first half of 1955 requirements were placed for coverage of 35 meetings and trade fairs, some of which have already been held and others to be held in the future. Attendance at scientific meetings has resulted in much information on the activities and movements of scientists in specific fields. In March 1955 an unsuccessful attempt was made to induce attendance of leading Soviet scientists at the International Symposium on Electromagnetic Wave Theory which was held at University of Michigan in June 1955. A continued effort will be made to stimulate Soviet attendance at such meetings. At trade fairs, many items of material of Soviet or satellite manufacture were obtained. These fabricated items will be analyzed to determine industrial trends, technical processes, and research and development as it may apply to the air weapons industry.

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Efforts were made to enlist the services of scientists and technicians whose specialties cover the technical fields related to air technical intelligence. The purpose of this plan is to use these selected personnel to travel to foreign areas to acquire specific information. Contracts under this plan were negotiated with three scientists. ~~(S)~~ (u)

Early in June 1955 plans were made to sponsor a visit to the Center by a German scientist, Dr. (b) (6). Dr. (b) (6) is Dean of Mathematics at Darmstadt Institute of Technology, Darmstadt, Germany. A series of conferences were planned in which Dr. (b) (6) will brief selected personnel from ARDC, NACA, National Bureau of Standards, and other agencies on the state of applied mathematics in Europe, USSR, and the Middle East. He will be available for informal discussions on subjects of technical interest to the Center. He is scheduled to arrive at the Center the first week of September 1955. ~~(S)~~ (u)

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(Uncl) REG Program:

The REG (Returnee Exploitation Group) Program continued to be a valuable source of technical intelligence during the first half of 1955. This program was initiated to exploit the hundreds of German scientists and technicians who were taken to Russia or held in East Germany at the end of World War II and later allowed to return to their homes in the West. Many of these returnees had

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done research work for the Soviets, and many others had worked in the Soviet aviation industry or allied fields. ~~(S)~~ (U)

In March 1955 the Center received copies of the REG Installation Folder. This folder was an excellent recapitulation of knowledge gleaned from returning German scientists on the technological advances in the USSR during the period 1946 - 1954. This information is being closely studied by Center analysts for indications of trends and techniques. ~~(S)~~ (U)

Although the REG Program has been an excellent source of technical information in the past, the point of diminishing returns has been reached because of the limited number of possible sources that remain in the USSR and East Germany. This has resulted in a considerable slowing down of activity in the program. ~~(S)~~ (U)

(Uncl) Technical Trip Briefs:

Technical trip briefs are prepared to facilitate collection of intelligence by both official personnel and other persons who travel to areas of technical intelligence interest within the Soviet sphere. For example - The Center may be informed that a reliable and cooperative source plans to make a business trip to such an area. A trip brief outlining matters in which the Center is interested, together with selected targets for observation, is cabled to the appropriate overseas Air Technical Liaison Office where the requirements are imparted to the traveler. ~~(S)~~ (U)

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During the period covered by this report, 17 technical briefs were prepared and forwarded for use. A geographical index of information relating to physical locations and items of technical interest was set up to facilitate the preparation of technical trip briefs. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Fly-By Photography:

Several items of newly developed photographic equipment were sent to the Air Attache at Moscow for use at the Soviet Air Show scheduled for 1 May 1955. These items included a 42-inch lens assembly, an 82-inch lens assembly, and three 50-cm gunstock camera assemblies. It was anticipated that the photography obtained would meet the standard required by the Center for accurate and detailed analysis of Soviet aircraft. The May Day Show was cancelled because of inclement weather. Numerous practice fly-bys were made, however, but the quality of the photographs obtained were not up to standard. This was partly due to improper operating procedure and unfavorable weather. ~~(CONFIDENTIAL)~~ (u)

In past years there has been considerable delay in receiving Soviet Air Show intelligence reports and photographic coverage at the Center. Arrangements have been made with the Director of Intelligence to expedite this flash intelligence material.

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Plans were made for a courier from the Center to arrive in Washington at a time that will coincide with the scheduled arrival of the State Department Couriers from Moscow. ~~(SECRET)~~ (U)

(Uncl) Air Technical Liaison Officer Program:

The Air Technical Liaison Officer Program (ATLO) accounted for a large portion of the raw intelligence received at the Center. Under this program, specially trained personnel are placed at sensitive points throughout the world. Their specific mission is to collect and report air technical intelligence information. Although the ATLOs are under administrative control of the overseas command in which they operate, reports of their collection operations are forwarded to the Director of Intelligence and this Center. They have been trained by the Center, and the Center furnishes them with guidance, requirements, and support. ~~(SECRET)~~ (U)

In the early part of this reporting period the Center initiated a study concerning new concepts of the utilization and functions of ATLOs. The draft of the study has been held pending determination of the effect of the Austrian Peace Treaty on certain recommendations made in the study. In compliance with an oral request by the Director of Intelligence, the Center submitted recommendations on 16 April 1955 for a USAF directive which would preserve the status of the ATLO system pending action on the basic ATLO study. Using those recommendations as a basis, the Director of Intelligence published an Office

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Instruction dated 29 June 1955 entitled "SOP For the Employment and Administration of Air Technical Intelligence Liaison Officers (ATLOs)" (Uncl)

The policy of returning ATLOs to this Center for short periods of TDY during their overseas tours has proved advantageous to both the ATLO and the Center. The ATLO is brought up to date on the latest requirements and developments and the analysts are able to get a more detailed account of projects which are carried out overseas. During this period three ATLOs were returned for debriefing and reorientation. (Uncl)

(Uncl) INTELLIGENCE COLLECTION AIDS:

4A2a (Uncl) Specific Request For Information:

The Center prepares a variety of aids and guidance publications to facilitate technical intelligence collection. Specific Request for Information (SRI) is one type of aid which serves as a specific guidance for collectors in the field. SRIs are requests for specific information which is lacking on a certain subject or for information to supplement or to verify reports previously received. These SRIs are distributed to collectors in the areas most likely to produce the information. (Uncl)

During the first half of 1955 the Center initiated 277 SRIs and at the close of the period, 30 June 1955, there were 287 active SRIs.

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More than 20 of these SRIs were in the guided missile field which has a high priority in the collection of air technical intelligence.

~~(CONFIDENTIAL)~~ (u)

(Uncl) Intelligence Collection Guidance Manuals:

Intelligence Collection Guidance Manuals are an important aid in the collection of air technical intelligence. These manuals prove helpful to the non-technical collector in identifying and reporting significant information in the various technical fields. (Uncl)

In March 1955 the Center completed a guidance manual on aircraft materials.<sup>1</sup> This manual has 149 illustrations, and it provides guidance for collection of information on aircraft, aircraft components and related materials, their applications, processing, and manufacturing techniques. (Uncl)

A guidance manual on fuels, lubricants, and rocket propellants was completed in June 1955.<sup>2</sup> This manual is copiously illustrated and is designed to help the collector in identifying and reporting the various types of petroleum products, processing methods and equipment, and associated transportation and storage facilities. The manual contains a section on nuclear fuels and a section on methods used in sampling petroleum, oils, and lubricants. (Uncl)

1. Air Force Manual 200-16 (ICGM-Aircraft Materials).
2. Air Force Manual 200-18 (ICGM-Fuels, Lubricants, and Rocket Propellants).

A revised appendix to Air Force Manual 200-10 (ICGM-Electronics) was completed in March 1955.<sup>3</sup> This revision added 109 pages of text and 56 new illustrations to Air Force Manual 200-10 to aid collectors in the recognition of radar units and sites. ~~(CONFIDENTIAL)~~ (u)

Four Intelligence Collection Guidance Letters were prepared and forwarded to the Director of Intelligence for dissemination. These letters were prepared on subjects that did not justify publication of a lengthy manual, or were prepared as a temporary measure pending inclusion in a manual. The four subjects covered were: Microwave Facilities (ICGL NR. 12), USSR Development and Application of Heavy Presses (ICGL NR. 101), Identification of Electronic Installations (ICGL NR. 103), Heat Transfer as Applied to Air Weapons Development (ICGL NR. 104). ~~(CONFIDENTIAL)~~ (u)

(Uncl) Russian-English Glossary of Military and Technical Terms.

481 The Center completed the first edition of a Russian-English glossary of technical terms. This glossary is designed as a collection aid and a guide for all intelligence activities. It contains approximately 5500 Russian terms and their English equivalents, covering such subjects as aerodynamics, airframes, power plants, armament, meteorology, photography, and military rank. The glossary was distributed to ZI and overseas intelligence activities, and to numerous other agencies which have a need for it. (Uncl)

3. Air Force Manual 200-10A. (ICGM-Electronics)

(Uncl) INTELLIGENCE TRAINING:

The Requirements Division of the Center has the additional responsibility of selecting and training personnel engaged in technical intelligence collection activities. The Center operates the USAF Technical Intelligence Technician Course. The Officer Course has been on a stand-by basis since September 1954, leaving only one course active in the school. Economically, it is unsound for the Center to operate this one course since the average quarterly student load of 10 airmen requires a high instructor-student ratio. Two officers and 14 airmen were graduated from the Technical Intelligence School during the first half of the year. Since the Officer Course was in a stand-by status, the two officers received training on an informal basis. (Uncl)

4A3 On 31 May 1955 the Center dispatched a letter to the Commander, Air Training Command, proposing the transfer of the USAF Technical Intelligence School to the Training Command. The Training Command provides instruction courses in many technical fields as well as in intelligence and is better equipped to handle training matters and obtain maximum utilization of instructor personnel. The transfer of this school to the Training Command also would further consolidate the Air Force intelligence training program and eliminate a considerable amount of duplicate instruction in basic intelligence currently presented at Sheppard Air Force Base and at this Center. (Uncl)

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Headquarters, Air Training Command forwarded this Center's proposal to the Technical Training Air Force, Gulfport, Mississippi, by 1st indorsement dated 7 June 1955, stating that the proposal seemed feasible and authorized the Technical Training Air Force to communicate direct with ATIC to obtain basic data from which they could base a recommendation to Headquarters, Air Training Command. This proposal is expected to be accepted and transfer effected during the last half of 1955. (Uncl)

4A3 (Uncl) Air Attache Training:

Thirty-three Air Attache officers attended the three-week training program conducted by the Center. The training consisted of specialized briefings on ATIC requirements, and instruction and practice with the following photographic equipment: Leica 35 mm camera, K-20 Aerial camera, the Microfilm camera; the Minox camera and enlarger, and 16 mm Bell & Howell motion picture camera. Actual practice in film developing, print developing, and processing was included in the course. ~~(CONFIDENTIAL)~~ (u)

Seventeen Air Attache airmen received a course of specialized photography training that varied in length from three to eight weeks. The airman course included all of the photo training given the officers plus additional work that will enable the airmen to set up and operate a photographic darkroom. ~~(CONFIDENTIAL)~~ (u)



(Uncl) Photo Training:

A record number of six classes, numbering 67 officers, airmen, and civilians, received photographic training. Instruction consisted of approximately 1837 hours of classroom and practical demonstration exercises. The students included attaches, Air Technical Liaison Office personnel, and airmen technicians assigned to attaches.

(Uncl)

In April 1955 the modification of the Center's training aircraft, a C-47D, was completed by the Aircraft Engineering Branch, Wright Air Development Center. This modification consisted of the installation of two K-17 cameras in vertical camera wells at the aft end of the cargo compartment, and installation of an intervalometer for remote control of the cameras. The purpose of this modification is to train air attaches in the aerial photography portion of their mission. ~~(CONFIDENTIAL)~~ (u)

A K-17C aerial camera mock-up for training purposes was designed and constructed by Center technicians. This training device has proved to be a valuable aid for demonstration purposes and in preparing students for actual air operations training. (Uncl)

4A3 The Photographic Section of the Center produced 9670 negatives and 9077 photographic prints in support of the Center mission.

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An unusually large number of prints were required in May and June 1955 as a result of the material received from the USSR in connection with the Soviet Air Show fly-by rehearsals. ~~(S)~~ (U)

(Uncl) COLLECTION DEVICES:

The Requirements Division made considerable progress in acquiring, improving, and testing special devices to be used by field personnel engaged in collection activities. (Uncl)

(Uncl) Lens/Camera Assemblies for Static Photography. Arrangements were made with representatives of the Hulcher Camera Co. and the Zoomar Corporation for the assembly of a 70-mm camera and an 80-inch lens for test and evaluation by the Center. This equipment was furnished on a loan basis at no expense to the Government. Tests were accomplished and specifications prepared, including changes necessary to make the assembly suitable for collection purposes. One prototype model will be purchased. (Uncl)

(Uncl) General Purpose Long Range Lens/Camera Assemblies. A contract was negotiated with the Wollensak Optical Company for three 50-cm lenses mounted on gunstocks with proper placement of a telescopic sight and triggering device for use with Leica M-3 camera. Acceptance test of these items was performed, and an SOP was prepared covering the use of this equipment. (Uncl)

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(Uncl) Forty-two and Eighty-nine inch Lens/Camera Assemblies.

Design specification were prepared for the construction and calibration of the 42-inch lens/K-24 and 89-inch lens/Foton camera assemblies. After performance tests were made of these assemblies, an SOP was prepared and a limited number of personnel were trained in the operation of the equipment. (Uncl)

(Uncl) Sequence and Motion Picture Cameras. The Hulcher 70-mm sequence camera was placed under a study for possible use in the collection field. It combines a large format size (2 $\frac{1}{2}$  x 2 $\frac{1}{2}$  inches) with a rapid sequence of 5-20 frames per second in a small-size camera, in addition to being reliable and simple to operate. This camera can be a valuable aid in obtaining good photographs of fast, low-flying aircraft. ~~(SECRET)~~ (u)

(Uncl) Infra-Red Devices. A study was initiated on 15 June 1955 to explore the potential of infra-red devices to contribute to the collection of air technical information. This study included a complete program with the goal to provide usable, significant intelligence information for the Technical Analysis Division. Several infra-red devices are under development by the Air Force. They will be carefully examined for possible application to collection operations. ~~(SECRET)~~ (u)

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(Uncl) Sonic and Data Recorders

The Rome Air Development Center started on development of two recorders for this Center. One is a sonic recorder for recording engine sounds and it will be used in connection with the detailed analysis of sound being performed by Melpar, Inc. This analysis yields much engine performance data. The other recorder is a small pocket-size "note-taker" data recorder, which is a refinement of the Minifon and Aurex recorder ideas. It will be approximately the size of a package of king-size cigarettes. Delivery of both items is expected in 1956. ~~(SECRET)~~ (u)

On 25 April 1955 a controlled multi-place fly-by was accomplished in cooperation with the Strategic Air Command in order to obtain recordings. Turboprop recordings were made at Edwards Air Force Base on 23 May 1955. These recordings were obtained for use in basic comparisons. ~~(SECRET)~~ (u)

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EXEMPTION CATEGORY 2  
DECLASSIFY ON 31 DEC 1983

HISTORY OF

AIR TECHNICAL INTELLIGENCE CENTER

1 July 1953 - 31 December 1953

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Prepared by

Policy and Management Office

AIR TECHNICAL INTELLIGENCE CENTER

31 January 1954

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(Uncl) Suspended Studies. Because of the new organizational concept proposal, the organizational studies of the Document Processing Program and the Reorganization of the Training Administration Section, reported in process during the preceding period, were deferred. (Uncl)

PERSONNEL:

(Uncl) Manpower Authorization and Personnel Strength. As of 1 July 1953, the Air Technical Intelligence Center was authorized a total of 634 personnel: 196 officers, 111 airmen, and 327 civilians. There was no change in manpower authorizations during the period.

(~~CONFIDENTIAL~~)  
(unclas)  
Officer strength was maintained at 84 per cent of authorization. USAF-wide RIF action resulted in voluntary release of 18 officers serving on AD involuntarily and 5 released involuntarily by mandatory AF-wide quota. (Uncl)

Airmen strength averaged 102 per cent. Twelve airmen were voluntarily separated under the RIF program. On 31 December 1953, strength was 163 officers and 100 airmen. Orders had been received on 12 airmen replacements to arrive in January 1954. (~~CONFIDENTIAL~~)

(unclas)  
Civilian strength decreased from 307 on 1 July 1953, to 302 on 31 December 1953. At the end of the period, the Center was 25 civilians under strength. (~~CONFIDENTIAL~~)

(Uncl) Reduction-in-Force (Civilian). Although the reduction-in-force (RIF) for civilians did not result in the elimination of any ATIC positions, the Center was affected by 15 bumping actions. Two

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(Uncl) Overseas Mobilization. A mobilization plan for ATIC personnel, at overseas stations, to insure uninterrupted collection and transmission of air technical information in the event of mobilization for war. ~~(CONFIDENTIAL)~~ unclas

(Uncl) Foreign Travel of USAF and Contractor Personnel. A plan to provide for the ATIC's being notified concerning foreign travel of Air Force contractor personnel who may have a potential for the collection of technical intelligence information. An Air Force directive will be proposed to implement this plan. ~~(CONFIDENTIAL)~~ unclas

(Uncl) East German Patent Office. A plan to collect air technical information from the East German Patent Office. ~~(CONFIDENTIAL)~~ unclas

COLLECTION EQUIPMENT:

(Uncl) Minifron Wire Recorder. The ATL Office in Wiesbaden, Germany, purchased and distributed 40 Minifron wire recorders for use in intelligence collection operations in the Air Force and for intelligence training activities in ATIC. ~~(CONFIDENTIAL)~~ unclas

(Uncl) Zoomar Lenses. Three Zoomar lenses, of 80-inch focal length, were purchased and were mounted to Exakta cameras. One of these cameras, so equipped, was sent to the ATL Office in Austria; another was held for future delivery to the same office pending completion of modifications by ATIC; and the third was retained by ATIC for test, evaluation, and training purposes. ~~(CONFIDENTIAL)~~ unclas

(Uncl) Miniature Cameras. In a test program to select the best all-purpose miniature camera for field operations, the Minox camera

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was chosen as the most promising among those examined to date. Five others have been tested thus far: the Robot, the Japanese "cigarette lighter" camera, the Ga-Mi, the "match box" camera, and the "throw-away" camera. ~~(CONFIDENTIAL)~~ UNCLAS

(Uncl) Film. In conjunction with the evaluation of miniature cameras, another test program was carried on for the selection of the best film for use under varying operational conditions. Results of these tests were inconclusive at the end of the reporting period. (Uncl)

PHOTOGRAPHIC MATERIAL RESEARCH:

In carrying out the ATIC's responsibility of maintaining routine surveillance of intelligence photography obtained by other intelligence agencies, the Technical Requirements Division reviewed 212 aerial reconnaissance prints, 159 spot still photography prints, and 89 movie films. In addition, 228 mission-review photo-intelligence reports were reviewed. ~~(CONFIDENTIAL)~~ UNCLAS

Six separate IBM listings of intelligence photography were reviewed. All these listings pertained to the USSR and satellite countries, and included listings of petroleum, electronics, aircraft and related equipment, world-wide science, manufactured items, and machinery products subjects. These listings provided help in locating sources of photographic material. ~~(CONFIDENTIAL)~~ UNCLAS

As sources for intelligence to be obtained through photographic material, the division found that the CIA had the most nearly complete and best organized photographic facility among all of those that were

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studied. The Reconnaissance Branch, D/I (AFOIN-1A2) and the Photo Records and Services Division of the Aeronautical Chart and Information Center also proved to be valuable sources of photographic intelligence. (~~CONFIDENTIAL~~) *Unclass*

(Uncl) FOREIGN EQUIPMENT COLLECTION. During the reporting period, several important items were obtained: (a) major components of a Soviet MIG-15 aircraft; (b) a complete, flyable Czech trainer, the ZLIN-26; and (c) a complete, flyable Soviet YAK-23 fighter-trainer aircraft. (~~SECRET~~) *Unclass*

COLLECTION GUIDANCE. Two new intelligence collection guidance manuals were planned: one on intelligence photography and one on atomic energy. A project was established to cover production of the photography manual; requirements for the publication were prepared in outline form; and the photographic training courses that are offered by Army, Navy and Air Force intelligence schools were reviewed, on visits to such schools, in an effort to discover new equipment and techniques. Tentative plans were approved for production of the manual on atomic energy. (~~CONFIDENTIAL~~) *Unclass*

(Uncl) AIR TECHNICAL LIAISON PROGRAM:

During the reporting period 15 officers, four airmen, and three stenographers began training for overseas assignments in the Air Technical Liaison Program. One officer began training for assignment as a Domestic ATLO. Eight officers, three airmen, and three stenographers departed for overseas duty stations, and two Domestic

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ATLO's left for their duty stations within the United States. Four ATLO's began their training in the Strategic Intelligence School, and one airman and seven officers were sent to language schools. [REDACTED]

Twenty-three officers, seven airmen, one civilian ATI Collection Specialist, and two contractors completed their overseas tours of duty and returned to the United States. Eight personnel returned to the Center for reorientation and interview by the Technical Analysis and the Technical Requirements Divisions. ~~(CONFIDENTIAL)~~ UNCLAS

Air Attaches from Greece, Finland, and India were also interviewed by personnel of the two divisions. ~~(CONFIDENTIAL)~~ UNCLAS

The following chart reflects the status of personnel authorized and assigned to the Air Technical Liaison program at the beginning and end of the period covered by this history:

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A COMPARISON OF ALLOTTED AND ASSIGNED PERSONNEL TO THE  
ATL PROGRAM AS OF 1 JULY 1953 and 31 DECEMBER 1953

	<u>1 JULY 1953</u>						<u>31 DECEMBER 1953</u>					
	<u>TECHNICAL</u>			<u>ADM. STENO &amp; LANG SP.</u>			<u>TECHNICAL</u>			<u>ADM. STENO &amp; LANG SP.</u>		
	<u>AUTH</u>	<u>ASGD</u>	<u>IN TR</u>	<u>AUTH</u>	<u>ASGD</u>	<u>IN TR</u>	<u>AUTH</u>	<u>ASGD</u>	<u>IN TR</u>	<u>AUTH</u>	<u>ASGD</u>	<u>IN TR</u>
AUSTRIA	25	19	1	11	11	0	21	16	0	12	12	0
GERMANY	58	46	12	26	24	0	53	36	10	26	24	1
*JAPAN	2	1	1	0	0	0	2	1	1	0	0	0
JAPAN	9	6	2	3	3	0	8	8	1	2	1	0
*BELGIUM	1	0	1	0	0	0	1	1	0	0	0	0
*ENGLAND	7	7	1	0	0	0	6	5	1	0	0	0
*FRANCE	7	6	2	1	1	0	8	7	1	1	1	0
*ITALY	1	2	0	0	0	0	1	1	0	0	0	0
*SWEDEN	1	1	0	0	0	0	1	1	1	0	0	0
*SWITZERLAND	1	1	0	0	0	0	1	1	0	0	0	0
*TURKEY	4	0	2	0	0	0	4	0	0	0	0	0

\* Officers are under the administrative jurisdiction of the Air Attache Offices and clerical personnel are furnished by the Air Attache Branch

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## TECHNICAL SERVICES DIVISION

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The organization and functions of the Technical Services Division<sup>1</sup> have remained substantially the same throughout the reporting period, with the exception of a revision in the structure of the Materiel Services Branch. On 14 September 1953,<sup>2</sup> the supply, maintenance, and services functions performed by each of the former ATI Equipment and Office Equipment sections were regrouped homogenously to form the ATI Supply Section, and the Maintenance and Services Section. This change centralized supply control and records under one responsible officer, reduced workload by eliminating one memorandum receipt account, and improved both the quantity and quality of maintenance work and services performed by this branch. (Uncl)

Throughout the reporting period the division experienced difficulty in obtaining sufficient personnel, both military and civilian, to fill authorized positions. The major shortage was in the clerical field, where it was practically impossible to fill positions in the GS-2 and GS-3 grades. A base-wide shortage in this type of personnel

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<sup>1</sup> History of the Air Technical Intelligence Center, 1 January - 30 June 1953  
p 50  
<sup>2</sup> Hq 1125th USAF FAG (ATIC): GO 11, 14 September 1953

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indicates that this problem may be present for some time. As of 31 December 1953, the situation, personnel-wise, was as follows:

(Uncl)

	<u>Authorized</u>	<u>Assigned</u>	<u>Percentage of Authorized Strength</u>
Officers	36	32	89 %
Airmen	40	33	82 %
Civilians	118	101	85 %

During the period, the following changes occurred in the division's key personnel: (Uncl)

On 1 July 1953, (b) (6)<sup>3</sup> was assigned as the division's executive officer.

On 19 August 1953, (b) (6)<sup>4</sup> replaced (b) (6) as division chief. (b) (6)

(b) (6)<sup>5</sup> became the deputy chief.

On 15 September 1953, (b) (6)<sup>6</sup> was assigned as the division's administrative officer.

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<sup>3</sup>  
Hq 1125th USAF FAG (ATIC): PAM 32, 23 July 1953

<sup>4</sup>  
Hq 1125th USAF FAG (ATIC): PAM 37, 19 August 1953

<sup>5</sup>  
Ibid

<sup>6</sup>  
Hq 1125th USAF FAG (ATIC): PAM 42, 17 September 1953

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At the end of the period, key personnel for the Technical Services Division were: (Uncl)

Chief (b) (6)

Deputy Chief Lt Colonel  
(b) (6)

Executive Officer Major (b) (6)

Administrative Officer 1st Lieutenant  
(b) (6)

Plans and Operations Officer Major (b) (6)

Chief, Documents Services Branch Major (b) (6)

Chief, Material Services Branch Captain (b) (6)

Chief, ATI Indoctrination Branch Major (b) (6)

## II. ACTIVITIES

### DOCUMENT SERVICES:

(Uncl) Previously Reported Projects and Problems. The index of  
7  
ATIC publications, planned during the previous period, could not be  
accomplished because of personnel shortage. The project to catalogue  
8  
visual aids did not progress for the same reason. The central subject  
9  
and locator file for documents was completed and is functioning

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7 History of the Air Technical Intelligence Center, 1 January - 30 June 1953

8 52

8 Ibid

9 Ibid

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efficiently. The backlog of biographic and facilities cards, reported for the preceding period, has become unimportant since responsibility for the maintenance of a central technical information file is soon to be transferred to the Technical Analysis Division. When the shift occurs, agencies outside the ATIC will be contacted to ascertain if they have any use for these cards. Those not disposed of in this manner will be destroyed. (Uncl)

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History of the Air Technical Intelligence Center, 1 January - 30 June 1953  
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(Uncl) Accomplishments. Production record for document services,  
1 July - 31 December 1953, is as follows: (Uncl)

Documents received and processed	36,227
ATIC Studies and Technical Reports Distributed Out- side the ATIC	17,321
Documents filed in the Center's Repository	40,487
Documents loaned by the Repository to Center Personnel	7,209
Documents furnished "Project Stork" (Batelle Memorial Institute)	10,358
On Automatic Distribution	9,337
Per Special Request	1,021
Documents Screened for Routing	48,291
Obsolete Documents Destroyed	8,277
Subject and Country Locator Cards Prepared and Filed	168,246
Translations Completed	1,679,578 (words)
By ATIC Personnel	519,677 (words)
By Contractor Personnel	1,159,901 (words)
11 Reproduction	1,203,103 (pieces)

11  
Methods used were multilith, microfilm, mimeograph, ditto, addressograph, graphotype, foto-flo, ozalid, and xerography.

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TRAINING AND INDOCTRINATION:

(Uncl) USAF Technical Intelligence School. Fifty-nine persons graduated from this school during the last half of 1953. Eight were<sup>12</sup> graduated as Intelligence Technical Officer, and 51 as Technical<sup>13</sup> Intelligence Technician. In addition, 116 persons were given photographic training. The photographic laboratory processed 12,609 negatives and produced 8,423 prints. The school received a C-125 aircraft for use as a training aid. Another aircraft, an F-84, has been requested but has not been received. (Uncl)

(Uncl) ATLO Training. Arrangements were made for 26 persons to receive training to fit them for assignment as air technical liaison officers (ATLO's). Ten of this number completed their ATLO training during this period. ~~(CONFIDENTIAL)~~ *unc la D*

(Uncl) Indoctrination for Air Attaches. Seven indoctrination sessions were arranged for Air Attache personnel. A total of 33 persons received the Air Attache indoctrination. (Uncl)

(Uncl) Airmen's Information and Education Program. Total attendance was 1,472. (Uncl)

(Uncl) Orientation Program for New Civilians. Eighty-two new personnel were given orientation. Of this number, 43 were assigned to the ATIC Work Pool where they were given additional training in

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<sup>12</sup>  
AFSC 2064  
<sup>13</sup>  
AFSC 20570

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specific job skills while waiting for their security clearance. In addition, eight special orientation programs were arranged for a total of 23 visitors. (Uncl)

(Uncl) Debriefings. Thirty-five Korean returnees were debriefed. <sup>11</sup> (b) (6)

(Uncl) Security Indoctrination. Instruction on security regulations and practices was given to all the new personnel as a part of the orientation program. In addition, 119 security tests were administered and a refresher on orientation was given to the 37 students enrolled, during the period, in the USAF Technical Intelligence School. (Uncl)

MATERIAL SERVICES:

(Uncl) Foreign Equipment. 787 items, totalling 9,039 pounds were received and 559 items issued: 69 to the Technical Analysis Division, 339 to other agencies, and 151 to contractors. Reports were made to the Joint Technical Intelligence Sub-Committee on 711 items. 6,617 photographs were taken for Project 60002 <sup>2</sup> and 2,207 photos were forwarded to the Directorate of Intelligence, Headquarters USAF. ~~(CONFIDENTIAL)~~ unclard

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<sup>11</sup>  
A specialized term meaning to question or interview for the purpose of obtaining intelligence information. ~~(CONFIDENTIAL)~~ unclard

<sup>15</sup>  
~~See page~~

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(Uncl) Plant Maintenance. The relocation of offices within the  
16 Center that occurred during the period caused an increase in the workload of plant maintenance personnel. 233 work orders for minor maintenance were completed by the division's personnel, and 37 orders were placed with the Wright-Patterson Air Force Base's maintenance facility for major alterations and repairs. In addition, 40 work orders were initiated with the Base for communications services and 500 requests for office machine repair. (Uncl)

MISCELLANEOUS:

(Uncl) Testing Difficulties. Difficulty was encountered in the testing of photographic lenses. A camera was devised and assembled, using a large German photo-engraving camera as a test bed. This camera was altered by adding a modified 4 x 5 speed graphic back, thus permitting the testing of lenses at high apertures and shutter speed as high as .001 seconds. Conventional lenses of focal length up to 40 inches, and telephoto lenses of 60 inches focal length can be tested. ~~(S)~~ *Unclass*

(Uncl) Equipment Maintenance Problems. Maintenance of the Leica equipment used by ATIC and ATI field representatives was a problem. As a partial solution to this problem, an airman was

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sent to a 30 day course of instruction in the repair of Leica equipment, given by (b) (6) Incorporated, New York, New York.

~~(S)~~ UNCLAS

(Uncl) Distribution of Photographic Equipment. Distribution of the Heiland Strobosar V flash unit was begun. This unit was especially designed to meet specifications set down by ATIC. In addition, the Kilfitt Reflex Housing with 50mm lens and extension tubes is being distributed to the representatives in the field. This item is to be used in connection with collection of nameplate markings data. ~~(S)~~ UNCLAS

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DIVISION  
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## TECHNICAL ANALYSIS DIVISION

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

During the period, the functions assigned this division remained the same as reported in the preceding edition of the history.<sup>1</sup> Only one change was made in the organizational structure. The Counter-measures Section of the Electronics Branch was redesignated the Signal Analysis Section, 23 September 1953.<sup>2</sup> (Uncl)

The Table of Distribution issued 1 July 1953 authorized 111 civilians, 44 officers, and 8 airmen for the division. This was one civilian and one officer less than allotted the preceding period. (Uncl)

Early in the period, Colonel (b) (6) was assigned to the Center from student status at the Air War College. On 20 July 1953, Colonel (b) (6) was made chief of the Technical Analysis Division, vice Colonel (b) (6) who replaced Lt. Colonel (b) (6) as deputy chief. Lt. Colonel (b) (6), who had been serving in temporary duty status, was made assistant to the division chief and continued in

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1. History of the Air Technical Intelligence Center, 1 January-30 June, 1953, p 50.

2. Hq 1125th USAF FAG (ATIC):GO 12, 23 September 1953.

3. Hq 1125th USAF FAG (ATIC): PAM 31, 20 July 1953.

4. Ibid

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this capacity until he departed this station from temporary duty, 27 July 1953. Major (b) (6)<sup>5</sup> who had been assistant to the division chief, was transferred to the Technical Requirements Division when Lt. Colonel (b) (6) was moved into the assistant's position. (Uncl)

Upon Lt. Colonel (b) (6) departure, Captain (b) (6) of the Armament Section, Weapons and Industry Branch, was detailed to the Technical Analysis Division office as administrative staff officer. On 5 November 1953, Major (b) (6)<sup>6</sup> who had returned to the ZI from the air technical liaison program in Germany, was assigned to the division as administrative staff officer, and Captain (b) (6) was transferred to the ATL Program Branch of the Technical Requirements Division. (Uncl)

At the end of the period, key personnel for the Technical Analysis Division were: (Uncl)

Chief	Colonel (b) (6)
Deputy Chief	Colonel (b) (6)
Administrative Staff Officer	Major (b) (6)
Technical Advisor	Mr. (b) (6)
Advisor for Plans and Operations	Mr. (b) (6)
Acting Chief Aircraft and Propulsion Branch	Major (b) (6)
Acting Chief Weapons and Industry Branch	Mr. (b) (6)
Chief, Electronics Branch	Lt Colonel (b) (6)

<sup>5</sup> Hq 1125th USAF PAC (ATIC): PAM 33, 7 August 1953.

<sup>6</sup> Hq 1125th USAF PAC (ATIC): PAM 49, 5 November 1953.

<sup>7</sup> Hq 1125th USAF PAC (ATIC): PAM 51, 25 November 1953.

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## II. ACTIVITIES

Quantitatively, the figures below summarize project activity for the reporting period. (Uncl)

	Initiated 1 July to 31 December 53	Completed 1 July to 31 December 53	Cancelled 1 July to 31 December 53	Active as of 31 December 53
Aircraft & Propulsion	7	5	2	45
Electronics	2	1	0	24
Weapons and Industry	15	6	0	28

The following ATIC publications and other end products were issued in the cited technical fields during the six months covered: (Uncl)

	Aircraft & Propulsion	Electronics	Weapons & Industry	Total
ATIC Studies	11	1	4	16
Technical Reports	6	1	14	21
Preliminary Reports on Foreign Equipment	0	1	5	6
Air Intelligence Digest Articles	2	1	19	22
Technical Briefs	26	24	150	200
AF 112's	8	0	6	14

A more detailed description of the division's project activity follows:

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(Uncl) STATUS OF THE TECHNOLOGY OF AIRCRAFT METALLURGY IN THE USSR (30022). Work on the six studies and summary by the contractor proceeded at a satisfactory rate, although established deadlines were not met in all cases. Delay was due, primarily, to the unexpectedly large volume of information available and the additional workload imposed on the contractor by this Center. The basic study, "Status of Aircraft Metallurgy in the USSR - Aluminum,"<sup>8</sup> was distributed 26 August 1953, the study on magnesium,<sup>9</sup> 17 September 1953. Studies on titanium and stainless steels were approved by the Director of Intelligence on 9 September 1953 and 30 November 1953 respectively, but have not been published and distributed. ~~SECRET~~ *hmc la 2*

(Uncl) AIRCRAFT RUBBER TECHNOLOGY IN THE USSR (30049). Finalization of the study based on this project has been proceeding at a very slow pace at the contractor's activity. Cut-off date for acquisition of further information to be used in the study was established as 1 January 1953, and the report has been in collation, interpretation, and editorial phases since that date. Revised due date for receipt of contractor's report, 15 October 1953, has expired, and oral follow-up indicated probable receipt of the information early in calendar year 1954. In the meantime, however, a special technical report resulting from analysis of rubber seals from MIG-15 aircraft has been produced by the contractor for this Center. This, together with previously published reports, contains

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valuable data which will be reflected in the final basic study. ~~(S)~~

~~SECRET~~ *uncl*

(Uncl) STATUS OF SOVIET SYNTHETIC RESINS AS APPLIED TO AIRCRAFT  
(30046). The basic study on plastics,<sup>10</sup> was received from the contractor on 30 October 1953. Necessary revisions were accomplished and a proof copy forwarded for internal ATIC coordination on 30 December 1953.

(Uncl) STATUS OF SOVIET CERAMICS AS APPLIED TO AIRCRAFT (30045)  
The distribution of the study, "Status of Ceramic Technology in the USSR",<sup>11</sup> fulfilled the requirements of this project. The project was closed on 24 November 1953. (Uncl)

(Uncl) STATUS OF THE TECHNOLOGY OF AIRCRAFT AND GUIDED MISSILE INSTRUMENTATION IN THE USSR, ITS SATELLITES AND OTHER COUNTRIES (30057). As a result of discussions with the contractor on 2 September 1953, it was decided that the contractor would produce a report by 1 December 1954 covering the research and development capabilities of the USSR in instrumentation. A study on the USSR Satellites is scheduled for completion on 1 July 1955, and one on the NATO bloc countries between 1 January and 1 July 1955. These dates advance considerably the deadlines previously established by this Center for receipt of the contractor's reports. The contractor's personnel visited domestic manufacturing facilities in Boston, Massachusetts; Chicago, Illinois; Downey, California; and Minneapolis, Minnesota, to obtain information on domestic processes, facilities,

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<sup>10</sup> ATIC STUDY 102-AE-52/7-34

<sup>11</sup> ATIC STUDY 102-AE-52/6-34

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and problems for use in evaluating Soviet technical capabilities. ~~(S)~~

~~(S)~~ *unclas*

(Uncl) EVALUATION OF SOVIET AIRCRAFT WEAPONS (30025). Four ATIC technical reports were distributed on 14 August 1953 in fulfillment of this project. These reports based on analyses performed by Armour Research Foundation, Chicago, Illinois, on the 7.62-mm SHKAS,<sup>12</sup> the 12.7-mm BEREZINA,<sup>13</sup> the 20-mm SHVAK,<sup>14</sup> and the 23-mm VYA guns.<sup>15</sup> The project was closed on 26 August 1953. ~~(S)~~ *unclas*

(Uncl) SOVIET CAPABILITIES IN AIRCRAFT INSTRUMENT MANUFACTURING (30050). Copies of the sub-contractor's reports on evaluation of Russian flight indicators and an altitude gyro have been received and will be used by the main contractor in preparing the overall report. The date for distribution of this study had to be extended because of the workload imposed on the contractor's editorial department. A date for receipt of a coordination copy of the study has been re-established for 15 February 1954. ~~(S)~~ *unclas*

(Uncl) MATERIALS AND METHODS ANALYSIS OF SOVIET 23-mm NS AUTOMATIC AIRCRAFT GUN (30054). An ATIC technical report, "Metallurgical and Methods Study of Selected Components of the Soviet 23-mm NS Aircraft Gun,"<sup>16</sup>

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- 12 TR-AE-8
  - 13 TR-AE-9
  - 14 TR-AE-10
  - 15 TR-AE-11
  - 16 TR-AE-16

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was distributed 26 August 1953. This fulfilled the requirements of the project, which was closed 23 September 1953. ~~(CONFIDENTIAL)~~ *Unclass*

(Unc1) CHARACTERISTICS AND PERFORMANCE OF THE SOVIET 23-mm NR AUTOMATIC AIRCRAFT GUN (30061). This project was delayed by difficulties not foreseen at time of initiation. A more extensive scaling of photographs had to be made. The acquisition of a modified version of the 23-mm NR gun and a British report on its performance and characteristics made necessary considerable revision and expansion of the ATIC report. The results of tests made by the Naval Gun Factory on this weapon will also be used in the preparation of ATIC Technical Report TR-AE-34, to be distributed in March 1954. ~~(CONFIDENTIAL)~~ *Unclass*

(Unc1) INVESTIGATION OF FOREIGN FIRE CONTROL EQUIPMENT (30037). A preliminary report based on intelligence reports and a brief examination of the MIG-15 fire control system was received from the contractor on 16 October 1953. It will be supplemented by test data obtained from an intact system transported to the contractor on 22 October 1953. The contractor has promised to furnish the complete report on the MIG-15 fire control system in late February 1954. ~~(CONFIDENTIAL)~~ *Unclass*

*Unclass* ~~(CONFIDENTIAL)~~ SPECIAL STUDY OF USSR AIRCRAFT FOR ESCAPE AND EVASION BULLETIN (10135):

Of the two remaining pilot's operating manuals on USSR aircraft to be prepared, the "IL-10 Pilot's Operating Manual,"<sup>17</sup> has been completed and sent for reproduction.

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<sup>17</sup>  
TR-AE-42

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Work on the MIG-15 manual was temporarily suspended during this period because of the acquisition of higher priority equipment requiring the project monitor's undivided attention. Resumption of work on this manual has been scheduled for 1 February 1954.

The project monitor visited Headquarters, Strategic Air Command, Omaha, Nebraska, to discuss the Center's participation in the overall program in relation to SAC requirements for the information.

~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) SOVIET AIRCREW EQUIPMENT (30060). The study, "Capability of Soviet Aircrew Equipment for Long Range Bomber Operations,"<sup>18</sup> was completed in rough draft format in December 1953. The project is progressing according to schedule. ~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) MATERIALS APPLICATION IN SOVIET AIRFRAMES AND ENGINES (30055). A Call Letter was initiated 24 September 1953 against AF Contract 33(600)-23806, Supplemental Agreement #1, with Cornell Aeronautical Laboratory, Buffalo, N. Y., to compute gross input materials requirements to manufacture certain types of Soviet airframes and engines. In the interim, a table showing revised AMPR weights of twelve Soviet aircraft was forwarded to the Deputy Director for Targets, Directorate of Intelligence, on 14 October 1953 as partial fulfillment of the requirements of this project. ~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) STATUS OF THE NUCLEAR ENERGY PROGRAM IN THE USSR (30051). Under the revised concept of the contractor's activity in support of

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this Center's nuclear energy program, that is, acquisition only, this project proceeded in a satisfactory manner. ATIC personnel and contractor personnel made several trips to domestic facilities associated with nuclear propulsion of aircraft to become familiar with the program and problems of nuclear propulsion of aircraft in the USA. Discussions were also held with personnel of the Directorate of Intelligence, the Atomic Energy Commission, and the Central Intelligence Agency to establish more clearly the responsibility of this Center for atomic energy intelligence in the field of nuclear propulsion and in certain aspects of atomic weapons. ~~(CONFIDENTIAL)~~ UNCLAS

(Uncl) DEVELOPMENT OF ANALOG RATIOS FOR ANALYSIS OF VACUUM TUBE PRODUCTION FACILITIES (30062). This project was initiated upon written request from Deputy Director for Targets (AFOIN-3), 1 October 1952. The purpose of the study is to develop a technique for estimating the effectiveness of vacuum tube manufacturing facilities. A project proposal sheet (PPS-154) was submitted in May 1953 to authorize contractor work on the project. Copies of the final report will be due from the prime contractor on 15 February 1954. ~~(CONFIDENTIAL)~~ UNCLAS

(Uncl) STATUS OF THE TECHNOLOGY OF AIRCRAFT AND GUIDED MISSILE ELECTRICAL EQUIPMENT IN THE USSR AND OTHER COUNTRIES (30069). This project, initiated 22 July 1953 and approved 10 August 1953, is aimed to determine the state of development in certain foreign nations in aircraft and guided missile electrical equipment, both alternating and direct current systems. A contract proposal (PPS-139) was approved 21 August 1953 for a survey of open literature and foreign technical

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intelligence to be accomplished during the period of 1 July 1953 to 1 January 1954. The contractor is to submit a progress report on 15 April 1954. Future plan of work will be made at that time.

~~(CONFIDENTIAL)~~ *unclass*

(Uncl) ANALYSIS OF SOVIET N-37 AUTOMATIC AIRCRAFT GUN (30076).

Instrumented firing tests and evaluation of the 37-mm N automatic aircraft gun have been performed by the Naval Gun Factory. These results, reported in Technical Report NAVORD 3286, NGF-T-64-53, will form the basis for the ATIC technical report. The estimated date of 24 February 1954 for distribution of the ATIC report will be delayed because of higher priority work. ~~(CONFIDENTIAL)~~ *unclass*

(Uncl) STATUS OF DEVELOPMENT AND CHARACTERISTICS OF SOVIET AND SATELLITE AERIAL PHOTO RECONNAISSANCE EQUIPMENT (30068). The need for determining the status of development and characteristics of Soviet and Satellite aerial photo reconnaissance equipment resulted in initiation of this project on 23 July 1953 and its approval 10 August 1953. A contract proposal (PPS-140) was approved 3 September 1953 for the collecting and processing of overt scientific literature and the processing of intelligence information released by this Center. A cut-off date of 1 October 1953 for acquisition of information and a report date of 15 December 1953 were established. The project progressed satisfactorily and a progress report was received from the contractor on 26 November 1953. A summary report was received from the contractor in December and is being reviewed prior to publication.

~~(CONFIDENTIAL)~~ *unclass*

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(Uncl) STATUS OF TECHNOLOGY OF AIRCRAFT AND GUIDED MISSILE MECHANICAL EQUIPMENT IN THE USSR, ITS SATELLITES AND OTHER COUNTRIES (30066). This project was initiated 22 July 1953 and approved 7 August 1953. Its purpose is to determine the state of development in certain foreign nations in selected fields of aircraft and guided missile mechanical equipment (cabin air conditioning, oxygen, actuating, fuel and anti-icing systems, and in ground handling and servicing equipment). A contract proposal (PPS-141) was approved 26 August 1953 for a survey of the literature of all the countries involved, with major emphasis on USSR and its satellites. The submission of a progress report on the contractor's efforts was approved for 15 April 1954. At that time, definite dates for the submission of specific reports will be established. ~~(CONFIDENTIAL)~~ *unclars*

(Uncl) FOREIGN AIRCRAFT AND GUIDED MISSILE EQUIPMENT DATA (30067). This project was initiated 22 July 1953 and approved 10 August 1953. Its purpose is to complete a series of handbooks containing information on the characteristics and performance of equipment installed in each significant foreign aircraft. The order of priority for the series was determined and the handbook format set up during this period. Work is on a continuing basis. ~~(CONFIDENTIAL)~~ *unclars*

(Uncl) CLASSIFIED PROJECT (20024). Continued effort has been devoted to dividing the various activities of this project into separate projects. Further effort along this line will be desirable for good administrative control of project activity. Progress on the various phases of this overall project is summarized in the

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the following:

(Uncl) Regular Missions. At a conference with representatives from ATIC, SAC, and the Directorate of Intelligence, Headquarters USAF, it was decided that, effective 17 August 1953, Headquarters USAF and ATIC would rely upon SAC for radar order of battle information. This will bring work done under this project into better alignment with the ATIC mission and with the final analysis responsibility of this Center. ~~(SECRET)~~ *Unclass*

(Uncl) Special Missions. Preliminary and final analysis of a group of special ferret missions continued throughout this period. A very high priority has been assigned to this phase and a major part of analytical time has been devoted to it. ~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) Airborne Intercept System. Considerable effort has been devoted to evaluating error sources of a typical S-band intercept and direction finding system. Because of the magnitude of the man hour requirements, Project 20072<sup>19</sup> was initiated to cover this activity.

~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) The Della Rosa System. On the basis of the final report issued by the Federal Telecommunications Laboratories on the four operational flights made during the months of June, July, and August 1952, an evaluation was made not only of the flights and the resulting reports, but of the system itself. The ATIC evaluation was prepared as a

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Directorate of Intelligence, Hq USAF, paper and was discussed at a conference at ATIC with representatives of SAC, TAC, USAFSS, ARDC and Hq USAF. Substantial concurrence with ATIC conclusions was obtained.

(Uncl)

(Uncl) USAFSS Automatic Analysis System. ATIC, with the collaboration of WADC, acted as consultant to USAFSS in the development of machine analysis methods for intercept data. This involved evaluation of a contractor's proposal and several conferences with USAFSS and the contractor. ~~(CONFIDENTIAL)~~ *uncl*

(SECRET) Evaluation of Regular Intercept Data. Inconsistencies and apparent omissions of information continued to be evident in much of the data. An officer of the Directorate of Intelligence, Hq USAF, was briefed regarding this situation prior to his trip overseas for the purpose of determining causes for these inconsistencies and attempting to improve this situation in Europe. ~~(SECRET)~~ *uncl*

(Uncl) Instrumentation of Exploratory Aircraft. During this period, Project 20067 was set up to cover this activity. The accomplishments are detailed separately under this new project. <sup>20</sup> (Uncl)

(Uncl) USAFSS Antenna Systems. The antenna systems being constructed for the USAF Security Service under contract AF 33(600) 15660 have been completed and delivered to USAFSS. All other work in connection with this contract is reported under Project 20062. <sup>21</sup> (Uncl)

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(Uncl) Video Recorder. Procurement action is still being awaited on a flying spot video recorder. The purchase request on this development was initiated during the previous reporting period. (Uncl)

(Uncl) Analogue PRF Indicator. Considerable time has been devoted to the development of a device to provide an instantaneous indication of the pulse recurrence frequency of a short burst of pulses, using one channel of a Brush oscillograph for the indication. This involved chiefly the modification of an AN/APA-64 pulse analyzer. The purpose was to avoid the time-consuming process of making spectrograms for each burst of pulses recorded in connection with the analysis of some special missions presently being made by the ATTIC. Some success has been achieved, but further work will be required. (Uncl)

(Uncl) Direction Finding by Time Measurements. Observation revealed that under certain conditions it is possible to locate the radar with some degree of accuracy by use of this method. The Aeronautical Research Laboratory of WADC has made available the OARAC computer to compute data indicating the area of usefulness of this method. This data is now awaiting preliminary analysis prior to putting it into graphical form. ~~(SECRET)~~ *Unclass*

(Uncl) Digital Pulse Analyzer. Requirements have been developed and discussions with possible contractors have been held on the development of an analyzer which will automatically print PRF, beam width, and scan rate directly from an audio recording of a scanning radar. Although the immediate use would be in connection with the special missions, the device would be generally applicable to signal analysis.

~~(SECRET)~~ *Unclass*

(Uncl) Della Rosa Analysis. A number of conferences on machine analysis of Della Rosa AN/APD-4 recordings have been held with WADC and contractor personnel. The direction of future developments for this type equipment was also discussed during these conference. Although general agreements have been reached regarding future developments, little implementation of the agreements have been achieved to date. (Uncl)

(Uncl) AMC Proposal on IBM System. AMC proposed the implementation of a rather elaborate system for filing and sorting intercept data, using IBM equipment located at several analysis centers. The intended purpose was the reduction of man hours of analysis time. The proposed system had no provisions for data reduction, computation, etc. Neither the Strategic Air Command nor the ATIC were favorably inclined toward the proposal. (Uncl)

(Uncl) Crystal-Video Receiver Installation and Test. In collaboration with WADC, instructions were prepared for the installation of a crystal video intercept receiver developed by (b) (6) and Brown, Inc., in several types of aircraft. The first model of this receiver has been received and is awaiting installation in a WADC aircraft for flight tests to be conducted by WADC and ATIC. ~~(S)~~

~~SECRET~~ UNCLAS

(Uncl) Standardization of Reporting Format. At the request of Hq USAF, considerable time has been spent in working with an activity of the Joint Electronic Warfare Panel to standardize an intercept reporting format. (Uncl)



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(Uncl) PROJECT "BLUE BOOK" (10073). In the past six months, public interest in the subject of unidentified flying objects ("flying saucers") has increased considerably. This increase in interest has been caused, primarily, by the publication of several books and articles on the subject. As a result, there has been an increase in reports of citings and in inquiries concerning these objects. The Center has supplied news to the Office of Public Information, Headquarters USAF, Washington D.C., on a day-to-day basis, and has coordinated on the issue of a "Fact Sheet" to the press. (Uncl)

A constant effort has been made to improve both field-contact relations and the quality of reports on unidentified flying objects (UFO) received from the field. A step forward in this direction was made in December when an agreement was completed with Air Defense Command to have the 4602d AISS take over all field investigations of UFO sightings. A new Air Force regulation, AFR 200-2, has been written and coordinated to implement this agreement. In the future, a greater percentage of sightings should be solved before the report is sent to the ATIC. (Uncl)

An IBM statistical study on UFO sightings has been in progress for the past six months. While the finished report has not been received from the contractor, information on the general findings has been furnished. (Uncl)

These two means have reduced the project's workload and have aided in establishing new and improved methods of reporting and analysis. (Uncl)

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~~(CONFIDENTIAL)~~ *Unclass*

VERY LOW FREQUENCY NAVIGATION AND/OR COMMUNICATIONS IN RUSSIA (20006). This project involves a compilation of all available data on very low frequency installations, with particular stress on German very low frequency equipments in which the Soviets have shown an interest. Under an ATIC contract, (b) (6) of the Technische Hochschule, Munich, Germany, is supplying information on European very low frequency navigation and/or communications installations. This activity was expanded in the past six months as a result of a visit to Prof Schuman by representatives of the ATIC. Details of the expansion constituting a second phase of the project, are covered in a TOP SECRET report.<sup>22</sup> ~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) EVALUATION OF INTERCEPT OPERATIONS (20072):

The initial work on this project will be limited to the collection and evaluation of performance data on the AN/APA-17 direction finder and the related navigation. ~~(CONFIDENTIAL)~~ *Unclass*

The Princeton Analytical Research Group has undertaken the problem of experimental design and statistical evaluation of these operations. (Uncl)

Five flights out of Keesler AFB were made in late July 1953. Preliminary findings indicate that ECM<sup>23</sup> observers do a much better job than anticipated. Navigation was so poor that final conclusions

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An aeronautical rating given to <sup>23</sup> electronics counter measurer officers.

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on separation of errors cannot be made until further flights can be made in which aircraft course and heading are known more precisely.

~~(CONFIDENTIAL)~~ *Unclass*

(Unc1) COUNTERMEASURES CONSULTING SERVICES (20062):

The purpose of this project is to provide the ATIC with consulting service in the planning and implementing of a pilot radio intercept operation aimed at obtaining technical intelligence information on Soviet guided missiles. ~~(SECRET)~~ *Unclass*

The contractor (consultant) will conduct original and exploratory investigations into techniques and requirements for collecting technical intelligence on guided missiles. To date, the contractor has now made two trips to Europe to act as consultant for ATIC and USAFSS.

~~(SECRET)~~ *Unclass*

Studies concerning new methods of collecting guided missile information are well underway, and a meeting is planned for early January 1954 to determine a future program. Tests on sonic effects of missiles have been studied in detail. ~~(SECRET)~~ *Unclass*

In connection with the machine-method-data-analysis-study portion of the project, the contractor activity has been directed to construct an automatic data reducing device for its latest crystal video receiving equipment. ~~(SECRET)~~ *Unclass*

(Unc1) INSTRUMENTATION OF EXPLORATORY TYPE ELECTRONIC RECONNAISSANCE AIRCRAFT B-29 (20067):

The purpose of this project is to assist SMAMA and WADC in the design and fabrication of an exploratory aircraft, in accordance with

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Hq USAF Operation Program OPU-52-11, Vol 1, May 1952. (Uncl)

Several meetings have been held to outline the general plan and discuss detailed equipment locations. At the present time the modification of the aircraft is nearly completed with first flight test a few weeks away. Equipment in the aircraft will give it the unusual capability of both a "ferret" type plus a special flying laboratory for electronic reconnaissance. ATIC has been instrumental in obtaining many special devices for installation in this aircraft. ~~(SECRET)~~ *Unclass*

(Uncl) TECHNICAL ASPECTS OF USSR AIR DEFENSE (20056). This project was initiated 20 November 1952. Each of the three Technical Analysis Division branches have contributed to this study. The study was calculated to show present and future technical details and operational characteristics of Soviet weapons and equipment used in an air defense role. These include aircraft, radar, navigational devices, communications, aircraft weapons, anti-aircraft guns and rockets, and countermeasures devices. (Uncl)

(Uncl) INTELLIGENCE CONTRIBUTIONS FROM STUDIES OF THE UPPER ATMOSPHERE (20063)

The purpose of this project is to analyze and evaluate technical and scientific intelligence data available in research being made in the field of geophysics and other fields on the physical and chemical properties of the earth's atmosphere. ~~(SECRET)~~ *Unclass*

A series of seven reports has been prepared to date which discuss the following: (1) The contractor's activities during his

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European trip, 25 June to 1 August 1953; (2) several types of intelligence contributions that have been developed from studies of the earth's upper atmosphere; (3) possible influences of chemical reactions in the upper atmosphere produced by human activity; (4) some of the results of the contractor's participation in the planning of the program for the International Geophysical Year, 1957-1958; (5) plans for contractor coverage of the meeting of the International Union of Geodesy and Geophysics at Rome, September 1954. ~~(SECRET)~~ *Unclass*

A preliminary study has been made of the problem of varying upper atmospheric properties in order to determine intelligence opportunities and possible new defensive techniques. ~~(SECRET)~~ *Unclass*

(Uncl) SOVIET AND SATELLITE RADAR (20059), COMMUNICATIONS (20060), ELECTRONIC NAVIGATION (20061) HANDBOOKS:

These projects were initiated 9 April 1953 to meet a requirement of the Director of Intelligence, Hq USAF (AFDIN-2), for technical handbooks containing performance characteristics of currently operational Soviet and satellite radar, communications, and navigation equipments. ~~(CONFIDENTIAL)~~ *Unclass*

Project 20059, "Handbook of Soviet and Satellite Radar Equipment," was selected as the first handbook to be prepared by Contract AF33(600)8222, Call Letter No. 9, with the Capehart-Farnsworth Company. Considerable care has been given to the format for this handbook. This handbook, and the others, will be issued in loose-leaf form so that additions and superseding pages can be incorporated from time to time and thus keep the reports on a current basis. ~~(CONFIDENTIAL)~~ *Unclass*

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The communications handbook will be prepared next. Preparation will be started prior to completion of the radar handbook. ~~(CONFIDENTIAL)~~

~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) PREPARATION OF HANDBOOKS OF FOREIGN AIRCRAFT, OTHER THAN SOVIET (10150). The project is 60 percent completed. Two handbooks on Great Britain were completed and the coordination copies of the Scandinavian Handbook were prepared in December 1953. (Uncl)

*Unclass*  
~~(CONFIDENTIAL)~~ MAINTENANCE OF PERFORMANCE AND CHARACTERISTICS HANDBOOK, USSR AIRCRAFT (10128). The annual revision to the USSR handbook was printed and distributed during December 1953. Based on intelligence information available, preliminary characteristics sheets of the Type 36 Soviet Helicopter was submitted to AFOIN during November 1953 for inclusion in the handbook of USSR Aircraft. ~~(CONFIDENTIAL)~~

~~(CONFIDENTIAL)~~ *Unclass*  
*Unclass*  
~~(CONFIDENTIAL)~~ SOVIET ASH-621r ENGINE (10101). The final rough draft copy of TR-AC-25 was received by the Propulsion Section 7 October 1953, approved within the Air Technical Intelligence Center on 23 December 1953. This report was forwarded to the contractor on the 29 December 1953. The contractor will prepare the report for final publication. The reproducible copy of TR-AC-19, "Description Report of the Soviet ASH 62-1r Engine," was received on the 12 October 1953 and was ready for distribution on the 30 December 1953.

~~(CONFIDENTIAL)~~ *Unclass*  
*Unclass*  
~~(CONFIDENTIAL)~~ SOVIET ASH-21 ENGINE (10104). The reproducible copy of TR-AC-21, "Performance Characteristics of the Soviet ASH-21

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Aircraft Engine," received from the contractor, was approved for publication on 21 October 1953. IR-AC-21 was ready for distribution on the 3 December 1953, but distribution was delayed in order to comply with Executive Order 10501 regarding security classification.

~~(CONFIDENTIAL)~~ *Unclass*  
*Unclass* ~~(CONFIDENTIAL)~~

SOVIET VK-107A ENGINE (10105). The dynamometer testing of the Soviet VK-107A engine has been completed by the contractor and the engine returned to the ATIC. The contractor forwarded the rough draft copy of the performance report to the ATIC on 16 December 1953. This report is being reviewed and coordinated within Center. ~~(CONFIDENTIAL)~~ *Unclass*

*Unclass* ~~(CONFIDENTIAL)~~ FOREIGN PROPELLERS-SOVIET (10107). Curtiss Wright Corporation has completed the analysis of the VISH-107c propeller and will forward the rough draft copy of this report to the ATIC for coordination and approval, in the near future. The analysis of the VISH-111-V-20 propeller is still in progress at Curtiss Wright.

~~(CONFIDENTIAL)~~ *Unclass*

*Unclass* ~~(CONFIDENTIAL)~~ SOVIET SURFACE-TO-SURFACE GUIDED MISSILE CAPABILITIES (10139). The study,<sup>24</sup> prepared under this project, was completed in September and has been forwarded through coordination channels for approval. (Uncl)

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<sup>24</sup>

ATIC STUDY 102-AC-53/11-34

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~~(CONFIDENTIAL)~~ *Unclass*

FOREIGN AIRCRAFT ENGINE CHARACTERISTICS SUMMARY

BOOK - USSR (10112). Distribution of the study, "Known Soviet Aircraft Engines (Designation - Characteristics)"<sup>25</sup> was completed on 27 October 1953. The project was terminated on the 2 December 1953.

~~(CONFIDENTIAL)~~ *Unclass*

*Unclass*

ANALYSIS OF THE AVIATION FUEL POTENTIAL IN SOME

USSR CRUDE OILS (10166). ATIC Study No. 102-AC-53/9-34, which was prepared under this project, analyzes the compositions of 86 USSR crude oils. The Director of Intelligence coordination copy was forwarded on 2 September 1953. Distribution of the published study was accomplished on 4 December 1953. The project was terminated on 8 December 1953. ~~(CONFIDENTIAL)~~ *Unclass*

(Uncl) AIRCRAFT GROUP PERFORMANCE METHOD (10092). Collection

of performance data under USAF Mil. Spec. 5011A for six "super-priority" British aircraft has been completed and the information incorporated in "Handbook of British Aircraft." The super-priority aircraft mentioned are the Swift, the Hunter, and the Javelin fighters and the Valiant, the Victor, and the Vulcan bombers. ~~(CONFIDENTIAL)~~ *Unclass*

*Unclass* ~~(CONFIDENTIAL)~~ ATIC CONTRIBUTION TO HIS ON POLAND AND HUNGARY (10175):

Poland. Contributions to Section 71 and 76 were forwarded to the Director of Intelligence during September 1953. Contribution to Section 72 in December 1953.

<sup>25</sup>

ATIC STUDY 102-AC-53/3-34

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~~(SECRET)~~ *unclas* Hungary. Contributions to Sections 70, 71, 72 and 76 were forwarded to the Director of Intelligence during December 1953.

~~(SECRET)~~ *unclas*  
~~(CONFIDENTIAL)~~ *unclas* ANALYSIS OF TYPE-31 AIRCRAFT (SOVIET BOMBER)

(10160). ATIC study "Analysis of Type-31 Aircraft,"<sup>26</sup> has been re-written incorporating revised performance data based on latest indications of the status of this aircraft. This study was approved by the Air Technical Intelligence Center and forwarded to the Directorate of Intelligence, USAF, during December 1953. ~~(CONFIDENTIAL)~~ *unclas*

*unclas* ~~(SECRET)~~ YAK-23 (TYPE-28) SOVIET FIGHTER (10178). A complete flight test program was conducted on the YAK-23 during November 1953. A comprehensive report on this aircraft, including the flight test program, is currently in preparation for publication during early 1954. ~~(SECRET)~~ *unclas*

*unclas* ~~(CONFIDENTIAL)~~ TYPE-38 SOVIET FIGHTER (10180). Preliminary evaluation of data submitted on this aircraft reveals it to be a derivative of the MIG-15. A report on this aircraft is being prepared and will be published in early 1954. ~~(SECRET)~~ *unclas*

(Uncl) MIG-15 SOVIET FIGHTER (10181). During the latter part of September 1953, a flight test program was conducted at Kadena Air Base, Okinawa, by Wright Air Development Center and Air Technical Intelligence Center personnel. All information thus far gathered regarding this aircraft is being incorporated into one over-all ATIC study. ~~(SECRET)~~ *unclas*

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*unclass*  
~~(CONFIDENTIAL)~~

SOVIET SURFACE-TO-AIR GUIDED MISSILES (10182).

This project was initiated in November 1953 to evaluate Soviet activity directed toward the development of guided missiles of the surface-to-air type, and to estimate the Soviet capabilities to develop guided missiles of this type. ~~(SECRET)~~ *unclass*

*unclass*

~~(CONFIDENTIAL)~~

SOVIET AIRCRAFT FUELS AND LUBRICANTS SAMPLE

ANALYSIS REPORT (10095). ATIC Study No. 102-AC-53/14-34 which is being prepared under this project, will present an intelligence evaluation of all significant fuels and lubricants samples received and analyzed since January 1952 to January 1954. The rough draft of the study will be submitted thru coordination channels for approval on or about 12 January 1954. ~~(SECRET)~~ *unclass*

*unclass*

~~(CONFIDENTIAL)~~

A STUDY OF SOME CHEMICAL COMPOUNDS INVESTIGATED

AS ROCKET FUELS BY THE SOVIET UNION (10172). Work on this study is progressing satisfactorily. A contractor has been engaged to calculate the theoretical performance of six significant rocket fuels with white fuming nitric and oxidizer. Completion of this portion of the work is expected by 15 February 1954. ~~(SECRET)~~ *unclass*

*unclass*

~~(CONFIDENTIAL)~~

MAINTENANCE OF KNOWN SOVIET AIRCRAFT ENGINE HAND-

BOOK (10185). This project, initiated and approved on 2 December 1953, will be used to maintain the performance sheets of ATIC Study 102-AC-53/3-34.

*unclass*

~~(CONFIDENTIAL)~~

ANALYSIS OF VK-1 TURBOJET ENGINE PARTS (10168).

Publication and distribution of final report, TR-AC-22, was completed on 21 July 1953. The report covered findings resulting from analysis

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of miscellaneous engine pieces recovered from a VK-1 powered MIG-15 aircraft which crashed in the Soviet Zone of Austria. ~~(SECRET)~~ *Unclass*

*Unclass* ~~(SECRET)~~ DESCRIPTION AND PERFORMANCE OF SOVIET VK-1 TURBOJET ENGINE NO. 14105 (10173). Distribution of report, TR-AC-24, was accomplished on 15 December 1953. The report provides detailed analysis of component construction, and estimated performance data at altitudes up to 50,000 feet. ~~(SECRET)~~ *Unclass*

*Unclass* ~~(SECRET)~~ SOVIET VK-1A TURBOJET ENGINE NO. 26883, Series 6 (10179). Rough draft of report will be submitted for coordination, January 1954. (Uncl.)

*Unclass* ~~(CONFIDENTIAL)~~ SOVIET RD-500 TURBOJET ENGINE (10186). Acquisition phase of the project is nearing completion. The rough draft is scheduled to be completed by 1 March 1954. (Uncl.)

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AIR INTELLIGENCE  
OFFICE  
(ATIX)

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## AIR INTELLIGENCE OFFICE

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Air Intelligence Office was reorganized in October 1953,<sup>1</sup> in an effort to streamline the office and provide for a realistic approach to the problem of meeting current requirements. These requirements had been altered somewhat by changes in the international situation, mainly the armistice in Korea. This armistice had wiped out simultaneously the principal source of tactical intelligence information and the most urgent need for this information on a continuing basis. However, after the cessation of open hostilities, there remained the requirements for reliable strategic and air technical intelligence. These requirements were given a new and increased emphasis by the changing circumstances in international affairs. (Uncl)

To promote fulfillment of its mission effectively under these changed circumstances, the Air Intelligence Office was reorganized into two branches: the Briefing Branch and the Research and Publications Branch.<sup>2</sup> Three former branches (the Intelligence Survey Branch, the Intelligence Publications Branch, and the Special Intelligence Branch) were consolidated into the new Research and Publications Branch. The

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<sup>1</sup>

Hq 1125th USAF FAG (ATIC): GO 14, 16 October 1953

<sup>2</sup>

Ibid

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former Intelligence Briefing Branch remained the same, except for personnel changes and minor revisions in the designation: Briefing Branch. (Uncl)

Functions of the office as a whole remained substantially the same as during the preceding period.<sup>3</sup> The office was still responsible for contributing to the dissemination of intelligence information, including air technical intelligence information, in the over-all effort of the Air Technical Intelligence Center to discharge its responsibilities to the United States Air Force. The Air Intelligence Office continued to serve also as the A-2 for the Air Materiel Command, under commitments made when the Air Technical Intelligence Center was established as an organization independent of AMC. The dissemination of intelligence information to all using agencies, through the media of oral briefings, periodical publications, and special reports, was continued, with the minor changes that had been dictated by the changed circumstances in the international scene. (Uncl)

With the reorganization of the Air Intelligence Office, came the physical move of the Briefing Branch from the Air Room in Building 262, (Hq. Air Materiel Command) to the Center, (Building 263). Even after the establishment of the Air Technical Intelligence Center as an organization independent of AMC, the Briefing Branch had stayed in the Air Room and had retained responsibility for maintenance of this room,

<sup>3</sup>

History of the Air Technical Intelligence Center, 1 January - 30 June, 1953, p. 87

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under the agreement to serve AMC as the A-2. Though the main aspects of this agreement remained in effect, the branch's occupancy of the Air Room was relinquished in the autumn of 1953; responsibility for the maintenance of the Air Room was transferred to AMC; and the Briefing Branch was moved in with the rest of the Air Intelligence Office. (Uncl)

At the end of the period, key personnel for the Air Intelligence Office were: Major (b) (6) Chief; (b) (6), Chief, Publications Branch; M/Sgt. (b) (6), Acting Chief, Briefing Branch. (Uncl)

## II. ACTIVITIES

(Uncl) ORAL BRIEFINGS. The pattern of the oral briefing program was revised to give greater emphasis to air technical intelligence and related information of particular interest to the Air Materiel Command, the Wright Air Development Center, and the components of these two organizations. Coverage of tactical intelligence (and even strategic intelligence, except for the strategic implications that are inherent in technical intelligence and related information) was substantially curtailed.<sup>4</sup> Closer liaison was established with the scientific and technical components of the Center, in the effort to devise a program that would better serve the needs of the Air Materiel Command and the Wright Air Development Center. (Uncl)

<sup>4</sup>

However, the limited tactical intelligence emanating from Indochina was covered, and the Briefing Branch continued to maintain preparations for the coverage of tactical intelligence from other areas.

(Uncl) PUBLICATIONS. Daily publication of AIR TECH INTISUM<sup>5</sup> was discontinued, because of the changes in the international situation. Publication was continued of the weekly ATIC BULLETIN, a compilation of air technical intelligence information and related data, for the use of various components of the National Military Establishment, including the Air Materiel Command, the Air Research and Development Command, the Bureau of Aeronautics of the Navy Department, and the Central Intelligence Agency. (Uncl)

(Uncl) ATIC REPORT CLINIC:

A new program, planned in the spring of 1953 and described briefly in the foregoing installment of this history,<sup>6</sup> was put into effect in July,<sup>7</sup> under the title of THE ATIC REPORT CLINIC, for the purpose of "stimulating and directing a continuing, Center-wide effort to insure clarity and general effectiveness in all correspondence, written reports, and oral briefings emanating from this Center."<sup>8</sup> Weekly meetings were held with scientific, technical, and administrative personnel

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<sup>5</sup> A compilation of strategic and tactical intelligence information, with occasional items of particularly timely air technical intelligence information, primarily for the use of AMC and WADC. This publication, issued by the former Intelligence Publications Branch in collaboration with the Briefing Branch, had constituted a condensed summary of material covered in oral briefings for the AMC and WADC Commanders and staff officers.

<sup>6</sup> History of the Air Technical Intelligence Center, 1 January-30 June, 1953, pp 89-90.

<sup>7</sup> Air Technical Intelligence Center Office Instruction, No. 50-2, 23 July 1953.

<sup>8</sup> Ibid.



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of the Center, for the discussion and constructive criticism of written reports and correspondence; and oral briefings, prepared by the Center's scientific and technical personnel (in addition to the briefing program of the Air Intelligence Office) were put through "dry-runs" in an attempt to perfect the briefers' organization of material, and their style, delivery, and stage presence. (Uncl)

The object of this program was, as the foregoing quotation from the implementing Office Instruction indicates, to assist personnel of the Center in their preparation of clear, effective communications, both written and oral; to discover and remedy common defects in speech and writing; and thus to aid the Center as a whole in disseminating its end products in the most effective form possible. (Uncl)

Attendance of Center personnel at the weekly meetings for the discussion of written reports was voluntary. The "dry-runs" of important oral briefings, however, were compulsory. As a result of this distinction between the informal weekly meetings and the "dry-runs" of oral briefings, there was necessarily a relaxation of emphasis on the weekly meetings late in 1953, when a requirement arose for the preparation of extensive programs of briefings for delivery early in 1954. Among the programs in process of preparation at the close of the year were two series of technical briefings by personnel of the Technical Analysis Division, for WADC, and Air Force contractors; a technical briefing for presentation in the Air University, and special briefings scheduled for delivery early in 1954 by personnel of the Briefing Branch. In the effort to assist the speakers in their preparation for these presentations,

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the Air Intelligence Office discontinued the program of weekly discussion meetings during the holiday season. These meetings will be resumed, however, at the first opportunity in 1954. (Uncl)

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# HISTORY OF AIR TECHNICAL INTELLIGENCE CENTER

1 JANUARY 1954 - 30 JUNE 1954



AIR TECHNICAL INTELLIGENCE CENTER  
WRIGHT-PATTERSON AIR FORCE BASE  
OHIO

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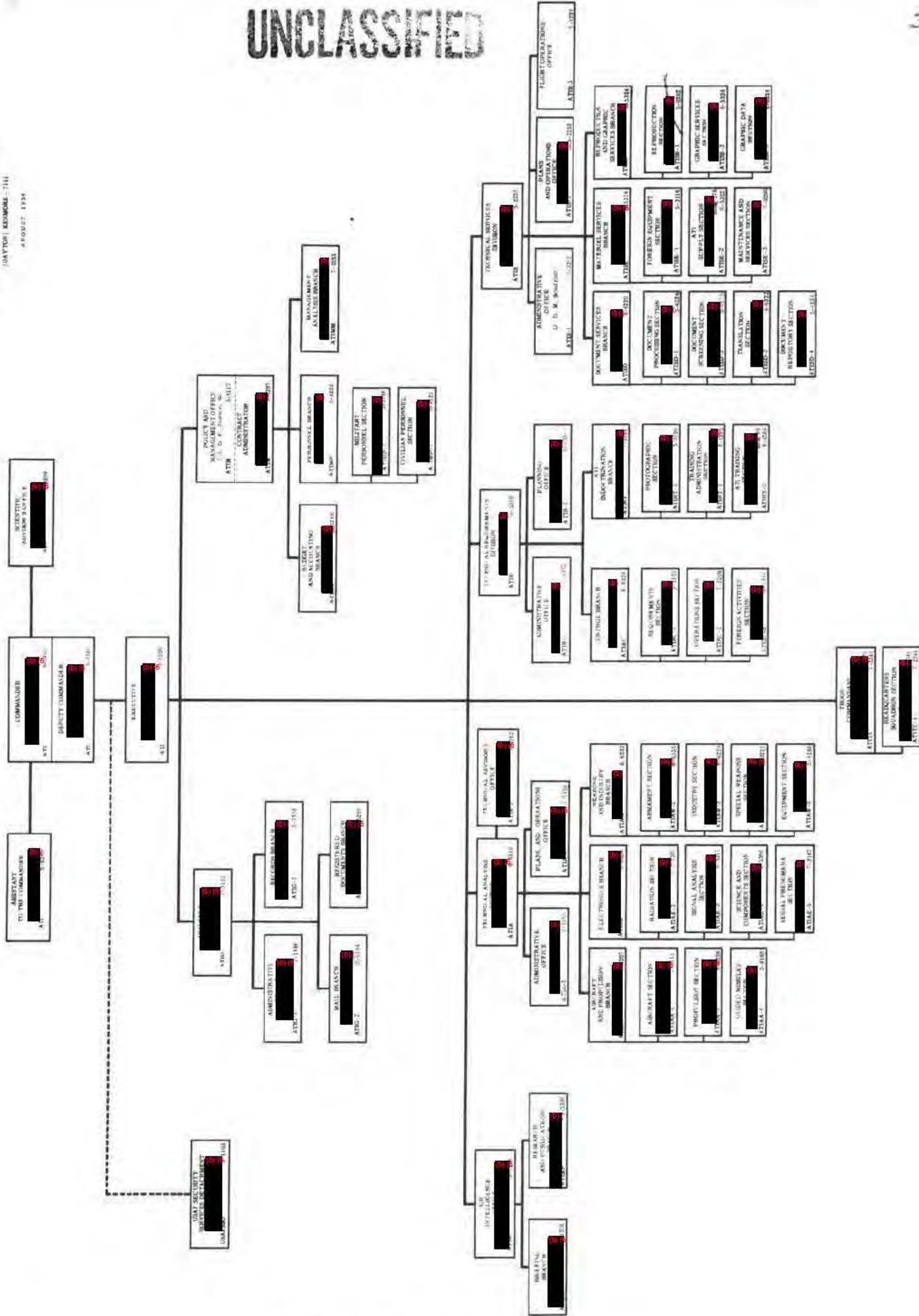
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HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
1 January 1954 - 30 June 1954

Prepared by  
Policy and Management Office  
AIR TECHNICAL INTELLIGENCE CENTER  
~~30 June 1954~~  
31 JULY 1954

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2

FOREWORD  
TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER

For the Period  
1 January 1954 - 30 June 1954

In this edition of the Center History a new Section, V, Periodic Reports, has been added. At the end of this section, an index of ATIC projects mentioned in the text has been included. Minor changes have also been made in the order of components in Section IV, Divisions. The rest of the history remains essentially the same as the preceding edition, in plan and format.

The organizational structure shown in the chart on following page differs in two minor respects from the organizational structure as of 30 June 1954. The Administration Office of the Technical Analysis Division was not established as a separate entity as of that date, but was included as a part of the Plans and Operations Office. The ATLO Processing Section, not shown on the chart, was a part of the Personnel Branch, Policy and Management Office.

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# OFFICE OF THE COMMANDER

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## OFFICE OF THE COMMANDER

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The over-all function of the Office of the Commander is to guide and direct the activities of the Air Technical Intelligence Center (ATIC) in the accomplishment of its mission, which is to provide air technical intelligence that will prevent technological surprise, serve as a sound technical basis for counsel on air preparedness, and support planning and conduct of air operations. This office executes the orders and directives of higher authority. (b) (6) (Unclass)

At the beginning of the period, the Office of the Commander was authorized nine persons: three officers, one airman, and five civilians. Nine persons were assigned: four officers and five civilians. Key personnel were as follows:

Commander - absent because of illness

Brigadier General

(b) (6)

Deputy Commander - acting Commander during General Garland's absence

Colonel

(b) (6)

Executive - acting as Deputy Commander

Colonel

(b) (6)

Administrative Officer - an overage temporarily assigned in lieu of an acting Executive

Captain

(b) (6)

Scientific Advisor

(b) (6)

Civilian Assistant

(b) (6)

(Uncl)



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During the period, the following changes occurred in functions and key personnel:

On 1 January 1954, Brigadier General (b) (6), (b) (3), (b) (7) (C) was transferred to 1072d Hospital Squadron, Headquarters Command, Army Medical Center, Washington, D.C., for subsequent retirement.<sup>1</sup> (b) (6) continued in command.<sup>2</sup> (Uncl)

(b) (6) Hampton was relieved from duty as Administrative Assistant in the Office of the Commander and from assignment to the 1125th USAF FAG (ATIC), and departed on 20 April 1954 for duty in the Office of the Air Attache, London, England.<sup>3</sup> (Uncl)

On 3 May 1954, the Internal Security Branch, formerly a function of the Inspector General's Office, was transferred to the Office of the Commander under jurisdiction of the Executive.<sup>4</sup> This activity is responsible for advising and coordinating on matters pertaining to the internal security of ATIC, formulating and executing the plans, policies and procedures necessary for physically safeguarding the ATIC, and assuring proper security clearance for personnel assigned.

(Uncl)

1

DAF: SO 251, 28 Dec 53.

2

Hq 1125th USAF FAG (ATIC): GO 2, 1 Jan 54.

3

Hq 1125th USAF FAG (ATIC): SO 44, 14 Apr 54.

4

Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54.

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The transfer of this function to the Office of the Commander resulted in an increase of four manpower authorizations: one officer, one airman, and two civilians. The airman position was vacant at the time of the transfer. Key personnel transferred from the former Inspector General's Office were Colonel (b) (6) former Inspector General, assigned temporarily as Executive, and Captain (b) (6) Internal Security Officer, transferred without change in title with the internal security function.<sup>5</sup> (Uncl)

On 16 June 1954, Colonel (b) (6)<sup>6</sup> reported for duty with the 1125th USAF FAG (ATIC) and was assigned to the Office of the Commander as Executive the following day.<sup>7</sup> (Uncl)

Effective 17 June 1954, (b) (6) was relieved from duty as Executive and assigned to duty as Administrative Officer in the Office of the Commander,<sup>8</sup> pending departure for his new assignment at Chanute AFB, Illinois.

One additional civilian allotment, clerical, was authorized as a result of workload survey conducted in January 1954. (Uncl)

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<sup>5</sup> See History of the Inspector General's Office, pg 35 this edition of the ATIC History.

<sup>6</sup> AAC, APO 942, Seattle, Wash: SO 63, 31 Mar 54.

<sup>7</sup> Hq 1125th USAF FAG (ATIC): OO 14, 17 Jun 54.

<sup>8</sup> Hq 1125th USAF FAG (ATIC): PAM 38, 17 Jun 54.

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Manpower authorizations and personnel strength at the end of the period were: authorized, four officers, two airmen, eight civilians, -- a total of 14; assigned, five officers, one airman, seven civilians, -- a total of 13. One civilian and one airman position were vacant and one officer overage was temporarily assigned. All positions were filled according to classification rank or grade with the exception of the Internal Security Officer's position which called for a major but was filled by a captain. Key personnel were as follows:

Commander

Deputy Commander

Executive

Administrative Officer

Internal Security Officer

Scientific Advisor

Civilian Assistant

(b) (6)

(Uncl)

9

Temporary Overage. Position will not be continued when present incumbent leaves.

10

Position calls for rank of major,

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## II. ACTIVITIES, EVENTS, AND PROBLEMS

(Uncl) OVERSEAS VISIT. (b) (6) accompanied by the Administrative Assistant, (b) (6), departed on 7 February 1954, to visit Frankfurt, Munich, and Wiesbaden, Germany; Salzburg, Inns and Vienna, Austria; Ankara, Turkey; Rome, Italy; London, England; and Paris, France, for purposes of familiarization with the various people and installations visited and the operations of the Air Technical Liaison Officer Program of the ATIC in these countries.<sup>11</sup> In the Austrian offices, (b) (6) investigated certain organizational and operational problems which involved ATIC policy. Colonel (b) (6) and (b) (6) returned to duty on 5 March 1954. Colonel (b) (6), (b) (3) (B) was in command during Colonel (b) (6), (b) (3) (B) absence.<sup>12</sup>

(Uncl)

### (Uncl) NOTEWORTHY VISITORS:

On 18 January 1954, a former Commander of the Air Technical Intelligence Center, (b) (6) visited in the Office of the Commander and the Technical Analysis Division to discuss intelligence matters of a classified nature. (Uncl)

Brigadier General (b) (6), Chief, Inspection Services Division, the Inspector General, USAF, visited the Commander, ATIC, on 27 April 1954, and toured the foreign equipment display of the Center. (Uncl)

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<sup>11</sup>

Hq 1125th USAF FAG (ATIC): Ltr Order 92, 3 Feb 54.

<sup>12</sup>

Hq 1125th USAF FAG (ATIC): GO 4, 8 Feb 54.

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(b) (6) Vice-President of the Enskilda Banken of Sweden, and Major (b) (6), (b) (3) (B) of the Royal Swedish Air Force visited the ATIC on 11, 12, and 13 May 1954. The visitors toured the AF Museum and Wright Air Development Center on 12 May. On 13 May, the visitors, accompanied by Colonel (b) (6) visited the National Cash Register Co. in Dayton. (b) (6) and (b) (6) in company of (b) (6) attended the General Motors Wonderama during the afternoon 13 May. (Uncl)

Brigadier General (b) (6) Deputy Director of Intelligence, visited the ATIC on 25 May 1954, for the first time. The purpose of his visit was familiarization with ATIC facilities and activities. (Uncl)

Brigadier General (b) (6) visited the ATIC on 14 May 1954, for the purpose of familiarizing himself with the functions, activities, and operations of the Center, prior to his departure for assignment as Assistant Chief of Staff, Intelligence, at Headquarters, USAFE, Wiesbaden, Germany. (Uncl)

Four members of the aeronautical industry of Germany, Mr. (b) (6), (b) (3) (B) Boie, Dr. (b) (6), (b) (3) (B) (b) (6), and Mr. (b) (6) visited the ATIC and other activities at Wright-Patterson Air Force Base on 30 June 1954 for purpose of general orientation. The German nationals were accompanied by a civilian escort, (b) (6), and a military escort, Major (b) (6), (b) (3) (B) of this Center. (Uncl)

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(Uncl) PROJECT PLANNING AUTHORITY (PPA). At the beginning of this period, the PPA had aligned its goals with those of the Directorate of Intelligence, USAF, had developed a method of operation, and was ready to proceed with problems of ATIC requiring attention on a priority basis. However, during this period, little significant progress was made. Although the basic principle and goals of the PPA have been determined to be sound, the reluctance of its members to seek a solution to the problem at hand by reasonable compromise has stagnated its efforts. The fault of the PPA, as organized at the present time, is a lack of sufficient authority to direct the efforts of the operating divisions effectively. (Uncl)

(Uncl) REORGANIZATION PLAN: Reorganization of the Center is being planned to incorporate the principle of the PPA and provide means for correcting its deficiencies. It is believed this plan will result in better operation and management. (Uncl)

(Uncl) AWARDS. (b) (6) Commander of the Air Materiel Command, presented the Meritorious Civilian Service Award to Mr. (b) (6), (b) (3) (B) at a ceremony held in the Air Room, AMC, on 28 January 1954. This award is the second highest Air Force civilian award, and was granted to Mr. (b) (6), (b) (3) (B) for his thorough knowledge, understanding, and application of the aeronautical, scientific, and technical program which has resulted in the improvement and advancement of the Intelligence program of the United States Air Force. (Uncl)

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## MISCELLANEOUS ACTIVITIES

## TROOP COMMANDANT AND HEADQUARTERS SQUADRON SECTION

The Troop Commandant's Office together with the Headquarters Squadron Section is responsible for the administrative functions concerning all airmen assigned or attached to the 1125th USAF Field Activities Group (ATIC), including maintenance of records, welfare, housing, and supply. The Troop Commandant serves as Commander, Headquarters Squadron Section, which is divided into four sections: administrative, supply, morning report, and airman records. (Uncl)

On 1 January 1954, the Troop Commandant's Office and Headquarters Section were manned as the following figures indicate: eight positions authorized, five persons assigned, three positions vacant. (Uncl)

On 6 May 1954, responsibility for the administration of airman classification was transferred from the Personnel Branch of the Policy and Management Office to the Troop Commandant's Office. Authorization for one position was transferred with this function. (Uncl)

At the end of the period, nine positions were authorized and 11 persons were assigned. The two surplus personnel were awaiting reassignment. (Uncl)

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During the period, three changes were made in AFSC's in conformation with AFM 35-1 and duties of the positions. (Uncl)

1st Lt. (b) (6), (b) (3) (E) was the Troop Commandant throughout the period. (Uncl)

Activities during the period were chiefly concerned with improvement of the Squadron Area and supplemental inspections. (Uncl)

Both office and recreational areas were improved. Funds were obtained from the non-appropriated Welfare Fund, materials and supplies from the Wright-Patterson Air Force Base, while labor was contributed by the airmen themselves. (Uncl)

A program of monthly inspections conducted by ATIC staff officers was inaugurated in January. These inspections are in addition to those conducted by the Wright-Patterson Air Force Base Commander and by the Wright-Patterson Air Force Base Plaque Team. (Uncl)

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USAF SECURITY SERVICES DETACHMENT

This detached activity from Brooks Field, Texas, provides the Air Technical Intelligence Center with expeditious and secure means for receipt, storage, transmission, and distribution of intelligence material not handled through other channels. (Uncl)

On 6 May 1954, Captain (b) (6) replaced Lieutenant (b) (6) (b) (6) as the officer in charge. (b) (6) continued to be the ATIC liaison representative to this activity. (Uncl)

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# STAFF OFFICES



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POLICY AND MANAGEMENT OFFICE

I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Policy and Management Office advises the Commander and staff on management policies, plans, and practices; reports on the efficiency and effectiveness of operation; provides the Center with budget, cost accounting, and other financial services; performs the personnel functions for the Center; controls manpower distribution; plans and recommends organizational structure, placement of functions, and Center-wide standing operating procedures. This office is divided into three branches: Budget and Accounting, Personnel, and Management Analysis. (Uncl)

At the beginning of the period, this office was authorized 14 civilians, 6 officers, and 8 airmen. All except two airman positions were filled. Key personnel were as follows:

Chief, Policy and Management Office  
Deputy Chief (a temporary position)  
Contract Administrator  
Chief, Budget and Accounting Branch  
Chief, Personnel Branch  
Chief, Management Analysis Branch

(b) (6)

Vacant

(Uncl)

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During the period, the function of processing personnel for overseas assignment was transferred from the former ATL Program Branch of the Technical Requirements Division to the Personnel Branch.<sup>1</sup> Two civilians were transferred with the function and the ATLO Processing Section was temporarily established until arrangements could be made to integrate these duties into the regular duties performed by the Military and Civilian Personnel Sections of this branch. By the end of June, this integration had been accomplished, the temporary ATLO Processing Section was scheduled to be dissolved and one civilian position was to be declared surplus. (Uncl)

The work of airman classification was transferred to the Troop Commandant in May. One airman was transferred with the function.<sup>2</sup> (Uncl)

On 21 March 1954, Lt. Colonel (b) (6) joined the staff as Chief of the Management Analysis Branch.<sup>3</sup> Lt. Colonel (b) (6) came to the Air Technical Intelligence Center from Headquarters 1st Air Force (Continental Air Command), Mitchell Air Force Base, New York, where she was Chief of the Reserve Records Division, Directorate of Reserve Administration. (Uncl)

On 5 May 1954, Lt. Colonel (b) (6) was transferred to the University of Massachusetts, Amherst, Massachusetts, as an instructor

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<sup>1</sup> Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54.

<sup>2</sup> Hq 1125th USAF FAG (ATIC): PAM 30, 21 May 54.

<sup>3</sup> Hq 1125th USAF FAG (ATIC): PAM 19, 5 Apr 54.

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in military science for the ROTC, after a six-week period at the Air University, Maxwell AFB, Montgomery, Alabama, taking the academic instructor's course.<sup>4</sup> Upon his departure, the temporary position of Deputy Chief of the Policy and Management Office was abolished. (Uncl)

No further changes occurred in organization, functions, manpower, or key personnel. At the end of the period, authorized manpower consisted of 16 civilians, 6 officers and 7 airmen. Two airman positions were vacant. Key personnel were as follows:

Chief, Policy and Management Office  
Contract Administrator  
Chief, Budget and Accounting Branch  
Chief, Personnel Branch  
Chief, Management Analysis Branch

(b) (6)

(Uncl)

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<sup>4</sup> Hq 1125th USAF FAG (ATIC): SO 38, 1 Apr 54.

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## II. ACTIVITIES, EVENTS AND PROBLEMS

### ATIC FINANCIAL PROGRAMS

#### (Uncl) Budget Estimates, FY 1956

The budget estimates for the fiscal year 1956 submitted for the Air Technical Intelligence Center were as follows:

Project 481, "Command Administration"	\$1,715,950
Project 731, "Contingencies"	2,439,000
Project 443, "Schools and Training"	45,253
Sub-Project 531.10, "PCS Movement of Military Personnel with Major Commands in Zone of Interior"	6,035
	<u>4,206,238</u>

(~~CONFIDENTIAL~~)  
(unclas)  
Project 481 funds, which provide for civilian payroll, travel, and miscellaneous operating expenses, were based on an estimated full time employment of 325 civilians throughout the fiscal year. Estimates of other operating requirements provided for the Air Technical Intelligence Center by Headquarters, Air Materiel Command and by the Wright-Patterson Air Force Base were furnished these two organizations for incorporation in their budget estimates. (~~CONFIDENTIAL~~)

The estimate for Project 731 funds was \$11,000 under the budget funds for FY 1954. (~~CONFIDENTIAL~~)  
(unclas)

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This was the first time that Project 443 and Sub-Project 531.10 funds were included in the ATIC budget estimate. Project 443 funds, which provide for the operation of the USAF Technical Intelligence School by the Air Technical Intelligence Center, will be used for salaries for civilian faculty members, for faculty travel, and for TDY travel of student officers and airmen from participating commands to attend courses at this school. Civilian payroll and faculty travel formerly were covered by Project 481 funds. (Uncl)

Project 560, "Civilian Clothing Allowances for Airmen on Specific Assignments," was deleted from the ATIC budget estimate because this project was discontinued as a controlled allotment, effective 1 July 1954, and will henceforth be paid from an open allotment under Project 511, "Military Personnel Appropriation." (Uncl)

(Uncl) Financial Plans, FY 1954 and 1955. Financial plans for fiscal year 1955 provide for a 3.6 percent increase in Project 481 funds over total obligations for fiscal year 1954. This increase is based on the maintenance of an average civilian strength of 315.9 persons. A reduction of \$461,930 in Project 731 funds was included in the 1955 plan because of rephasing of the Battelle Memorial Institute contract to permit refinancing of services on a fiscal year basis. (CONFIDENTIAL)

(uncl)

~~CONFIDENTIAL~~  
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[REDACTED]

(Uncl) Appropriation Accounting. Preparations have been completed for assuming the function of accounting for 731 funds, 1 July 1954. (Uncl)

(Uncl) Cost Accounting:

Cost accounting services to the divisions were extended by providing an additional ATIC Manhour Utilization Report to the Technical Analysis Division. In this report, manhours are reported through section level according to the mission index of that division. (Uncl)

ATIC Form 510, "Monthly Job Time Report," used by the individuals to report time spent on projects for costing purposes, was revised to provide more columns for projects. The form was further improved by including instructions for reporting on the back of the form, thus eliminating the necessity for referral to a separate instruction. (Uncl)

(Uncl) STATUS OF FUNDS. The status of ATIC funds authorized for fiscal year 1954 is as follows:

Project 731 - Contingencies

Annual Budget Authorization	\$2,450,000
Total Allotment	2,450,000
Total Commitments	2,386,049
Total Obligations	2,283,826
Percent Utilization	93.2

Project 481 - Command Administration

Annual Budget Authorization	\$1,697,007
Total Allotment (21 May 54)	1,697,007
Total Obligations	1,669,156
Percent Utilization	98.4

(Uncl) (unclas)

[REDACTED]

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(Uncl) DISTRIBUTION OF MANPOWER AUTHORIZATIONS

1 Jan 54

<u>Component</u>	<u>Total</u>	<u>Civilian</u>	<u>Officers</u>	<u>Airmen</u>
ATI - Office of the Commander	9	5	3	1
ATLI - Inspector Generals Office	12	4	5	3
ATIG - Adjutant's Office	30	17	2	11
ATIM - Policy and Management Office	28	14	6	8
ATIX - Air Intelligence Office	16	9	2	5
ATIR - Technical Requirements Div	174	49	97	28
ATIA - Technical Analysis Div	163	111	44	8
ATIS - Technical Services Div	194	118	36	40
ATITC - Troop Commandant	8	0	1	7
TOTAL	634	327	196	111

30 Jun 54

ATI - Office of the Commander	13	8	4	1
ATIG - Adjutant's Office	30	17	2	11
ATIM - Policy and Management Office	29	16	6	7
ATIX - Air Intelligence Office	14	7	2	5
ATIR - Technical Requirements Div	220	57	114	49
ATIA - Technical Analysis Div	168	114	44	10
ATIS - Technical Services Div	146	107	19	20
ATITC - Troop Commandant	9	0	1	8
Manpower Pool	5	1	4	0
TOTAL	634	327	196	111

(Uncl)

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(Uncl) CONTRACT ADMINISTRATION. There was no change in the conduct of this activity. Since this activity is now operating on a routine basis, it will be dropped from the ATIC history. (Uncl)

(Uncl) ATIC MANPOWER:

(Uncl) Authorizations. On 1 January 1954, the Air Technical Intelligence Center was authorized a total of 634 personnel: 196 officers, 111 airmen, and 327 civilians. The military grade ceiling was 12 general officers and colonels, 27 lieutenant colonels, 44 majors, 75 captains, 38 lieutenants, 0 warrant officers, 23 master sergeants, 23 technical sergeants, 20 staff sergeants; 21 airmen 1st class, 22 airmen 2nd class, and 2 airmen 3rd class. Civilian positions were 312 graded and 15 wage-board. No change occurred in manpower authorization during the period.<sup>5</sup> (Uncl)

(Uncl) Strength. At the beginning of the period, 163 officers, 102 airmen, and 301 civilians were on the rolls. At the end of the period, 162 officers, 113 airmen, and 299 civilians. Officer strength was maintained at 83 percent of authorization and airman strength at 98 percent. (Uncl)

<sup>5</sup>  
Hq USAF, Dir of Manpower and Organization: Hq Cmd, USAF, Hq 1125th USAF FAG (ATIC), Non-T/O Personnel Authorization Table (AF Form 256), Jan 54, and Hq USAF Dir of Manpower and Organization, Non-T/O Personnel Allotment Voucher (AF HQ Form 0-85), 88/4-15, Air Tech Int Center FE, 14 May 54. A break-down of manpower authorization is tabulated on the following page.

(Uncl) Turnover. During the period, 34 officers left the Center and 31 were processed in; 16 airmen left and 27 reported in; 39 civilians left and 37 were added to the rolls. Reasons for leaving were as follows:

- 5 officers and 8 airmen separated from the service.
- 29 officers and 8 airmen were reassigned to other duty stations.
- 18 civilians resigned from government service.
- 15 civilians transferred out of the ATIC.
- 1 civilian was separated through RIF action.
- 1 civilian was separated for disqualification.
- 4 civilians were placed in leave-without-pay status. (Uncl)

(Uncl) Other Personnel Changes. In addition to the separations and accession actions, 30 civilian employees, 16 officers, and 12 airmen were promoted; 8 civilians were changed to lower grade, and 22 civilians were reassigned without change in grade. (Uncl)

(Uncl) ATIC POSITION STRUCTURE. During the period, 36 new civilian positions were established, 42 were cancelled, 18 were reclassified or changed in grade, and 7 were changed in title without change in grade. Based on the 327 positions authorized, this represents a 31.5 percent change in position structure. (Uncl)

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(Uncl) ATIC POSITION AUDITS. The annual audit of civilian positions, required by law,<sup>6</sup> resulted in 24.4 percent change in grade structure being reported. Of the 340 positions<sup>7</sup> existing at the time of the audits, which extended from 1 July 1953 through 30 June 1954, 26 positions or 7.6 percent were reported as requiring upgrading, 57 positions or 16.8 percent as requiring downgrading, and 257 or 75.6 percent as requiring no change in grade. Grade changes broken down according to general job category are as follows:

	<u>Clerical</u>	<u>Administrative</u>	<u>Technical</u>	<u>Wage Board</u>
Total Number of Positions Audited	185	13	126	16
Upgraded	8 (4.3%)	0 0	18 (14.3%)	0 0
Downgraded	53 (28.6%)	8 (61.5%)	6 (4.8%)	0 0

(Uncl)

## (Uncl) ATIC ORGANIZATION:

(Uncl) Major Components. At the beginning of the period, the Air Technical Intelligence Center was organized into six offices and three divisions, with internal organization for each as shown in the chart included in the previous edition of the History of the Air Technical Intelligence Center.<sup>8</sup> Major components were the Office of the Commander,

<sup>6</sup> Public Law 253, 82nd Congress, Section 1310(d).

<sup>7</sup> Includes authorized overage positions.

<sup>8</sup> ATIC Organizational Directory Chart, 1 November 1953.

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the Troop Commandant, the Adjutant's Office, the Policy and Management Office, the Office of the Inspector General, the Air Intelligence Office, the Technical Analysis Division, the Technical Requirements Division, and the Technical Services Division. During the period, only one change was made in major components. On 3 May 1954, the Inspector General's Office was discontinued.<sup>9</sup> (Uncl)

(Uncl) Changes Within Components:

On 5 February 1954, the ATI Indoctrination Branch was transferred from the Technical Services Division to the Technical Requirements Division.<sup>10</sup> (Uncl)

Effective 15 March 1954, the Reproduction and Graphic Services Section of the Documents Processing Branch, Technical Services Division, was established as a separate branch composed of two sections:<sup>11</sup> Reproduction Section and Graphic Data Section. On this same date, the Flight Operations Office was established as a separate entity in the Technical Services Division and the Documents Repository was made a separate section in the Documents Processing Branch of this same division.<sup>12</sup> (Uncl)

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<sup>9</sup> Hq 1125th USAF FAG (ATIC): GO 13, 3 May 1954.

<sup>10</sup> Hq 1125th USAF FAG (ATIC): GO 3, 5 Feb 1954.

<sup>11</sup> Hq 1125th USAF FAG (ATIC): GO 8, 15 Mar 1954.

<sup>12</sup> Ibid.

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On 3 May 1954, concurrent with discontinuance of the Inspector General's Office, the Internal Security Branch of that office was transferred to the Office of the Commander and made directly responsible to the Executive. <sup>13</sup> (Uncl)

Also on 3 May 1954, the following changes were made in the Technical Requirements Division. The ATL Program Branch was dissolved, a part of its functions being transferred to the Policy and Management Office and the remainder to Technical Requirement's Collection Control Branch which was redesignated "Control Branch." <sup>14</sup> (Uncl)

Concurrent with transfer of functions from the ATL Program Branch, the ATLO Processing Section was established in the Personnel Branch of the Policy and Management Office to absorb the transferred functions. <sup>15</sup> (Uncl)

(Uncl) ATIC ORGANIZATIONAL AND DIRECTORY CHART. One revision of the ATIC Organizational and Directory Chart was published 1 March 1954. Another revision reflecting the organization as of 30 June 1954 is included in this installment of the Center History. (Uncl)

(Uncl) SURVEY OF SEPARATED PERSONNEL. A study of the questionnaires received during the first year of this survey <sup>16</sup> was completed. The

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<sup>13</sup> Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54.

<sup>14</sup> Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54.

<sup>15</sup> Ibid.

<sup>16</sup> Policy and Management Office, "Report of ATIC SURVEY OF Separated Personnel, First Year: January - December 1953."

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survey proved to be a valuable means of determining factors influencing employee morale that needed correction and in revealing progress that was being made in improvement of management and operation of the Air Technical Intelligence Center. It is planned to continue the survey.

(Uncl)

(Uncl) PERFORMANCE REQUIREMENTS PROGRAM. In February, as result of a suggestion submitted by a civilian supervisor, a series of supervisory conferences were held to discuss and evaluate the ATIC performance requirements program. Following the meetings, noticeable improvement was achieved in the standards for job performance developed by supervisors and in the performance evaluation conferences held with individual employees. The civilian supervisor, (b) (6) who suggested these conferences, was granted a cash award through the AF Incentive Awards Program. (Uncl)

(Uncl) ATIC PROJECT CONTROL SYSTEM. A comprehensive study of the project control system that has been in operation for the past three years was completed in April. Recommendations for changes in the present system to include all phases of workload control were submitted to the Commander in May and are under consideration. <sup>17</sup> These recommendations include plans for a change in organizational structure to provide a framework for an effective work-management system. (Uncl)

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Policy and Management Office: "ATIC Work Management System,"  
14 May 1954

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(Uncl) DEVELOPMENT OF SUPERVISORY PERSONNEL. Prior to the 15 May annual rating date for civilian employees, conferences on the AF Performance Rating System, conducted by the Central Civilian Personnel Office, were attended by all ATIC supervisors. (Uncl)

(Uncl) MONTHLY MEETINGS OF PERSONNEL. No meetings were held during this period. (Uncl)

(Uncl) ATIC REPORTS CONTROL SYSTEM. The question of the ATIC reports control system was decided by the Commander in June 1954. Only those reports required of the Center by outside activities on a recurring basis are to be controlled. Reports of this category classed as exempted by the AF reports control system are to be included. The Adjutant's Office is to establish a suspense file for these reports and is to take action to insure prompt reporting. The Adjutant's Office is also to screen incoming requests for new reports to insure that proper reports control procedures have been followed. The Policy and Management Office is to conduct a semi-annual survey of reporting requirements and to take action to reduce the administrative load imposed by reporting, whenever possible. Records initially established for reports control were transferred to the Adjutant's Office for use in maintenance of the system. (Uncl)

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Disposition Form, "ATIC Reports Control System (15 Dec 53)," Cmt 3, ATI to ATIM, thru ATIG, 16 Jun 54.

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## ADJUTANT'S OFFICE

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Adjutant's Office provides administrative services for the Center. This office publishes and distributes official communications and directives from the Commander, issues orders and authorized publications; processes mail and messages; receives, stores, and dispatches Top Secret and Registered Documents; controls correspondence; controls the maintenance and disposition of records; operates the ATIC forms management program; and maintains central files of records for the Office of the Commander. During the period, two new functions were added: maintenance of an authority library and operation of the ATIC reports control system. (Uncl)

The Adjutant's Office is divided into four branches: Administrative, Mail, Records, and Registered Documents. This office is authorized two officers, 11 airmen, and 17 civilians. Three officers, 10 airmen, and 16 civilians are assigned. (Uncl)

Key personnel throughout the period were:

Adjutant

(b) (6)

Assistant Adjutant

(b) (6)

Top Secret Control Officer

1st Lieutenant (b) (6)

Records Officer

(b) (6)

(Uncl)

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Lieutenant (b) (6) is chief of both the Administration Branch and the Registered Documents Branch; CWO Schum supervises the Mail Branch; (b) (6) heads the Records Branch. (Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

### (Uncl) PUBLICATIONS:

(Uncl) Authority Library. Upon deactivation of the Office of the Inspector General,<sup>1</sup> certain phases of the function of maintenance of an authority library were transferred without additional personnel to the Adjutant's Office. This increased workload consisted of requisitioning of Technical Orders and the maintenance of superseded or rescinded administration publications. By 28 May 1954, filing cabinets and contents had been moved from the Inspector General's Office and had been incorporated into the Adjutant's publication files. (Uncl)

(Uncl) Requirements Tables. Requirements tables of AF, ANG, and W-PAFB publications to be furnished ATIC components on automatic distribution were revised and submitted to the Base supplying activity for the period 1 June - 1 September, 1954. Further refinements were made in ATIC requirements to conform with justifiable need for publications of this type, thereby eliminating waste of publications and conserving filing space. (Uncl)

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<sup>1</sup>

Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54

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(Uncl) ATIC Administrative Publications. The procedure of semi-annual review of ATIC administrative publications, initiated during the preceding period,<sup>2</sup> was continued and was for the most part, effective. However, pending policy decisions and organizational changes have hampered somewhat the expeditious revision of some administrative publications. During the period, two bi-monthly revisions to the ATIC publications index were published, 19 April and 18 June, 1954, together with seven new ATIC office instructions, 26 revisions, and one numbered memorandum. Seven non-current office instructions were rescinded. (Uncl)

(Uncl) Other ATIC Publications. During the six-months period, the Adjutant's Office published 84 Special Orders affecting 320 individuals, 530 Letter Orders and Travel Orders affecting 540 persons, 16 General Orders, and 126 Daily Bulletins. (Uncl)

(Uncl) FORMS MANAGEMENT. During the period, 17 new forms were approved and 14 forms were cancelled; 10 were revised and 53 reprinted without revision. (Uncl)

(Uncl) REPORTS CONTROL. Late in June, work was started to establish a suspense file for reports to be controlled.<sup>3</sup> This file had not been completed by the end of the reporting period. (Uncl)

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<sup>2</sup> History of the Air Technical Intelligence Center, 1 July - 31 Dec, 1953, p 32.

<sup>3</sup> See Policy and Management Office History, p 28, this edition.

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(Uncl) MAIL PROCESSING. Incoming mail totaled 33,568 pieces; outgoing mail, 216,621 pieces. These figures include official correspondence and messages, personal mail, and documents. (Uncl)

(Uncl) RECORDS MANAGEMENT:

The Center continued to operate under a decentralized and standardized filing system. Conversion to the AF subject classification system was, for the most part, completed. Disposition schedules required much revision during the period because of changes in organizational structure and transfer of functions between activities. (Uncl)

(Uncl) Records Disposition. At the end of the period, 4,382 cubic feet of records remained, 928 cubic feet having been destroyed during the period. The balance on hand represents 19 cubic feet less than the volume on hand at the beginning of the period. (Uncl)

(Uncl) Retirement Problem. Very few records were retired during the period, chiefly because of the problem of listing Secret and Top Secret material. The large volume of Secret material to be retired imposes an excessive workload, were each piece to be listed separately. Proposal was made to the Headquarters USAF Records Management Officer to solve the problem by binding file folders and listing the folder as a bound document. This proposal was tentatively disapproved but has been referred to Headquarters USAF Security people for final decision. Meanwhile, retirement action has been suspended. (Uncl)

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(Uncl) Contractor Records. The Headquarters USAF Records Management Office has instructed the Center to account for records transferred to and being maintained by one of its prime contractors, <sup>4</sup> who is engaged in establishing a technical intelligence file for the Center's use.<sup>5</sup> Approximately 1300 cubic feet of these records are located at the contractor's site. In February, the ATIC Records Officer inspected these records, and requested the Technical Analysis Division to include them on that division's disposition schedules. This action has not been completed because of numerous difficulties that have arisen. The problem has been referred to the Office of the Commander and is under consideration. (Uncl)

(Uncl) Microfilming Project OIN-1B-54. At the request <sup>6</sup> of the Headquarters USAF Records Management Officer, a survey was made of ATIC microfilming operations. Report of this survey was approved <sup>7</sup> and the operation assigned microfilming project number OIN-1B-54. (Uncl)

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<sup>4</sup> Memo from Hq USAF Records Management Officer, 14 June 1954, subject: "Records Disposition Schedule."

<sup>5</sup> Battelle Memorial Institute, Columbus, Ohio

<sup>6</sup> Cmt #1, R&R, 1 Oct 53, from Hq USAF Records Management Officer, subject: "Survey of Government Microfilming Operations."

<sup>7</sup> R&R, Cmt #7, 30 Apr 54, from Hq USAF Records Management Officer, subject: "Approval of Microfilm Project at ATIC."

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(Uncl) TOP SECRET AND REGISTERED DOCUMENTS. When the Center assumed its own Top Secret control functions, 13 July 1953, the transfer of documents from the ANC Top Secret control was begun. During this period, approximately 3,000 documents were transferred and are being reviewed for downgrading, retirement, and destruction. Inadequacy of storage facilities is presenting a problem. (Uncl)

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## INSPECTOR GENERAL'S OFFICE

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The primary functions of the Inspector General's Office were to inspect activities of ATIC, advising the Commander of the effectiveness and efficiency of Center activities; to hold personal conferences for assigned personnel; to conduct an adequate internal security program; and to conduct investigations and administrative inquiries for the Commander. (Uncl)

The Inspector General's Office was organized into Inspector's Branch, the Internal Security Branch, and the personnel staff of the Inspector General. Manpower authorized was five officers, three airmen, and four civilians. Actual strength for the period, however, was three officers, two airmen, and four civilians. Colonel (b) (6) was the Inspector General; Major (b) (6) Inspector; and Captain (b) (6) Internal Security Officer. (Uncl)

The Inspector General's Office continued with its assigned functions and personnel until 3 May 1954. On this date the office was disbanded.<sup>1</sup> The Internal Security Branch with its functions and personnel were transferred to the Office of the Commander and placed under the jurisdiction of the Executive. The authority library was transferred to the Adjutant's Office. The other elements of the Inspector

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<sup>1</sup>  
Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54

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General's Office were abolished. The Inspector General was assigned temporarily to the Office of the Commander as Executive.<sup>2</sup> (Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

(Uncl) ADMINISTRATIVE INSPECTIONS. Administrative Inspections were completed for the following activities: Aircraft and Propulsion Branch, Technical Analysis Division; Executive Offices of Technical Analysis Division; Collection Control Branch, ATL Program Branch, and ATI Indoctrination Branch, all of Technical Requirements Division. (Uncl)

(Uncl) PERSONAL CONFERENCES AND INVESTIGATIONS. Five official complaints and numerous informal requests for information were disposed of during the period. One formal and four informal investigations were conducted. Three cases were referred to OSI and one to USAF for investigation. (Uncl)

### (Uncl) SECURITY PROGRAM:

Clearances were requested for 89 new employees of the Center. The Base Provost Marshal granted 105 clearances based on previous requests. Three new employees were denied clearance because of derogatory information in their files. Close liaison was maintained with the Base Provost Marshal and OSI to protect ATIC from persons who are abnormal security risks. (Uncl)

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<sup>2</sup>

Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54

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Additional emphasis was placed on the program of monthly indoctrination of Center personnel by Unit Security Officers. Several new or revised office instructions were issued to bring Center operating procedures into line with the revised AFR 205-1. The turnstiles and reception desk at the main entrance of ATIC were rearranged to provide a more orderly flow of traffic during the rush periods and to enhance the appearance of the entrance area. An electric klaxon was installed in Building 263 to provide the receptionist with the means of summoning aid discreetly in the event of attempted forcible entry. The bell button at the entrance to Building 263 was connected to the time clock bell system, making it possible for the night civilian guard to hear the door bell when it rings while he is making periodic checks of the building. (Uncl)

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**AIR INTELLIGENCE  
OFFICE  
(ATIX)**

## THE AIR INTELLIGENCE OFFICE

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The functions of the Air Intelligence Office are to provide intelligence services for the Air Materiel Command, the Wright Air Development Center, and other components of the Department of Defense located at the Wright-Patterson Air Force Base; to prepare and disseminate air technical intelligence digests and similar miscellaneous periodicals; and to conduct the previously established "ATIC Report Clinic" program.<sup>1</sup> (Uncl)

The Air Intelligence Office is organized into two branches: the Research and Publications Branch, which is responsible for the publication of periodicals and special reports, and the Briefing Branch, responsible for the dissemination of intelligence through oral briefings.<sup>2</sup> (Uncl)

Key personnel and their positions at the beginning of the period were:

Chief, Air Intelligence Office	Major (b) (6)
Chief, Research & Publications Branch	Mr. (b) (6)
Acting Chief, Briefing Branch	N/Sgt (b) (6)

<sup>1</sup> History of the Air Technical Intelligence Center, 1 Jul - 30 Jan 54 pp 88-90.

<sup>2</sup> Hq 1125th USAF PAC (ATIC): GO 14, 16 Oct 53.



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Manpower allotment for the Air Intelligence Office calls for 14 personnel: 7 civilian and 7 military. Thirteen persons were assigned at the beginning of the period, 14 at the end. (Uncl)

On 26 January 1954, Lieutenant Colonel (b) (6) was assigned as Chief of the Office, succeeding Major (b) (6), who left on 2 February 1954 to attend the Rhode Island School of Design. Lieutenant Colonel (b) (6) came to the Air Intelligence Office from the position of Chief, Air Technical Liaison Program, Technical Requirements Division. On 17 February 1954, 2nd Lieutenant (b) (6) was assigned to the office of the chief, Air Intelligence Office, where he is now serving as Intelligence Officer and has taken over the duties of deputy chief, Air Intelligence Office. Lieutenant (b) (6) came to the Air Intelligence Office from the Flying Training Air Force where he had been undergoing pilot training. On 1 May 1954, Master Sergeant (b) (6) was transferred to the ATL program for overseas assignment. The position that he had held in the Air Intelligence Office remained vacant until 23 June 1954, when (b) (6) was assigned as chief of the Briefing Branch. (b) (6) came to this assignment from commissioned military service in the USAF. No other changes occurred in functions, organizations, manpower, or key personnel. (Uncl)

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At the end of the period key personnel were:

Chief, Air Intelligence Office

Deputy Chief

Chief, Research and Publications Branch

Chief, Briefing Branch

(b) (6)

(Uncl)

A move of the physical plant early in June to another location within the Center has resulted in better working conditions and improved operation for this office. (Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

The Air Intelligence Office has continued the activities that were in progress at the close of the foregoing reporting period, and has started several new activities. (Uncl)

Activities continued were oral briefings, publication of ATIC Bulletin, and the ATIC Report Clinic.<sup>3</sup> (Uncl)

Four new reports were initiated: a report to the Chief of Staff of the United States Air Force, covering air technical intelligence information and related data of particular significance; a special report for the Assistant Secretary of Defense (R&D); two periodicals, one entitled the "ATIC AMC Briefer," covering information of particular

<sup>3</sup>

History of Air Technical Intelligence Center, 1 Jul 53 - 31 Dec 53, pp 87-89.

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significance to the Air Materiel Command, the other, "ATIC WADC Briefer," of interest to the Wright Air Development Center. The two new periodicals were issued weekly; the reports to the Chief of Staff and the Assistant Secretary of Defense (R&D), whenever issuance was warranted by the receipt and valuation of suitable information. (Uncl)

Conferences were held with the laboratories of the Wright Air Development Center in an effort to clarify WADC's requirements for intelligence information so that particular emphasis could be given to technical intelligence information affecting the missions of the various WADC laboratories. (Uncl)

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**TECHNICAL SERVICES  
DIVISION  
(ATIS)**

## TECHNICAL SERVICES DIVISION

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

In the first half of the year 1954, three major changes were made in the organization of the Technical Services Division -- one change which had no effect on the functions of the division, except to promote the efficiency of operations, and two changes which had no appreciable effect on the functions of the Center, since the chief factor involved was a transfer of functions from the division to other agencies serving the Center. With the exception of these three changes, the functions and organizational structure of the Technical Services Division remained<sup>1</sup> substantially as they had been before. (Uncl)

The changes were, in their chronological order: first, the transfer<sup>2</sup> of the ATI Indoctrination Branch to the Technical Requirements Division; second, the dissolution of the Biographic and Facilities Group in the<sup>3</sup> Document Services Branch; and, third, the advancement of Reproduction<sup>4</sup> and Graphic Services from section to branch level. (Uncl)

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<sup>1</sup> History of the Air Technical Intelligence Center, 1 January - 30 June 1953 p. 50.

<sup>2</sup> Hq 1125th USAF FAG (ATIC): GO 3, 5 February 1954.

<sup>3</sup> This dissolution was effected 1 March 1954 under an order contained in Comment No. 5, Project Report and Termination Form C-27 (on Project No. 50408), dated 16 February 1954.

<sup>4</sup> Hq 1125th USAF FAG (ATIC): GO 8, 15 March 1954.



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The transfer of the ATI Indoctrination Branch (a transfer of mission, functions, personnel, and equipment en masse) was accomplished in consideration of the close relationship between the functions of training, on one hand, and the mission of the Technical Requirements Division, on the other. In order to meet its responsibilities, the Technical Requirements Division needed to exercise control over the training of air technical intelligence personnel used in the Technical Requirements program. The transfer of the ATI Indoctrination Branch bodily, with its training function, provided the Technical Requirements Division with the opportunity to exercise the necessary control. (Uncl)

Similarly, the dissolution of the Biographic and Facilities Group entailed a reduction in the functions and work-load of the Technical Services Division but did not affect the functions of the Center significantly, since the Battelle Memorial Institute in Columbus, Ohio, (an ATIC contractor, referred to unofficially, within the Center, as "Project Stork") was maintaining extensive files similar to those of the Biographic and Facilities Group, and the Battelle files were available to ATIC personnel. Action to dissolve the Biographic and Facilities Group permitted (1) a consolidation of the group's files with the Battelle files, and (2) release of group personnel for reassignment to more urgent duty. (UNCLASSIFIED)

Considerations underlying the third organizational change (the advancement of Reproduction and Graphic Services from section to branch level) were, first, the hope of increasing the efficiency of division operations and, second, the recognition of the size and

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importance of the Reproduction and Graphic Services organization. The change gave the chief of Reproduction and Graphic Services direct access to the division chief, and thus promoted the efficiency of operations, but it entailed no alteration in the mission or functions of the division. (Uncl)

Several key officers of the Technical Services Division were reassigned in the period covered by this installment of the ATIC history. Major (b) (6) was relieved as Executive Officer and was assigned to the position of Plans and Operations Officer,<sup>5</sup> vice Major (b) (6) (b) (6) who was assigned to Headquarters USAF Institute of Technology, with permanent duty station at the Foreign Service Institute, Department of State, in Washington, D.C., to pursue the Turkish Language Course.<sup>6</sup> The position of Executive Officer was still vacant on 30 June 1954. (Uncl)

Lt. Colonel (b) (6)<sup>7</sup> deputy chief of the division since 19 August 1953, was relieved of this position and was assigned as chief of the ATI Indoctrination Branch when this organization was transferred<sup>8</sup> to the Technical Requirements Division. (Uncl)

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<sup>5</sup> Hq 1125th USAF FAG (ATIC): PAM 8, 4 February 1954.

<sup>6</sup> Hq 1125th USAF FAG (ATIC): SO 15, 12 February 1954.

<sup>7</sup> History of the Air Technical Intelligence Center, 1 July - 31 December 1953 p. 49.

<sup>8</sup> Hq 1125th USAF FAG (ATIC): PAM 9, 5 February 1954.

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Lt. (b) (6) administrative officer, was transferred to the  
Fitzsimmons Army Hospital for prolonged treatment,<sup>9</sup> and Major (b) (6)  
(b) (6) was released from his position as chief of the Document Services  
Branch,<sup>10</sup> for assignment to PAAF. Succeeding Major (b) (6) was  
Major (b) (6) (Uncl)

Colonel (b) (6) remained in the position of division chief,<sup>11</sup>  
an assignment he had held since 19 August 1953. Other key personnel  
still serving in previously announced assignments were (b) (6)  
(b) (6) chief of Reproduction and Graphic Services, and Major  
(b) (6) (recently promoted from the rank of Captain), chief of  
the Materiel Services Branch. (Uncl)

Authorized personnel strength of the division was reduced, of  
course, by the transfer of the ATI Indoctrination Branch to the Technical  
Requirements Division and by the dissolution of the Biographic and  
Facilities Group. The adjusted figures, for personnel authorized and  
assigned, at the end of the first half of the year 1954, are tabulated  
below:

	<u>Authorized</u>	<u>Assigned</u>
Officers	19	11
Airmen	20	22
Civilians	108	97

(Uncl)

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<sup>9</sup> Hq 1125th USAF FAG (ATIC): SO 44, 11 April 1954.

<sup>10</sup> Hq 1125th USAF FAG (ATIC): SO 82, 28 June 1954.

<sup>11</sup> History of the Air Technical Intelligence Center, 1 July - 31 December 1953,  
p. 49.

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Before transfer of the ATI Indoctrination Branch, authorized totals for officers, airmen, and civilians were 36, 40, and 118 respectively. Thus, the reductions in authorized strength amounted to 17 officers, 20 airmen, and 10 civilians. As the foregoing table indicates, the assignments which were filled at the end of the first half of the year left the division substantially under strength in two of the three categories. (Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

### DOCUMENT SERVICES:

(Uncl) Previously Reported Projects and Problems. Work was continued<sup>12</sup> on projects to index AFIC publications and to catalogue visual aids, but progress was hampered by the personnel shortages and completion of the work was not yet in sight by mid-1954. (Uncl)

(Uncl) Current activities. Receipt of documents through intelligence channels was continued at the rate of approximately 6000 a month. The Document Services Branch was able to process most of these documents, month by month, and disseminate them to interested personnel. (Uncl)

At mid-year, contracts for the translation of foreign-language documents were in effect with Associated Science Translators, Inc., of Newark, N. J., and with the Language Service Bureau, of Washington, D.C. The combined cost of both contracts amounted to \$100,000 for the Fiscal Year 1954. (unclas)

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History of the Air Technical Intelligence Center, 1 July - 31 December 1953, p. 50.

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A request for negotiation of new contracts for translation, during Fiscal Year 1955, was filed with the Procurement Directorate, Air Materiel Command; and, in addition, plans were made to investigate the feasibility of establishing an ATIC office in the New York area for the purpose of obtaining translations from technically qualified personnel under individual contracts. The decision to investigate this possibility was reached after the Air Information Division of the Library of Congress reported that it could not comply with an ATIC request for translations services. (~~CONFIDENTIAL~~)

(unclas)

REPRODUCTION AND GRAPHIC SERVICES:

(Uncl) Activities. Major contributions of the Reproduction and Graphic Services Branch to the over-all ATIC effort during the first half of the year 1954 were (in addition to the usual reproduction and illustration of intelligence studies and reports) the interpretation of photographs published by the US press, concerning Soviet aircraft, and the preparation of detailed drawings based on an analysis of intelligence information. Both the photographic interpretation and the drawings were used by the Technical Analysis Division in the continuing effort to estimate the Soviet air potential. (~~CONFIDENTIAL~~)

(unclas)

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MATERIEL SERVICES:

(Uncl) Activities. The most significant contribution of the Materiel Services Branch was the work performed by the Foreign Equipment Section in connection with the receipt of a complete, operational Soviet MIG-15 aircraft. This plane, surrendered by a North Korean pilot in response to the US offer of a \$100,000 bounty, was received at the Wright-Patterson Air Force Base on 8 January 1954, shortly after midnight. Within an hour and a half it was completely unloaded from the C-124 aircraft which had brought it in, and was taken to a hangar on the base. Here it was made available to analysts of the Technical Analysis Division, who established and monitored an extensive program of testing and evaluation. (Uncl)

Another significant item received by the Foreign Equipment Section was an East-German decimeter radio relay station, complete with power supply and antennas. This equipment was assembled, by the section, for study and evaluation by personnel of the Technical Analysis Division, the Signal Corps, the United States Navy, the CIA, and other interested agencies. (Uncl)

The Materiel Services Branch, charged with responsibility for maintenance of the steel hangars housing the Center (Building 263), continued to struggle with the hopeless and costly problem of providing adequate office and laboratory facilities in the outmoded and dilapidated hangars. (Uncl)

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**TECHNICAL REQUIREMENTS  
DIVISION  
(ATIR)**

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## TECHNICAL REQUIREMENTS DIVISION

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

Primarily, the Technical Requirements Division is responsible for consolidating and compiling the needs of the Air Technical Intelligence Center for intelligence information and for locating, recommending, and evaluating means for obtaining this information. Selection, training, guidance and general administration of field personnel engaged in collection activities are also major responsibilities of this division. (Uncl)

During the reporting period, this division underwent a major reorganization.<sup>1</sup> The training function was acquired from the Technical Services Division and the function of processing field personnel was relinquished to the Policy and Management Office. These functional changes imposed the heavy administrative load of revamping organizational and position structure, replanning of projects and programs, and ~~xxx~~ shifting of personnel and work assignments. A part of the administrative work remains to be accomplished in the next period.

(Uncl)

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<sup>1</sup> See History of Policy and Management Office, p 25 , this edition.

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At the beginning of the period, the major organizational segments of this division and key personnel were:

Chief, Technical Requirements Division

Chief, Collection Planning Office

Chief, Collection Control Branch

Chief, ATL Program Branch

Administrative Assistant

(b) (6)

(Uncl)

During the period, the following changes occurred in key personnel:

On 25 January 1954, Lt Colonel (b) (6) left the division to become chief of the Air Intelligence Office.<sup>2</sup> He was replaced as chief of the ATL Program Branch by Major (b) (6) formerly assigned to the Planning Office.<sup>3</sup> Later, when the ATL Program Branch was deactivated,<sup>4</sup> Major (b) (6) returned to the Planning Office. (Uncl)

When the training function was transferred from the Technical Services Division, 5 February 1954, Lt Colonel (b) (6) formerly deputy chief of the Technical Services Division, was transferred with the function and assigned as chief of the ATI Indoctrination Branch. (Uncl)

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<sup>2</sup> Hq 1125th USAF FAG (ATIC): PAM 5, 25 Jan 54.

<sup>3</sup> Ibid.

<sup>4</sup> Hq 1125th USAF FAG (ATIC): GO 13, 3 May 54.

<sup>5</sup> Hq 1125th USAF FAG (ATIC): GO 3, 5 Feb 54.

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On 17 June 1954, Major (b) (6) replaced Major (b) (6) as chief of the Control Branch. Pending his departure to attend school, Major (b) (6) was reassigned to the Planning Office, where Major (b) (6), (b) (3) (D) had formerly been assigned.<sup>6</sup> (Uncl)

In the field liaison offices, Colonel (b) (6) replaced Colonel (b) (6) as chief air technical liaison officer, Headquarters USAF. Colonel (b) (6), who had completed his overseas tour of duty, was reassigned to Eglin AFB, Florida.<sup>7</sup> (Uncl)

Organizational segments and key personnel at the end of the period were:

Chief, Technical Requirements Division  
Chief, Planning Office  
Chief, Control Office  
Chief, ATI Indoctrination Branch  
Administrative Assistant

(b) (6)

As of 1 January 1954, the authorized strength of 97 officers, 28 airmen, and 49 civilians; assigned strength was 82 officers, 29 airmen, and 43 civilians. At the end of the period, manpower allotments and personnel strength were: 114 officers authorized, 100 assigned; 59 civilians authorized, 50 assigned; 49 airmen authorized, 47 assigned.

(Uncl)

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<sup>6</sup> Hq 1125th USAF FAG (ATIC): PAM 35, 17 Jun 54.

<sup>7</sup> Hq 1125th USAF FAG (ATIC): PAM 38, 25 May 54.

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## II. ACTIVITIES, EVENTS, AND PROBLEMS

During this reporting period, the major portion of the Technical Requirements Division's activity toward furthering the collection of air technical intelligence information consisted of redefining areas of interest and types of information desired, in light of the Center's mission and its objectives as stated in the Ten Year Plan,<sup>8</sup> and in giving more specific guidance to collectors. (Uncl)

### (Uncl) COLLECTION PROGRAMS:

#### (Uncl) REG Program:<sup>9</sup>

The need for improvement in administrative procedures for the Center's use of the Returnee Exploitation Group, Europe, a CIA monitored activity, and the growing importance of the REG as a source of intelligence information caused this specific phase of collection to be changed from a sub-project under the "specialized personnel" project to a main project. ~~(SECRET)~~ (u)

The purpose of the project is four-fold: To provide guidance to the REG for the defection and interrogation of German technical specialists who have been repatriated from the Soviet Union; to maintain files of REG reports and a biographical register of all Germans known to have been deported to the USSR; to prepare ATIC requirements to be served on REG; and to conduct liaison between the ATIC and CIA on matters pertaining to REG operations. ~~(SECRET)~~ (u)

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<sup>8</sup> History of the Air Technical Intelligence Center, 1 Jan - 30 Jun 53, pp 8-10.

<sup>9</sup> ATIR Project 40024, May 1954. Formerly ATIR Project 40016-31.

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In order to assist field collectors, the ATIC provides REG Europe and Headquarters USAFE with guidance in the form of requirements and priorities based on information contained in ATIC files and a CIA biographic register. Upon recommendations of the ATIC, the Inter-Departmental Defection Committee assigned responsibility for final selection of individuals to be targeted for defection to REG Europe. In addition, REG is responsible for transportation, interrogation, logistical support, and re-settlement of all scientific and technical defectors. ~~(SECRET)~~ (U)

A conference was held 15 April between the Scientific Estimates Committee and the CIA, to discuss operational problems relating to this program. The ATIC Scientific Advisor, Mr. ~~(b) (6), (b) (3) (B)~~ represented the ATIC on the SEC. As a result of this conference, brochures indicating the fields of interest of the using activities have been substituted for individual specific requests for information. These brochures eliminate duplicate requests, reduce administrative workload, and supply guidance to field operational personnel more quickly and in more usable form. ~~(SECRET)~~ (U)

Work is now in progress to revise the REG requirements relating to Postfachs.<sup>10</sup> Development of REG requirements relating to Zavods<sup>11</sup> will also be undertaken. ~~(SECRET)~~ (U)

<sup>10</sup>

Russian term for controlled mailing address. Comparable to an APO.

<sup>11</sup>

USSR industrial combine or complex.

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In addition, an air technical liaison officer is assigned to the REG in Frankfurt and in Berlin, Germany. (~~SECRET~~) (u)

(Uncl) Scientist Program.<sup>12</sup> This program has not produced the results hoped for. Although the scientists who traveled abroad under ATIC contract have collected some data of value to the Air Research and Development Command, which participates in the benefits derived from this project, and have assisted in determining the research capabilities of those countries visited, they have not supplied any considerable amount of information needed by the Air Technical Intelligence Center, particularly on the USSR and its satellites. What new information was obtained through these scientists could have been obtained more easily and less expensively through air technical liaison officers and other Armed Services collection personnel. The failure of the scientist program has been due, in part, to the lack of specific objectives and administrative deficiencies. Plans to correct these deficiencies are being devised. Information on German scientific and technical academic systems has been added to the subject matter to be included under this program.

(~~SECRET~~) (u)

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ATIR Project 40016, "Collection of ATI Information (Specialized Personnel)."

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(Uncl) Technical and Scientific Meetings.<sup>13</sup> Closely allied to the scientist program is the project for obtaining intelligence information through coverage of scientific meetings and trade fairs, particularly those held in the USSR and satellite countries or attended by Soviet scientists in the free world. Because of a definite increase in Russian participation in affairs of this kind, this project has been removed from deferred status. During the reporting period, plans were made jointly by the CIA and the ATIC to coordinate their activities in furthering the collection of intelligence information through these sources and to furnish guidance to overseas collectors. An Intelligence Collection Guidance Letter on this subject was sent to the field in June. Lists of 1954 International Conferences and Trade Fairs have been received and screened for coverage desired by the ATIC. Case folders for each conference of possible interest to the ATIC are being prepared. These case histories will be used to maintain a record of sources and pertinent information collected, and to evaluate the productivity and value of these activities as sources of intelligence information. ~~(SECRET)~~ (u)

<sup>13</sup>

ATIR Project 40017, "Exploitation of Technical and Scientific Meeting."



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(Uncl) Domestic Program.<sup>14</sup> Tentative plans for ATIC activity in obtaining air technical intelligence information directly from domestic sources were cancelled since the Center can place requirements on CIA which has the primary responsibility for this type of collection. During the period, the CIA made available 423 sources. The ATIC utilized 118 of these sources, submitting 307 requirements on them. One hundred sixteen of these requirements have been fulfilled or cancelled, and 208 are still active. During the same period, the ATIC notified CIA of 301 possible sources and placed, through the CIA, requirements on 62 of these sources. ~~(SECRET)~~ (u)

(Uncl) Basic Requirements:<sup>15</sup>

Several improvements made by the Directorate of Intelligence in the basic requirements program will result in the Center's receiving better service in regard to basic air intelligence. These improvements consisted primarily of standardization of format and terminology for requirements submitted to the D/I Screening Panel and the application of cut off dates to subjects listed in the "Basic Air Intelligence Requirements" manual.<sup>16</sup> Standardization of format and terminology will provide the D/I Screening Panel with a better understanding of the Center's needs, while cut off dates in BAIR will reduce the amount of unusable, out-of-date intelligence information being received by the Center, particularly from REG sources. ~~(CONFIDENTIAL)~~ (u)

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<sup>14</sup> ATIR Project 40018, "Collection of ATI Information - Domestic."

<sup>15</sup> ATIR Project 40021, "Collection of ATI Information (General)."

<sup>16</sup> Directorate of Intelligence Publication.

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Under the basic requirements program, two Intelligence Collections Guidance Letters (ICGL) were prepared. ICGL No. 2, "Petroleum, Oils, and Lubricants," was revised to clarify instructions for labeling samples, to stress the need for expeditious shipping of samples, and to list the relative order of importance of materials desired. A new letter was prepared on scientific meetings and fairs.<sup>17</sup> Guidance was also provided by an article for the ATIO Journal on the intelligence importance of the use and application of critical materials. This article was written in conjunction with the Technical Analysis Division. (~~CONFIDENTIAL~~) (u)

Preparation of other guidance material relating to general requirements had to be suspended because of higher priority work on other projects. Suspended were revision of ICGL No. 2, "Minifon Recorders," and Chapter 5M, BAIR (Material Requirements); and three new letters, one on packaging and shipment of electronic tubes, one on the five most important items of air technical intelligence interest, and one on environment control and characteristics of aeronautical equipment. (Uncl)

(Uncl) Surveillance of Intelligence Photography.<sup>18</sup> One hundred thirty-three photographs, 20 films, and 146 mission review photo intelligence reports were obtained from other intelligence agencies, reviewed, and evaluated. (~~CONFIDENTIAL~~) (u)

17

See page 58, this section.

18

A sub-project under ATIR Project 40012, "Collection of ATI Information (General)."

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(Uncl) Specific Requests.<sup>19</sup> The workload of specific requests was, for the most part, constant throughout the period. At the beginning of the period, 210 SRI's were active. During the period, 198 were initiated and 208 closed out, leaving 200 active at the end of the period. A critical review of 3<sup>9</sup> SRI's one year old resulted in nine being cancelled as no longer current, seven being closed out as completed, five being revised, and 18 continued without revision. (Uncl)

(Uncl) Foreign Equipment and Material ("Blue Fly").<sup>20</sup> This project, popularly known as "Blue Fly," an unregistered nickname, was in standby status during the period. (Uncl)

(Uncl) Fly-By. Although ATIC representatives were unable to go to Moscow for the May Day celebration, recordings and photographs were obtained and have provided some useful intelligence information. Coverage of the coming Tushino Air Show by the same source is being planned. (~~SECRET~~) (u)

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<sup>19</sup> ATIR Project 40001, "Collection of ATI Information - Specific Requests."

<sup>20</sup> ATIR Project 40020, "Collection of ATI Information - Foreign Equipment and Material."

(SUnc1) SPECIAL COLLECTION DEVICES:

Accomplishments and problems pertaining to the development, and procurement of specialized collection devices were as follows:

(Uncl) Lenses. The success obtained through the use of the three 80-inch zoomar lenses procured during the preceeding period,<sup>21</sup> justified the procurement of two more of these lenses. One of these was sent to the Alaskan Air Command and the other reserved for a pending Top Secret project. One of the 150-inch lens being tested by the Physical Security Equipment Agency at the time of its deactivation was also obtained and sent to USAFE. ~~(SECRET)~~ (u)

(Uncl) Recorders. The search for a suitable miniature wire recorder continued. Minifon recorders have not proved to be entirely satisfactory chiefly because their foreign origin makes their availability unreliable and requires an excessive amount of time for their repair and modification. Plans are being made to obtain a sub-miniature recorder that was being developed under contract for the Physical Security Equipment Agency at the time of its deactivation, and to contract the repair and maintenance of Minifons to a US firm, pending the development of a more satisfactory recorder within the United States. ~~(CONFIDENTIAL)~~ (u)

<sup>21</sup>

History of ATIC, 3 July - 31 December 54, Page 42.

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(Uncl) Film and Developers. Tests of developers and film combinations best suited for intelligence photography are continuing. Super-Tonic color film, ASA-100, was found to be suitable only where grain was not important. Although the grain size obtainable with British Ilford Pan F, ASA-25, and Eastman Kodachrome, ASA-10 is superior to that obtained from Plus X, both ASA-25 and ASA-10 have too slow an emulsion speed. The Eastman Kodak D-25 developer was the best found to date for use with Plus X film and Adox, a German manufactured film. (Uncl)

(Uncl) GUIDANCE MATERIAL:

In addition to the collection guidance letters prepared for the Directorate of Intelligence, Headquarters USAF, work progressed on other guidance material as follows:

(Uncl) Manuals:<sup>22</sup>

One collection guidance manual was published and distributed, one was sent for publication, and two are in preparation. "ICGM - Aircraft Equipment,"<sup>23</sup> was distributed 1 March 1954. Revision of "ICGM - Aircraft,"<sup>24</sup> which contains a new section on Boundary Layer Control, was forwarded for publication 11 March 1954. The first draft of "ICGM - Aircraft Materials,"<sup>25</sup> has been completed and is

<sup>22</sup>

ATIR Project 40014, "Preparation of ATI Collection Guidance Manuals."

<sup>23</sup>

AFM 200-15.

<sup>24</sup>

AFM 200-12, Rev.

<sup>25</sup>

AFM 200-16.

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being reviewed by the technical intelligence specialists in the Technical Analysis Division. Twelve sections and two appendixes of "ICGM - Intelligence Photography,"<sup>26</sup> have been drafted; five sections and four appendixes remain to be written. Scheduled completion date is 15 August 1954. (Uncl)

In addition to work on these manuals, assistance was given to the Technical Analysis Division in the preparation of the ATIC's contribution to a biological and chemical warfare manual being compiled at Headquarters, USAF.<sup>27</sup> (Uncl)

(Uncl) Technical Trip Briefs (TTB's). Special guidance material, "Technical Trip Briefs," for five special trips to be performed by collection personnel were completed. Present plans call for 10 more TTB's to be produced. (Uncl)

(Uncl) Priority Target Folders (PTF's). Plans were completed for the preparation of special guidance material on critical collection requirements. Material for these folders has been assembled but actual work of preparation had to be deferred because of higher priority assigned to the technical trip briefs. (Uncl)

(Uncl) AIR TECHNICAL LIAISON PROGRAM:

This program was reviewed and plans made to improve it. A projected ATLO program extending through 1956 is being planned.

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<sup>26</sup>

AFM 200- (Number not assigned).

<sup>27</sup>

See Technical Analysis Division History, page 116, this edition.



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In the operation of this ATL program in the Austrian area, a problem arose pertaining to the exact relationship between the ATL Office and the 1142d USAF Special Activities Squadron, Headquarters USAF. The Commander on his visit to Europe in February 1954,<sup>28</sup> was advised of this problem. On 20 June 1954, the chief of the Technical Requirements Division departed for approximately 30-day temporary duty in Austria to further investigate this situation. (Uncl)

The practice of returning ATLO's once during their overseas tour has been very successful from the point of view of both the Center and the ATLO. (Uncl)

Improvements made in the interrogation and reorientation program for ATL personnel include a revised interrogation questionnaire and a program of interviews and discussions with personnel of the Center's three technical divisions and the Policy and Management Office. (Uncl)

Training plans for approved applicants for the air technical liaison program presently call for 50 to 100 weeks of training prior to assignment, the length of training period depending upon the applicant's background and the tentative ATL assignment. The preliminary training includes language training, photographic training, practical training in the applicant's particular specialty and in the particular duties inherent in the proposed assignment. (Uncl)

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See Office of the Commander History, page 9, this edition.

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During the period, nine officers and five airmen completed preliminary training. Sixteen officers, five airmen, and four civilians were assigned to ATL positions. Seven officers, three airmen, and one civilian completed their overseas tours and were returned to the Zone of the Interior for reassignment. Only three of these returnees were assigned to the Air Technical Intelligence Center. Twenty-five air technical liaison officers were returned to the Center for interrogation and reorientation. (Uncl)

The following table reflects the manpower situation of the air technical liaison program during the reporting period:

	Authorized 1 Jan 54		Assigned 1 Jan 54		Authorized 30 Jun 54		Assigned 30 Jun 54	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
ATL Office Austria	26	8	21	7	26	8	21	8
ATL Office Germany	64	14	46	13	65	15	51	15
ATL Office Japan	9	1	8	1	9	1	8	1
TOTAL	99	23	75	21	100	24	80	24

(Uncl)

Extra manpower allotments are needed to train replacements before overseas positions become vacant. At present, air technical liaison trainees have to be carried against existing overseas vacancies. Were all overseas positions to be filled, there would be no manpower allotments available for training purposes. (Uncl)

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(Uncl) COLLECTION PLANS AND STUDIES:

In addition to the plans and studies incorporated in the active projects and programs of the Technical Requirements Division, other plans were developed or evaluated with the following results:

(Uncl) U. S. Missions Abroad. From a study of "Project News," a publication of the Foreign Operations Administration (FOA), it was determined that the FOA might be a useful source for obtaining intelligence information. A recommendation has been submitted to the Directorate of Intelligence to explore the possibilities of liaison with the FOA for this purpose. (~~CONFIDENTIAL~~) (u)

(Uncl) VLF Communications. The ATIC's study on very low frequency communications in relation to intelligence collection was approved 25 February 1954 by the Director of Intelligence for implementation. (~~CONFIDENTIAL~~) (u)

(u) ~~(CONFIDENTIAL)~~ Foreign Travel of USAF and Contractor Personnel. Draft of the proposed Air Force directive on this subject, reported as pending in the preceding edition of the history,<sup>29</sup> was received and reviewed. Minor changes were suggested. When this directive is published, notifications of foreign travel will be made by all Air Force activities instead of just by the Air Materiel Command and Air Research and Development Command activities, as at present.<sup>30</sup> (~~CONFIDENTIAL~~) (u)

<sup>29</sup>

History of the Air Technical Intelligence Center, 1 Jul - 31 Dec 53, p. 42.

<sup>30</sup>

See page 59, this edition.

(Uncl) Special Collection Devices. A request has been submitted to the Directorate of Intelligence to assign to the ATIC the USAF mission of developing special photographic and electronic devices for field collection of intelligence.<sup>31</sup> Particularly, the ATIC wishes to secure appropriate projects and equipment which the Physical Security Equipment Agency had in process at the time of its dissolution. ~~(SECRET)~~ (U)

(Uncl) Foreign Manufactured Equipment. Plans were completed for using commercial import-export facilities on a world-wide basis for securing foreign manufactured equipment needed for intelligence purposes. A proposal has been made to the Director of Intelligence for utilizing G-2 army missions for this same purpose. It is planned to send ATIC representatives to the G-2 school to be held in Washington, D. C., during the next period. This collection program is referred to locally as "Janus," an unregistered nickname. Action will be taken in the next period to secure a registered nickname for this activity. ~~(SECRET)~~ (U)

(Uncl) Solar Eclipse. The ATIC's plan for exploiting the solar eclipse, 30 June 1954, had to be cancelled because of difficulties in obtaining entrance into the USSR. It is now planned to debrief the Cambridge Research Center's team upon their return from the Iranian border. ~~(SECRET)~~ (U)

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MFR to Commander ATIC, 28 Apr 54, transmitted to Director of Intelligence by letter, 7 May 54. Follow-up, 9 Jun 54.

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(Uncl) Sonic and Seismic Aircraft Detection. The first step in the research being conducted by Melpar, Inc., under ATIC contract, to determine the feasibility of using sonic and seismic devices for detection and identification of aircraft and rockets has been completed and the final report for this part was received 22 February 1954. A purchase request has been initiated to proceed with step two, which will be enlarged considerably over that originally planned. ~~(SECRET)~~ (u)

(Uncl) International Geophysical Year. A preliminary study has been completed concerning the possibility of exploiting the International Geophysical Year which will occur 1957-1958. (Uncl)

(Uncl) East German Patent Office. Means of securing intelligence information from the East German Patent Office are being considered. However, information obtained from visitors of the Military Intelligence Department indicated that another intelligence agency is also working on this problem. If the collection efforts of this other agency can be utilized, the ATIC may abandon its plans. ~~(SECRET)~~ (u)

(Uncl) Foreign Documents Collection. Elimination of duplication in the acquisition of foreign documents continues to be a problem. A documents air technical liaison officer has been assigned to USAFE. The NSCID 16<sup>32</sup> Sub-committee has approved the

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National Security Council Intelligence Directive 16

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ATIC's proposal for exploitation of scientific and technical periodicals. The possibility of furnishing collection aid to the publications procurement officer in Moscow was discussed with the Department of State's Eastern European Division. Further ATIC action is being held in abeyance pending outcome of Department of State plans. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Foreign Release Function. The Coordinating Air Staff, Headquarters USAF, is considering the possibility of transferring the function of foreign release of documents from the Air Research and Development Command to the Air Materiel Command. (Uncl)

(Uncl) MONITORING EVALUATION OF INTELLIGENCE REPORTS.<sup>33</sup> Improvement in reporting techniques, redefining of ATIC informational requirements, and better guidance to collectors resulted in a decline of intelligence reports requiring evaluation. During this period, 773 reports were evaluated as compared to 1156 for the preceding period. Of the 773 evaluations prepared, only 383 were mandatory, the remaining 390 being voluntarily contributed by the Technical Analysis Division analysts. (Uncl)

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<sup>33</sup>

ATIR Project 40023, "Evaluation of Air Technical Intelligence Reports."

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(Uncl) TRAINING ACTIVITY:

The purpose of the training conducted or monitored by the Air Technical Intelligence Center is to provide air technical intelligence training for air technical liaison personnel and other selected air force personnel, and to provide the Center's military and civilians personnel with general orientation and indoctrination. Both preliminary and inservice training are included in the training activity. A part of the training is conducted by Center personnel, a part by the Headquarters Air Materiel Command's Central Civilian Personnel Office, and a part by government and non-government schools located elsewhere. The USAF Air Technical Intelligence School is located on the Wright-Patterson Air Force Base and is under the direction of Air Technical Intelligence Center. (Uncl)

When the training function was transferred from the Technical Services Division to the Technical Requirements Division,<sup>34</sup> work was started to revamp the organizational structure, staffing pattern, training programs, projects, and courses of instruction related to this function. A part of this work has been completed; the rest is nearing completion and will be reported in the next edition of the history. (Uncl)

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<sup>34</sup>

Hq 1125th USAF FAG (ATIC): GO 3, 5 Feb 54

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(Uncl) Change in Responsibilities. To date, training responsibilities have been changed as follows:

Debriefing of Korean returnees was cancelled 5 March 1954 because the work has been completed. (Uncl)

Responsibility for in-service training of all Center personnel in security consciousness was transferred to the Unit Security Officers, 23 April 1954. (Uncl)

Administrative, clerical, and similar types of training are now provided by the training activity of the Central Civilian Personnel Office, Headquarters, Air Materiel Command, which services the Center. The Center's training administrators are responsible only for notifying supervisors and employees of the training opportunities available through the Headquarters, Air Materiel Command civilian training activity and for arranging with this activity to schedule Center personnel for selected courses. (Uncl)

The reporting phases of the Airman Information and Education Program have been transferred to the Troop Commandant. (Uncl)

Responsibilities added to the training activity include arranging for off-the-base-training of prospective air technical liaison personnel, and supervision of the ATIC on-the-job training program for airmen. (Uncl)

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Specialized intelligence-collection photographic projects<sup>35</sup> were removed from the photographic training program and assigned to operational personnel. The three photographic training projects,<sup>36</sup> one each for air attaches, air technical liaison office personnel, and air technical intelligence investigators, were combined into one project<sup>37</sup> for better administration. (~~CONFIDENTIAL~~)  
(unclas)

(Uncl) Space Problems:

An unsuccessful attempt was made to obtain more adequate housing facilities for the USAF ATI School. Only two buildings on the Wright-Patterson Air Force Base were deemed suitable for the school's needs, but neither of these buildings was available. As a result, Building 89, where the school is presently located, is being renovated to provide the needed classrooms, offices, and student lounge. The new layout will provide 700 additional square feet of space, will reduce some of the problems of high noise level and poor lighting, but will not solve the problem of proper ventilation. Since Building 89 is considered by the Wright-Patterson Air Force Base to be on a stand-by basis, ATIC training personnel have had to perform the actual renovation work. In addition to work on the building, renovation work included grading of the field area and construction of a road leading to this area. (Uncl)

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<sup>35</sup> ATIR Project 70016.

<sup>36</sup> Former ATIR Projects 70013, 70014, 70015.

<sup>37</sup> ATIR Project 70025.

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The work-pool, which is under the supervision of the training activity, presented another space problem. The space made available by Headquarters, Air Materiel Command in Building 263A has been withdrawn and no suitable new location has been found. The pool is temporarily housed in Building 876. (Uncl)

(Uncl) Personnel Problems. The problem of obtaining qualified personnel to serve as instructors and supervisors for the training activity is acute. At present, this activity is short four officers. The relatively rapid turnover of instructors is also hampering the training effort. Revised staffing plans for the training activity call for two additional civilians, training-specialists, and the assignment of educational career field officers to supervisory positions. Arrangements have been made to have USAF Air Technical Intelligence School instructors attend an instructor's training course at the Air University, Maxwell Air Force Base. During the reporting period, three instructors completed this course at the Air University. (Uncl)

(Uncl) Courses of Instruction. Revision and preparation of courses of instruction progressed as follows:

ATI Investigator Course.<sup>38</sup> A twelve-week course to replace the former nine-week course was completed and installed, 15 March 1954. The new course provides increased hours for the

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<sup>38</sup>

AFIR Project 70018, "ATI Indoctrination Course."

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various blocks of instruction and adds additional subjects relative to basic intelligence and communist area and background.

(Uncl)

Reserve Officer Training Course. Although reserve training has been a responsibility of the training activity for some time, little work had been done to plan a formal training program prior to this period. A formal reserve officer program is being written which will provide for 48 training-periods a year. Class instruction will supplant the present, informal on-the-job instruction and will give reservists training in intelligence and military subjects pertaining to their career fields. (Uncl)

Airman On-the-Job Training. A sample course for an administrative supervisor has been completed and is being reviewed for approval. This sample will serve as a guide for preparation of additional on-the-job courses for airmen. Approximately 20 airmen are presently in on-the-job training status. (Uncl)

ATLO Indoctrination Program.<sup>39</sup> A new ATLO training program is being written. (Uncl)

Orientation of New Employees.<sup>40</sup> A revised course has been completed and is waiting approval. This proposed course changes the time requirements for orientation from three to eleven hours, and is divided into two parts. The first part, five hours, will

<sup>39</sup>

ATIR Project 70024, "ATLO Indoctrination Course."

<sup>40</sup>

ATIR Project 70019, "Orientation of Civilian and Military Personnel."

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consist of explaining the employee's security obligations, administration of two security-knowledge tests, and instruction on the handling of classified material. The second part, six hours, will consist of introduction to the mission, organization, and functions of the ATIC, an explanation of the employee's responsibility to the Center, and a briefing on the services and assistance available to employees. (Uncl)

(Uncl) Training Devices. During the period, two JU-004 engines were received, one of which will be used by the ATI school for training purposes. The F84 aircraft received during the preceeding period was assembled and is ready for use as a training device. The Japanese aircraft "Nick," previously received, could not be used because of its extremely bad condition. There is a definite need for late types of foreign aircraft for intelligence training purposes. On 13 January 1954, action was initiated to obtain a Russian MIG-15 for this purpose. To date, the desired aircraft has not been obtained.

(Uncl)

(Uncl) Training Accomplished:

Despite the shortage of personnel and the heavy workload imposed by reorganization planning, revision of projects and courses of instruction, renovation and construction of the physical training area, the training activity has been able to accomplish the following training.

<sup>41</sup>  
ATLO Indoctrination Program. Training programs were arranged

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<sup>41</sup>

ATIR Project 70024, "ATLO Indoctrination Course."

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for 29 prospective air technical liaison personnel. Of this number, 14 have completed their training and have been assigned to the air technical liaison program. (Uncl)

<sup>42</sup>  
ATI Indoctrination Course (ATI School). Nine officers and 14 airmen were graduated from the technical intelligence course given by the USAF Air Technical Intelligence School. In addition, 12 students attended this course on an informal status. (Uncl)

Briefing of Air Attaches. Seven groups of Air Attaches, comprising 53 officers and 22 airmen, were briefed on activities and operations of intelligence organizations in Europe and in the Far East, the mission and functions of the ATIC, and the collection of air technical intelligence. The briefing programs included some photographic training and visits to neighboring research and aircraft manufacturing activities. (Uncl)

<sup>43</sup>  
Airman I & E Program. Twenty-six I and E meeting were held, with a total attendance of 1950. (Uncl)

<sup>44</sup>  
Orientation of New Employees. Sixty-eight newly assigned employees each received a three-hour orientation on the mission, organization, and security practices of the ATIC. (Uncl)

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<sup>42</sup>  
ATIR Project 70018, "ATI Indoctrination Course."

<sup>43</sup>  
Included under ATIR Project 70019, "Orientation of Civilian and Military Personnel."

<sup>44</sup>  
ATIR Project 70019, "Orientation of Civilian and Military Personnel."

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Work Pool.<sup>45</sup> Thirty-five military and 37 civilians were taken care of in the work pool pending receipt of their security clearance.

(Uncl)

Photographic Training.<sup>46</sup> A total of 85 persons, 41 officers, 41 airmen, and 3 civilians were given approximately 80 hours each of photographic training related to collection of intelligence information. (Uncl)

(Uncl) Miscellaneous Training Activities:

Photographic Services.<sup>47</sup> These services are furnished the Center as a by-product or side line by the photographic laboratory whose primary responsibility is photographic training. During the period, 5,815 negatives and 8,031 prints were produced. (Uncl)

Russian Dictionary. The need for Russian technical dictionaries for use by students attending the USAF Air Technical Intelligence School motivated the training activity to start preparation of a dictionary of this kind. Inasmuch as the work is extensive and exacting, considerable time will elapse before this dictionary is completed. (Uncl)

(Uncl) HONOR AWARDS. Mr. (b) (6) photographic instructor, was awarded a Superior Accomplishment Pay Increase for effective methods in instructing and promoting interest in photography as applied to intelligence collection.<sup>48</sup> (Uncl)

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<sup>45</sup> Included under ATIR Project 70019.

<sup>46</sup> ATIR Project 70025.

<sup>47</sup> ATIR Project 70021.

<sup>48</sup> 21 March 1954.

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**TECHNICAL ANALYSIS  
DIVISION  
(ATIA)**



## TECHNICAL ANALYSIS DIVISION

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The primary function of the Technical Analysis Division is to produce air technical and scientific intelligence studies and estimates of alien capabilities to conduct air warfare. (Uncl)

The division is divided into two offices and three branches. The offices, located at division level, are the Plans, Operations, and Administrative Office and the Technical Advisor's Office. Branches are organized according to subject matter fields: Aircraft and Propulsion Branch, Electronics Branch, and Weapons and Industry Branch. Sections within the branches are as shown on the ATIC chart.<sup>1</sup> No organizational changes occurred during the period. (Uncl)

During the period, no changes occurred in key personnel, who are:

Chief, Technical Analysis Division

Deputy Chief

Executive Officer

Technical Advisor

Chief, Plans, Operations and  
Administrative Office

Administrative Assistant

Chief, Aircraft & Propulsion Br.

Chief, Electronics Br.

Chief, Weapons and Industry Br.

(b) (6)

(Uncl)

Manpower authorizations and assigned strength at the beginning and the end of the period were:

	1 January 1954			30 June 1954		
	Officers	Airmen	Civilians	Officers	Airmen	Civilians
Authorized	44	8	111	44	10	114
Assigned	19	7	109	26	7	110

(Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

The work projects of the Technical Analysis Division are performed partially by contractors and partially within the ATIC by technical personnel assigned to this division. Some of these projects are broad in scope, covering a wide geographical area or all phases of a particular subject. Others are limited to a specific country or a particular piece of equipment. Some involve contributions from more than one of the technical branches while others are accomplished within a particular branch or section, often by a single technical analyst. (Uncl)

During the period, the division spent considerable time in re-evaluating its current projects in light of the objectives established in the ATIC Ten-Year Plan,<sup>2</sup> planning the revamping of its project structure for better administration and increase in

<sup>2</sup>

History of Air Technical Intelligence Center, 1 Jan - 30 Jun 1953, pp 8-10.

production, and determining the priority order for its workload. The division is attempting to achieve depth in its research activities by narrowing the scope of investigation and analysis. A start has been made in carrying out these plans. (Uncl)

A table summarizing quantitatively the division's project activity for the reporting period is included at the end of this section.<sup>3</sup> In the more detailed description of projects which follows, projects are grouped by subject instead of by project number sequence.

(Uncl)

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(Uncl) PROJECT "BLUE BOOK":<sup>4</sup>

Reports of unidentified flying objects ("flying saucers") continue at about the same rate as for the past two years. From 1 January through 30 June this year, 184 official reports were received. Percentages for disposition of these reported citings remain the same; 70 percent identified as known objects or phenomena, 20 percent discarded because they contained insufficient information, leaving 10 percent classed as unknown. The last reported citing, made by a British Overseas Airway pilot off the coast of Labrador, has been identified as an inversion reflection of the planet Mars. (Uncl)

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<sup>3</sup> Page 119

<sup>4</sup> Project 10073. "Blue Book" is a popular, not an official, code word.  
15 Aug 50.

A few of the reports concerned shattered windshields, indicating that some people have associated the recent epidemic of windshield incidents (appearing in the press) with the "saucer" subject. (Uncl)

A contractor<sup>5</sup> has completed two studies for this project: A study of Videon cameras for use in photographing citings and a statistical study of reported citings. Limited distribution will be given these reports when they are ready for release. (Uncl)

The AF Regulation transferring responsibility for field investigation of citings to the 4602d AISS, Air Defense Command, mentioned in the preceeding edition of the history,<sup>6</sup> has not been released but is expected early in the next period. (Uncl)

KNOWN AIRCRAFT:

Known aircraft studied during the period were the MIG-15, MIG-17, YAK-23, and TU-4. Designated aircraft deferred until sufficient information is available, are the DFS-36<sup>7</sup> and the EF-150.<sup>8</sup> (~~CONFIDENTIAL~~) (u)

MIG-15. One of the most significant pieces of intelligence research accomplished by the ATIC in the past three years pertains to the Soviet MIG-15 fighter aircraft. The main MIG-15 projects accomplished or underway are:

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<sup>5</sup> Battelle Memorial Institute.

<sup>6</sup> History of Air Technical Intelligence Center, 1 Jul - 31 Dec 53, p. 73.

<sup>7</sup> Project 10117, "The Soviet DFS-36 Supersonic Research Plane."

<sup>8</sup> Project 10118, "The Soviet EF-150 Prototype Aircraft."

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10115, (Uncl) "Evaluation of the MIG-15," the first MIG-15 project established, was planned to cover the overall study that will be prepared when the MIG-15 research is completed. The first MIG-15 analyzed under this project was one with a RD-45 engine. A later type MIG-15 with a different engine was analyzed and reported under another project (10181). Project 10115 is being held open until the overall story of the MIG-15 is published. Little work has been accomplished on this project since the Cornell Aeronautical Laboratory completed its research, under ATIC contract, in December 1953. (~~CONFIDENTIAL~~) (u)

10155, (Uncl) "Combat Radius Capabilities of the Soviet MIG-15." This MIG project was tentatively completed with the distribution of ATI Study No. 102-AC-52/35-34, same title as the project. It is being held open until guidance material for using agencies can be prepared and it can be determined from flight test data currently being analyzed whether any revision in the published study is necessary. (Uncl)

30074, (Uncl) "Analysis of Soviet Interceptor Components." ATIC technical report, "Analysis of Soviet Interceptor Components," summarizing all the known data on the components of the MIG-15, was released 19 January 1954, whereupon the project was closed. (Uncl)

10179, (~~CONFIDENTIAL~~) (u), "Soviet VK-1A Turbojet Engine No. 26883, Series 6." Under this project, established 29 September 1953, an analysis of an engine found in one of the later type MIG-15's was made.

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Report on the findings,<sup>9</sup> was approved 7 May 1954, and is scheduled for release in August 1954. This report will contain a thermodynamic analysis to supplement the estimates. (~~CONFIDENTIAL~~) (u)

10181, (Uncl) "Project Zeta."<sup>10</sup> This project was established in October 1953 to cover the Okinawa flight tests of the much publicized MIG-15 that was delivered by its pilot to the United Nations Forces at the close of the Korean hostilities. Because of time limitations, this project was approved informally and the number tentatively assigned. Distribution of TR-AC-27, 23 October 1953, completed this project. Flight test data subsequently received is being analyzed and will be included in the comprehensive study under project 10115. Since project 10181 was completed before it was formally established, it does not appear in any monthly index of ATIC project activity.

(Uncl)

10187, (Uncl) "Evaluation of Project Zeta Power Plant." This project, officially established 17 March 1954, relates to the VK-1 power plant contained in the North Korean ("Zeta") MIG-15. A report summarizing and evaluating the results of teardown, inspection, and thrust stand testing of the "Zeta's" power plant is well underway, as is also a motion picture depicting the history and potential development of the VK series of Soviet turbojet engines. (Uncl)

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TR-AC-33.

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"Zeta" is a popular term, not an official code word. The term was chosen because this is the sixth MIG-15 to be analyzed by the ATIC.

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<sup>11</sup>  
MIG-17:

The Soviet Type-38 aircraft has been identified as the MIG-17. Eighty-five MIG-17's were observed during the 1954 May Day Air Show further substantiating the supposition that this aircraft had been placed in operational use. Some of the MIG-17's observed appear to be identical to those that appeared in the 1953 Soviet air shows. On others, however, the dive brakes appear to be located immediately aft of the wing trailing edge rather than in the aft position on the fuselage. No other significant changes were noted. ~~(S)~~ (u)

Preliminary analysis of this aircraft was reported in ATI Study No. 102-AC-54/2-34, distributed in June 1954. Study of the MIG-17 will continue. (Uncl)

<sup>12</sup>  
YAK-23. Testing and analysis of the YAK-23, was started early in 1954. When this work is completed, a technical report will be issued and a film, "Project Alpha," will be released on this aircraft. The term "Alpha" is used within the ATIC to refer to this aircraft because it is the first YAK-23 to be received for analysis. ~~(S)~~ (u)

<sup>13</sup>  
TU-4 Bomber. Revision of the former AMC Intelligence Department study on this bomber, <sup>14</sup> published in 1950, is still pending. (Uncl)

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<sup>11</sup>  
Project 10180, "Preliminary Analysis of the Soviet Type-38 Aircraft," 5 Jan 54.

<sup>12</sup>  
Project 10178, "Project Alpha," 26 Oct 53. "Alpha" is a popular term, not an official code word. Project pending approval.

<sup>13</sup>  
Project 10176, "Soviet TU-4 Bomber," July 1953.

<sup>14</sup>  
I/D Study 102-AC-50/36-34, prepared under AMC Intelligence Department Project 10054.

UNDESIGNATED AIRCRAFT:

Undesignated aircraft studied during the period are the Type-31, Type-36, Type-37 and Type-39. Study of the Type-15, initiated in 1952, will probably be discontinued because of the low priority for information on this aircraft. (Uncl)

(Uncl) Type-31 Bomber.<sup>15</sup> ATI Study No. 102-AC-53/13-34, containing the preliminary analysis of this aircraft, was released 31 March 1954. When additional information becomes available, study of this aircraft will continue. (Uncl)

(Uncl) Type-36 Helicopter.<sup>16</sup> Work is progressing on the study which will cover the total aircraft. Preliminary Performance and Characteristic sheets were forwarded to the Directorate of Intelligence in March 1954 for inclusion in the handbook on USSR Aircraft. An article on the load capabilities of this helicopter was published in the May 1954 issue of the "Air Intelligence Digest." (Uncl)

(Uncl) Type-37 Aircraft.<sup>17</sup> Preliminary study of this aircraft, ATI Study No. 102-AC-54/4-34, is being drafted and will be ready for coordination approximately July 1954. (Uncl)

(Uncl) Type-39 Aircraft.<sup>18</sup> Draft of the preliminary study, ATI Study No. 102-AC-54/5-34, is nearing completion and will be ready for coordination in July 1954. (Uncl)

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<sup>15</sup> Project 10160, (U) ~~(Conf)~~ "Analysis of the Type-31 Bomber," 27 Jun 52.

<sup>16</sup> Project 10188, (U) ~~(Conf)~~ "Preliminary Analysis of the Soviet Type-36 Helicopter," 12 Feb 54.

<sup>17</sup> Project 10195, (U) ~~(Conf)~~ "Analysis of the Soviet Type-37 Aircraft," 27 May 54.

<sup>18</sup> Project 10196, (U) ~~(Conf)~~ "Analysis of the Soviet Type-39 Aircraft," 27 May 54.

AIR-WEAPON COMPONENTS:

Aircraft components studied during the period include guns and fire control equipment, landing gear struts, instruments, mechanical equipment, electrical equipment, photographic equipment, and electronic equipment. Study of boundary layer control devices<sup>19</sup> had to be suspended until a suitable replacement for the project monitor, who separated in 1953, could be secured. (Uncl)

(Uncl) Fire Control Equipment:<sup>20</sup>

Much of the work on this subject is being performed for the AFIC under call contract. The contract for fiscal year 1953 was let with the Emerson Electric Company, St. Louis, Missouri;<sup>21</sup> for fiscal year 1954 with the Crosley Division of the AVCO Manufacturing Corporation.<sup>22</sup> (Uncl)

Call Letter No. 2 for a report on installation of Guns in Turrets of the TU-4 Bomber was not completed by Emerson when the contract expired. In February 1954, additional information from the RAND Corporation and the Hughes Aircraft Company was furnished to Emerson. A meeting was held in April with the Emerson representatives to discuss completion of this report which was still pending at the end of the reporting period. (Uncl)

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<sup>19</sup> Project 10144, (U) "Potentialities of Boundary Layer Control Devices on Soviet Aircraft," 12 Feb 52.

<sup>20</sup> Project 30037, "Investigation of Foreign Fire Control Equipment," 29 Dec 51.

<sup>21</sup> Contract AF33(600)-18147

<sup>22</sup> Contract AF33(600)-24502

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Four call letters have been issued to date against the AVCO Contract: No. 1 for MIG-15 fire control system; No. 2 for MIG-15 generator; No. 3 for A-1 and A-1p fighter gunnery trainers; and No. 4 for installation of a camera on the MIG-15 gunsight so that photographs can be taken during firing tests. The camera-on-gunsight installation was received 15 March 1954. On 24 May 1954, an interim report on the generator was received. Report on the fire control system was accepted 4 June 1954 and is being coordinated prior to publication. Only call letter No. 3 for the fighter gunnery trainers was not completed by the end of the fiscal year. In April 1954 a purchase request was submitted to extend the contract for this project for the next fiscal year. (Uncl)

(Uncl) Guns:

A technical report on the Soviet 23-mm NR automatic aircraft gun<sup>23</sup> is in publication and is scheduled for release in July 1954. This report presents the characteristics and performance data on the 23-mm Soviet aircraft gun, Type NR-23, two versions of which were evaluated by this Center. The Naval Gun Factory, Washington, D.C. and the U.S. Naval Proving Ground, Dahlgren, Virginia, conducted firing tests under various conditions and furnished AFIC with much valuable information on these weapons. (Uncl)

<sup>23</sup>

Project 30061, (Uncl) "Characteristics and Performance of the Soviet 23-mm NR Automatic Aircraft Gun." TR-AE-34 to be released.



Another technical report on the Soviet N-37 automatic aircraft gun<sup>24</sup> is also in publication and scheduled for July distribution. (Uncl)

Evaluation of the French 3 CGF revolver<sup>25</sup> will get underway as soon as the contract is let. This gun is the French version of the World War II Mauser MK-213 which has served as the model for revolver gun development in many countries. A comparison will be made with the USAF T-160 to determine any design details that are desirable for the improvement of USAF revolver weapons. (Uncl)

(Uncl) Landing Gear Struts.<sup>26</sup> Materials and manufacturing methods of the YAK-11 and MIG-15 landing gear struts were reported in the AFIE technical report released 13 April 1954.<sup>27</sup> This report, based on the data furnished by the Menasco Manufacturing Company, under a dollar-a-year contract, fulfilled the requirements of this project which was closed 6 May 1954. (Uncl)

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<sup>24</sup> Project 30076, (Uncl) "Soviet N-37 Automatic Aircraft Gun," TR-AE-35 to be released.

<sup>25</sup> Project 30082, (Uncl) "Evaluation of Foreign Aircraft Weapon," 5 May 54. Purchase Request 94823, 22 Apr 54, for contract with Armour Research Corporation. Contract pending "sole source" justification.

<sup>26</sup> Project 30044, (Uncl) "Evaluation of Foreign Landing Gear Shock Struts," Project Closed.

<sup>27</sup> TR-AE-25.

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(Uncl) Instruments:

Study of the aircraft and guided missile instruments being used or developed by the USSR and its satellites and the NATO block countries<sup>28</sup> is in process. An interim report, summarizing USSR and satellite activities in this area of specialization, is due from the contractor<sup>29</sup> in July 1954. According to the contractor, very little good technical information on guidance and control or instrumentation has been obtained from Intelligence Reports. However, other sources, such as previous studies of various Soviet instruments and extracts from Soviet books on the subject, are providing information of value. (~~CONFIDENTIAL~~) (u)

Coverage of the NATO bloc countries will be performed by ATIC personnel on a low-priority basis, instead of by the contractor as originally planned. (Uncl)

Because of the extensive traveling performed during 1953 by contractor personnel for purposes of domestic familiarization, requests for approval of contractor travel were scrutinized most carefully during this period and two proposed trips to West Coast facilities were disapproved. (Uncl)

<sup>28</sup>

Project 30057, (Uncl) "Status of the Technology of Aircraft and Guided Missile Instrumentation in the USSR, Its Satellites, and Other Countries," 25 May 53

<sup>29</sup>

Battelle Memorial Institute.

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A unique flight and navigation instrument, the Swedish KH-29 universal gyroscope, is being analyzed under another project.<sup>30</sup> The Wright Air Development Center is making tests of this equipment. An ATIC technical report on this subject will be released approximately October 1954. (Uncl)

(Uncl) Mechanical Equipment.<sup>31</sup> Study of aircraft and guided missile mechanical equipment in the USSR, its satellites, and other European countries is in process. Definite plans for completing this research will be made when the interim report is received from the contractor. On 22 January 1954, the contractor furnished a rough draft copy of a brief report of documents extracted but could not accomplish the interim report scheduled for 15 April. Date for delivery of interim report has been extended to 29 July. (Uncl)

(Uncl) Electrical Equipment.<sup>32</sup> Evaluation of the status of aircraft and guided missile electrical equipment in the USSR and

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<sup>30</sup> Project 30081, "Evaluation of Swedish KH-29 Universal KH-29 Universal Gyroscope," initiated 24 Mar 54, approved 19 Apr 54.

<sup>31</sup> Project 30066, "Status of Technology of Aircraft and Guided Missile Mechanical Equipment in the USSR, Its Satellites, and Other Countries," 7 Aug 53. Work being performed by Battelle Memorial Institute, under the "Stork" contract.

<sup>32</sup> Project 30069, (Uncl) "Status of the Technology of Aircraft and Guided Missile Electrical Equipment in the USSR and Other Countries," 10 Aug 53. Work being performed by Battelle Memorial Institute under the "Stork" contract.

other countries is proceeding at a slower rate than originally planned. The interim report from the contractor, originally scheduled for delivery 15 April, is now expected 1 July. Definite plans for completing this research will be made when the interim report is received. (Uncl)

(Uncl) Photographic Equipment.<sup>33</sup> An ATI study, "The Status and Characteristics of Current Soviet Aerial Photo Reconnaissance Equipment,"<sup>34</sup> the first of three studies on this subject, prepared under contract, was approved for distribution on 17 May 1954. Two other studies, one a comprehensive report on the USSR, the other on satellite countries, are due from the contractor on 1 March and 1 April 1955, respectively. Inquiries from other government agencies prior to issuance of the first study indicated a great degree of interest in this subject. (Uncl)

(Uncl) Electronic Equipment. The chief projects for evaluating electronic components, in process or planned, are:  
(Conf) 20035, "Soviet Progress in the Development of Millimeter-Wavelength Electron Tubes."

(Uncl) 20045, "Air Aspects of Decimeter Communications Systems."

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33

Project 30068, (Uncl) "Status of Development and Characteristics of Soviet and Satellite Aerial Photo Reconnaissance Equipment." Work being performed by Battelle Memorial Institute under the "Stork" contract.

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ATI Study 102-AE-54/1-34.

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- (U)  
(Sens) 20064, "Soviet Missile Guidance and Control Capabilities."  
(U)  
(Sens) 20068, "Soviet ECM Capability and Susceptability."  
(U)  
(Sens) 20087, "Soviet Magnetrons, Klystrons and Traveling Wave Tubes."  
(Uncl) 20089, "Soviet Electronic Components."  
(U)  
(Sens) 20090, "Soviet Magnetic Amplifier Development."

POWER PLANT RESEARCH:

The study of aircraft power plants progressed steadily with the following results:

(Unclassified) Soviet ASH-62ir Engine.<sup>35</sup> One report, TR-AC-19, "Description of Soviet ASH-62ir Aircraft Engine," was distributed 7 January 1954. Another, TR-AC-25, "Soviet ASH-62ir Aircraft Power Plant Performance Characteristics," has been received from the contractor and is in publication. (Unclassified)

(Unclassified) Soviet VK-107A Engine.<sup>36</sup> Information contained in the rough draft copy of TR-AC-29, "Soviet VK-107A Aircraft Power Plant Performance Characteristics," received from the contractor, Lycoming-Spencer, lead to this project being expanded to include testing of the detonation characteristics of this engine using the Soviet specified fuel. Completion and publication of this technical report has been withheld until these additional tests are completed. (CONFIDENTIAL) (U)

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<sup>35</sup> Project 10101 16 Jun 51.

<sup>36</sup> Project 10105 15 Jun 51.

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(Uncl) Domestic and Foreign Turbojet Engines.<sup>37</sup> This project was completed with the distribution of ATI Study No. 102-AC-53/7-100, "Foreign and Domestic Turbojet Engines," 7 May 1954. (Uncl)

(Uncl) Soviet Power Plant Developments.<sup>38</sup> Original plan was to publish one study which would compare the developments of the other nations in rocket power plant development with that of the USSR. Collection difficulties, especially with respect to developments in France, have hampered completion of this plan. Two separate studies, one on the USSR and one on Great Britain, are now being prepared so as not to delay making information on these two countries available. A third study, one on France, containing the partial information available to date, will be prepared following these other two studies. (Uncl)

(Unclassified)<sup>39</sup> Soviet RD-500 Turbojet Engine. TR-AC-32, "Description and Performance of the Soviet RD-500 Turbojet Engine," is in publication and will be distributed early in the next period. (Unclassified)

(Uncl) Soviet Jumo 022 Turbojet Engine.<sup>40</sup> Since the initiation of this research, 25 March 1954, a report on the development and capabilities of this engine has been drafted and is in review. (Uncl)

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<sup>37</sup> Project 10120, closed.

<sup>38</sup> Project 10165, 20 Nov 52.

<sup>39</sup> Project 10186, 3 Dec 53.

<sup>40</sup> Project 10193, 25 Mar 54.

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(Uncl) Soviet Ramjet and Pulsejet Engines.<sup>41</sup> Interpolation of performance of these engines, initiated 28 October 1951, was approximately 60 percent complete when higher priority work on Soviet turbojet engines caused suspension of the ramjet-pulsejet research. (Uncl)

(Uncl) Foreign Propellers.<sup>42</sup> Five technical reports relating to this subject have been approved and will be published in the next period. These reports are: TR-AC-30, "Evaluation of Soviet Propeller VISH 107 10;" TR-AC-34, "Soviet AV-5L-24 Propeller Analysis;" TR-AC-35, "Soviet AN-7N-161 Propeller Analysis;" TR-AC-36, "Soviet V-501-D-81 Propeller Analysis;" TR-AC-38, "Evaluation of Soviet Propeller VISH-111-V-20." (Uncl)

(Uncl) Soviet VK-1 Turbojet. ATI Study No. 102-AC-53/10-34, "Soviet VK-1 Turbojet Engine Development Capabilities," distributed 9 February 1954, terminated project 10168. (Uncl)

(Uncl) Other Power Plant Projects. Power plant research reported under other groupings are projects 10179 and 10187 under the MIG-15;<sup>43</sup> projects 10151 and 10185 under handbooks and manuals.<sup>44</sup> (Uncl)

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<sup>41</sup> Project 10134, 28 Dec 51.

<sup>42</sup> Project 10107, 17 Jul 51.

<sup>43</sup> p. 83.

<sup>44</sup> pp. 113-114.

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AIRCRAFT FUELS AND LUBRICANTS RESEARCH:

Progress in the study of aircraft fuels and lubricants is as follows:

(Uncl) Analysis and Evaluation of Foreign Aircraft Fuel and Lubricant Samples.<sup>45</sup> ATI Study No. 102-AC-53/14/34, "Soviet Aircraft Fuels and Lubricants Sample Analysis Report," incorporating data for a two-year period, January 1952 to January 1954, is in publication. Hereafter, quarterly reports will be issued to keep this data on a more current basis. A contract is being let to a petroleum laboratory for assistance in analyzing the backlog of fuel samples now on hand. Additional assistance is being sought from laboratories of the military establishments in order to prevent backlogs from accumulating in the future. (Uncl)

(Uncl) Chemical Compounds Investigated as Rocket Fuels.<sup>46</sup> TR-AC-31, "Theoretical Calculation of the Performance of Rocket Propellants Developed in a Foreign Country," was distributed 23 April 1954. This report represents the first portion of the theoretical performance calculations being performed under contract.<sup>47</sup> Three reports are planned. The second one is scheduled for publication in August and the last one in November 1954. On 15 June 1954, ATIC and contractor representatives visited West Coast rocket propellant manufacturers and users to consult with scientists on propellants used by the Soviets and to inspect U.S. rocket facilities. (Uncl)

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<sup>45</sup> Project 10095, 21 Mar 51.

<sup>46</sup> Project 10172, 16 Oct 53.

<sup>47</sup> "Stork" contract with Battelle Memorial Institute.

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<sup>48</sup>  
(Uncl) Catalytic Cracking. Illness of the project monitor delayed somewhat the anticipated progress on this project. The Air Information Division of the Library of Congress is presently surveying scientific literature for Soviet research papers on catalysis that deal with the cracking of petroleum fractions. A completion date for the study on this subject cannot be estimated until it can be determined how much data will be available through the Library of Congress and other sources. (Uncl)

<sup>49</sup>  
AIR-WEAPON TREND STUDIES. Very little progress was made in the study of trends in the various classes of air weapons, chiefly because of higher priority workload and lack of sufficient information to warrant publication. What data was developed during the period will be included in the annual publication, "Estimated Characteristics of Soviet Air Weapons." (Uncl)

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<sup>48</sup>  
Project 10184, 23 Dec 53.

<sup>49</sup>  
Projects included in the trend studies are 10079, 10138, 10139, 10141, 10157, 10182, 10190, 10191. Projects 10190 and 10191 were established during the current period, in February 1954.

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METHODS OF ANALYSIS:

Work accomplished in improvement of methods of analysis includes:

(Uncl) Aircraft Group Performance Methods.<sup>50</sup> During the first three months of the period, a method of using electronic computers for calculating aircraft performance was developed and tested. Results of these preliminary tests have lead to action being taken to secure one of these computers for the Center. Because of higher priority work, completing of the Performance Methods Handbook has been delayed. (Uncl)

(Uncl) Weight Estimation.<sup>51</sup> Improved methods and curves for estimating weights of propeller and jet-propelled bombers and fighter craft have been developed and were used effectively to estimate the weights of the new Soviet bombers. Better methods for estimating AMPR weights<sup>52</sup> were also devised and used in calculating weights for all known USSR aircraft. (Uncl)

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Project 10092 , 16 Mar 51.

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Project 10158 , 7 Jul 52.

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Empty airframe weight

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GUIDED MISSILE RESEARCH:

Very little activity occurred in guided missile research as a subject independent of the other aircraft subjects. Status of the guided missile research is as follows:

(Uncl) Soviet Guided Missiles, Aircraft, Ship or Submarine Launched, Mass Destruction Warheads.<sup>53</sup> A Navy Intelligence Report has been published on this same subject. Since no new intelligence information has been received, this project is in deferred status.

(Uncl)

(Uncl) Soviet Surface to Surface Guided Missiles.<sup>54</sup> ATI Study No. 102-AC-53/11-34, initially drafted in October 1953, is being revised to conform with a later conceived method of presenting the information. (Uncl)

(Uncl) Performance Calculation Methods for Guided Missiles.<sup>55</sup> This is not a "research" project in the true sense of the word. It was primarily established to account for and cost the manhours expended in performing engineering calculations for data used in other guided missile projects. No additional manhours have been requested for this project for fiscal year 1954 as it is scheduled for closing within the next six months. (Uncl)

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<sup>53</sup> Project 10138, 13 Feb 52.

<sup>54</sup> Project 10139, 3 Apr 53.

<sup>55</sup> Project 10152, 9 Jun 52.

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(Uncl) Soviet Surface-to-Air Guided Missiles.<sup>56</sup> Preliminary work was well along on this project when higher priority work in relation to National Intelligence Estimates<sup>57</sup> and the guided missile portion of the future estimates study<sup>58</sup> caused 10182 to be deferred. (Uncl)

TECHNOLOGIES AND SCIENCE STUDIES:

Technologies and science studies undertaken by the Air Technical Intelligence Center include a variety of subjects in the fields of industry, air weapon materials, and pure science. Progress being made in these studies is as follows:

Metallurgy:

The status of aircraft metallurgy in the USSR, its satellites, as well as in other Western European countries is being studied. (Uncl)

(Uncl) USSR and Satellites.<sup>59</sup> Two studies on the USSR were distributed during this period and two others are in preparation. The study on stainless steels<sup>60</sup> was released 5 February 1954, and the one on titanium,<sup>61</sup> 23 March 1954. The ones on research and development and aircraft quality steels have been completed and are being coordinated. (Uncl)

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<sup>56</sup> Project 10182, 24 Nov 53.

<sup>57</sup> Project 10194, 9 Apr 54.

<sup>58</sup> Project 10140, 22 Jan 52.

<sup>59</sup> Projects 30022 and 30065. Work being performed by Battelle Memorial Institute under the "Stork" contract.

<sup>60</sup> ATI Study No. 102-AE-53/3-34.

<sup>61</sup> ATI Study No. 102-AE-53/2-34.

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The summary report on this research, received from the contractor on 4 February 1954, has been found unsatisfactory in its present form and will probably be rewritten within the ATIC. A separate study on the "Status of Welding Technology in the USSR," added during this period, was received from the contractor on 2 June 1954 and is presently being reviewed by the Materials Laboratory of the Wright Air Development Center. An addenda to the report on the USSR is due from the contractor, 1 July 1954. Coordination copies of studies on East Germany, Czechoslovakia, and Hungary are due 31 August 1954. In connection with this subject during the period, Center personnel visited various AEC installations and U.S. industrial plants to obtain information about new materials of construction, physical metallurgy and alloying of transistor metals, and titanium. (Uncl)

(Uncl) Western Europe.<sup>62</sup> In June 1954 the NATO bloc countries were included in this research. In April 1954 while the advisability of including these countries was being considered, the project monitor conferred with Professors (b) (6), (b) (3) (B) at the Massachusetts Institute of Technology relative to information obtained by these men during their recent European travels. (~~CONFIDENTIAL~~) (u)

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Project 30077, initiated 22 Jan 54 but not approved until Jun 54. Same contractor as for 30022 and 30065.

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(Uncl) Airframes and Engines. Investigation of the materials application in Soviet airframes and engines was completed with the distribution of the contractor's report which computed the gross input materials required to manufacture certain types of airframes and engines. This report was released to only the Directorate of Intelligence (Targets), the National Security Agency, and the Central Intelligence Agency.<sup>63</sup> (~~CONFIDENTIAL~~) (u)

(Uncl) Rubber and Plastics:

The research on this subject includes two overall studies on the status of development of high polymer materials in the USSR and its satellites,<sup>64</sup> and in the NATO<sup>65</sup> bloc countries and two more specific studies, one on rubber technology<sup>66</sup> and one on synthetic resins<sup>67</sup> as applied to aircraft in the USSR. (Uncl)

ATI Study No. 102-AE-54/2-34, "Aircraft Rubber Technology in USSR," with appendix in a separate volume was sent to the Directorate of Intelligence for coordination 18 June 1954. A more limited distribution will be given to the appendix than to the basic study. (Uncl)

<sup>63</sup>

Project 30055. Work performed by Cornell Aeronautical Laboratory under call contract. Call Letter No. 1 was issued for this specific report. /16 Dec 52.

<sup>64</sup>

Project 30078, initiated 21 Apr 54, approved 14 May 54.

<sup>65</sup>

Project 30083, initiated 22 Apr 54, approved Jun 54.

<sup>66</sup>

Project 30049, 7 Jul 52.

<sup>67</sup>

Project 30046, 21 May 52.

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The plastics study<sup>68</sup> was sent to publication 13 April 1954 and will be ready for distribution in the near future. Since this study contains only the chemical aspects of plastics, it will be given limited distribution to only those agencies having immediate need for a collation of information on this subject to date. Further research will be necessary before use may be made of this material in electronic and aerodynamics research. (Uncl)

For the overall study on Soviet high polymer materials, two volumes are planned, one on the USSR and one on its satellites. The number of volumes to be issued on the NATO bloc countries has not been decided and will depend primarily on the amount of material available after this research is well underway. These reports will combine a large amount of unevaluated and uncollated data previously accumulated, particularly on the USSR, as well as a number of piecemeal studies and reports previously issued, many of which are in need of revision. (Uncl)

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<sup>68</sup>

AFI Study No. 102-AE-53/10-34.



(Uncl) Ceramics.<sup>69</sup> The study of ceramics and ceramets in the USSR, began under project 30045 now closed, is being continued under a new project, 30084, established during this period. This subject was reopened in the hopes of finding solutions to the current problems pertaining to ceramics in USAF air weapons and electronic components. The absence of contractor personnel on an overseas journey will delay receipt of coordination draft of the study approximately 90 days beyond the initially scheduled date of 1 July 1954.

(Uncl)

(Uncl) Aircraft Industry:<sup>70</sup>

A formal project to estimate the limitations imposed on the Soviet's ability to launch heavy bomber attack on the USA by the level of its industrial technology was established during this period.

~~(CONFIDENTIAL)~~ (u)

In preparation for this work, contractor personnel visited the Douglas Aircraft Company, Santa Monica, California, and the Boeing Airplane Company, Seattle, Washington, to become familiar with U.S. materials and manufacturing methods pertinent to the design and production of heavy bombers. The scope of the project needs to be defined before deadline dates for submission of the study can be set. (Uncl)

<sup>69</sup>

Project 30084, initiated 5 May 54, officially approved 24 May 54. Work being performed by Battelle Memorial Institute under the "Stork" contract.

<sup>70</sup>

Project 30080, initiated 25 Mar 54, approved May 54. Work being performed by Battelle Memorial Institute under "Stork" contract.

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(Uncl) Precision Industry:

The study of Soviet capabilities in manufacturing aircraft instruments<sup>71</sup> and the development of analog ratios for analysis of vacuum tube production facilities<sup>72</sup> continued during the period, but a number of problems prevented accomplishment of any actual end item. Study of critical production factors in the Soviet precision industry<sup>73</sup> was deferred until the study of capabilities is completed, since the capabilities study will furnish information needed for the production study. (Uncl)

The capabilities study, originally scheduled for delivery 15 February 1954 was delayed because of higher priority requests placed with the contractor. Review of the summary of this study in May 1954 revealed several sections would have to be rewritten. The study is currently scheduled for delivery 31 August 1954. (Uncl)

Distribution of the study on analog ratios could not be accomplished in May 1954 because it was found, after preliminary data had been collected, that the problem was much more complex than originally estimated. 1 January 1955 is the current target date for the contractor's report. The cooperation of U.S. manufacturers in the electronics industry has been outstanding in relation to this project.

(Uncl)

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<sup>71</sup> Project 30050. Work being performed by Battelle Memorial Institute under the "Stork" contract. Est. 31 Jul 52

<sup>72</sup> Project 30062. Battelle Memorial Institute, "Stork" contract. Est. 30 Jun 53

<sup>73</sup> Project 30042. Battelle Memorial Institute, "Stork" contract. Est. 14 FEB 52

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(Uncl) Nuclear Energy.<sup>74</sup> Collection of data on the status of the nuclear energy program in the USSR progressed steadily. In April and May, the project monitor and the chief of the Special Weapons Section visited various aircraft contractors and AEC facilities to obtain technical assistance in determining Soviet nuclear propulsion indicators; to obtain information about new materials of construction, metals applications and metallurgical problems pertaining to atomic power plants; and to review current European metallurgical research.

(Uncl)

(Uncl) Geophysics.<sup>75</sup> Research to determine what intelligence contributions may be obtained from studies of the upper atmosphere was practically at a stand still during this period because of delay in renewal of contract for this work. (Uncl)

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<sup>74</sup> Project 30051. A continuous type project for which no formal publication is planned. Collection of data being accomplished for the AFIC by the Battelle Memorial Institute under the "Stork" contract. Contractor submits semi-annual summaries of new data incorporated in his files on this subject. Data accumulated under this project will be used in studies and reports prepared under other projects. Established 8 Aug 52.

<sup>75</sup> Project 20063, "Intelligence Contributions from Studies of the Upper Atmosphere." Purpose and plan of this project reported in 1 Jul - 31 Dec 53 edition of History of the Air Technical Intelligence Center, pp 76-77. Established 10 Jul 53.

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(Uncl) Other Technologies and Science Studies:

Other significant research in technology and science underway or planned is indicated by the titles of the following projects:

20070, "Soviet Capabilities in Electronic Measuring Techniques and Test Equipment."

20071, "Mathematical Progress in the Communist and Free World."

20074, "Soviet Nonlinear Mechanics, Nonlinear Differential Equations and Stability Theory."

20079, "Status of Automatic Control in the Soviet Union and Its Application to Guided Missile Control."

20081, "Infrared Capabilities."

20086, "Radar and Infrared Camouflage Technology."

20088, "Electronic Aspects of Soviet Solid-State Physics Research."

20090, "Soviet Magnetic Amplifier Development."

~~(CONFIDENTIAL)~~ (u)

(Uncl) SIGNAL ANALYSIS:<sup>76</sup>

During the period, the analysis of non-communications intercepts to determine the extent of use in foreign electronic equipment concentrated primarily on data collected by special ferret missions.

~~(CONFIDENTIAL)~~ (u)

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<sup>76</sup> Project 20024. For previous report on this project, see History of Air Technical Intelligence Center, 30 Jun - 31 Dec 53, pp 68-72. Established 18 Jan 51.

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In connection with this work, a digital pulse analyzer, the specifications for which were developed during the preceding period,<sup>77</sup> was received and is currently being readied for use. (~~CONFIDENTIAL~~) (u)

The crystal video intercept receiver,<sup>78</sup> acquired during the preceding period, was flight tested by the Wright Air Development Center and found to be satisfactory. A very high frequency receiver, QRC-7, Model 1, was also flight tested by Wright Air Development Center. (UNCLASSIFIED)

The status of the video recorder and the analogue FRF indicator, remained the same as reported for the previous period.<sup>79</sup> (Uncl)

Some progress was made in the problems relating to analysis of Della Rosa AN/APD-4 recordings.<sup>80</sup> Contract has been let for a Benson-Lehner BOSCAR modified to accomplish the AN/APD-4 recordings, but the machine has not been received. No further progress was made in the machine computation of data pertaining to direction finding by time measurement.<sup>81</sup> (Uncl)

A reference file of typical electronic signals has been proposed in order to reduce the time required in determining the signal characteristics from equipment whose signals have not been previously recorded. (Uncl)

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<sup>77</sup> History of Air Technical Intelligence Center, 30 Jun - 31 Dec 53, p. 71

<sup>78</sup> Ibid, p. 72

<sup>79</sup> Ibid, p. 71

<sup>80</sup> Ibid, p. 72

<sup>81</sup> Ibid, p. 71

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The ATIC is taking over the work of developing machine methods<sup>82</sup> for analysis of intercept data, previously carried on by the USAFSS. During the period, conferences were held with prospective contractors, but no definite plans have been completed. (Uncl)

(Uncl) INSTRUMENTATION OF EXPLORATORY TYPE ELECTRONIC RECONNAISSANCE  
AIRCRAFT B-29.<sup>83</sup> The first flight tests to determine acceptability of the plane were completed during this period. A second series of flight tests to determine the capability of this plane for special ferret missions will begin in July 1954. ~~(SECRET)~~ (u)

~~(SECRET)~~ (u) EVALUATION AND MODIFICATION OF AN AN/PRR-4 ELECTRONIC  
INTERCEPT RECEIVER:<sup>84</sup>

The purpose of this project is to evaluate and accomplish minor modifications in an AN/PRR-4 intercept receiver to make it more adaptable to USAF requirements. ~~(SECRET)~~ (u)

To date, one model has been modified by a transistor amplifier and a Minifon Recorder; another by an improved transistor and amplifier and a tape recorder consisting of a modification of the Magamite manufactured by the Amplifier Corporation of America. Experience of the ATIC and other intelligence groups indicates that the AN/PRR-4 is not satisfactory because of tuning difficulties, plus inconvenient packaging. Further work will be required before an improved intercept receiver is accomplished. ~~(SECRET)~~ (u)

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<sup>82</sup> History of the Air Technical Intelligence Center, 1 Jul - 31 Dec 53, p 70.

<sup>83</sup> Project 20067. See 30 Jun - 31 Dec 53 edition of the History of the Air Technical Intelligence Center, pp 75-76. 10 Aug 53.

<sup>84</sup> Project 20075. Not included in previous editions of the history. 12 Jan 54.

~~SECRET~~ UNCLASSIFIED

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(Uncl) TECHNICAL INTELLIGENCE ASPECTS OF EAST-WEST EMBARGO

<sup>85</sup>  
ITEMS. The purpose of this project is to evaluate the technical aspects of electronic items included in or proposed for the embargo lists of various foreign countries. The ATIC reviewed various items listed on the International Trade Embargo List (Electronics) and prepared briefs which were used by the Department of Defense in establishing the U.S. stand on these items. In addition, the project monitor, Mr. (b) (6) served as technical advisor to both the Department of Defense and the Department of Commerce at the international meeting in Paris during May of this year where these items were discussed. The firm stand taken by the U.S. delegation at this meeting resulted in the retention of a number of strategic items on the embargo list in spite of strong opposition from other countries.

(~~CONFIDENTIAL~~) (u)

(Uncl) COLLECTION AND ANALYSIS OF LOW FREQUENCY AND VERY LOW

<sup>86</sup>  
FREQUENCY DATA. The purpose of this project is to determine the value and means of collecting data on Soviet utilization of low, and very low radio frequencies and to analyze the material obtained. It is an outgrowth of the work performed by Professor (b) (6) of the Technische Hochschule, Munich, Germany, under a former project.

(b) (6) work revealed there was a definite need for further research on this subject. This project is outlined in detail in an ATIC Top Secret document.<sup>87</sup> (~~CONFIDENTIAL~~) (u)

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<sup>85</sup>

Project 20080

<sup>86</sup>

Project 20078, supersedes and expands Project 20006 reported in the 30 Jun - 31 Dec 53 edition of the History of the Air Technical Intelligence Center, p. 74. Established 8 Dec 53.

<sup>87</sup>

Air Technical Intelligence Center TS 3-264.



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(Uncl) COUNTERMEASURES CONSULTING SERVICES. During the period, the contractor made one additional trip to Europe as consultant for the ATIC and the USAFSS. Studies of new methods of collecting guided missile information are well underway and a contract is being negotiated to continue this program. (Uncl)

89

(Uncl) "MOON":

The purpose of this project is to interrogate German scientists, returned from the USSR, in order to obtain maximum details on their work on radio navigation, performed while in the USSR, particularly on the "Moon" system. ~~(CONFIDENTIAL)~~ (u)

From 10 May to 14 June 1954, the project monitor, (b) (6) was in Germany assisting with the interrogation of (b) (6) and (b) (6) who were key personnel utilized by the Soviet Union to develop its low frequency hyperbolic transit time navigation system which has been given the nickname "Moon." The extreme importance of the Soviet's "Moon" system as a precise tactical navigation aid covering all of Western Europe made desirable direct interrogation of these two men by an ATIC representative. ~~(SECRET)~~ (u)

Since this project was established for the sole purpose of interrogating these two German scientists, it is now considered essentially completed. (Uncl)

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88  
Project 20062, reported in the 30 Jun - 31 Dec 53 edition of the Air Technical Intelligence Center History, p. 75. Est. 5 May 53.

89  
Project 20083, established during this period. This project relates to the REG program reported under the Technical Requirements Division, pp. 55-57 of this edition. ~~(SECRET)~~ (u) Est. 19 May 54.

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MANUALS AND HANDBOOKS:

Activity pertaining to manuals and handbooks was as follows:

(Uncl) Performance and Characteristics Handbook, USSR

<sup>90</sup>Aircraft. Revision of the Soviet Aircraft Handbook on an annual basis was discontinued. Instead, revisions are being made on a continuing basis and are being published as completed. Revisions of major importance completed or under preparation during the reporting period were the new MIG-17 (Type-38) jet fighter and Type-37 and Type-39 jet bombers. Also revised was the Type-31 bomber which is estimated to be equipped with turboprop engines in place of the conventional reciprocating type. A plan to include the Soviet satellite nations in this handbook is being considered. (~~CONFIDENTIAL~~)(u)

(Uncl) Special Study of USSR Aircraft for Escape and

Evasion Bulletin.<sup>91</sup> TR-AE-42, "IL-10 Pilot's Operating Manual," was distributed 24 May 1954. Because of higher priority projects, work on the MIG-15 manual was deferred during this period, but will be resumed in the next. (Uncl)

(Uncl) Preparation of Handbooks on Foreign Aircraft Other

than Soviet.<sup>92</sup> ATI Study No. 102-AC-52/52-37, "A Study of British Aircraft," was released 25 January 1954. Toward the latter part of June 1954, ATI Study No. 102-AC-53/12-99, "A Study of the Aircraft

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<sup>90</sup> Project 10128, established 26 Oct 51.

<sup>91</sup> Project 10135, established 8 Apr 52.

<sup>92</sup> Project 10150, established 9 May 52.

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Program of Scandinavian Nations," was distributed. Loss of key technical research personnel and revision of plans for these handbooks prevented further progress on this project. (Uncl)

(Uncl) Maintenance of Handbooks on Foreign Aircraft Other than Soviet.<sup>93</sup> This project was initially established to keep current the handbooks prepared under project 10150. No revisions were made during the reporting period, chiefly because available manhours had to be used for higher priority projects. Future action hinges a new plan for aircraft handbooks which is under consideration. (Uncl)

(Uncl) Friendly Nations Engines Handbook.<sup>94</sup> The French section is ready for publication as ATI Study No. 102-AC-53/4-100, "Characteristics of Aircraft Engines of Foreign Countries (other than Soviet and Satellites)." The material for the remaining section, --Argentina, Australia, Belgium, Canada, Italy, Spain, Sweden, and Switzerland -- has been drafted and, when ready, will be published as additions to this basic study. (Uncl)

(Uncl) Maintenance of Known Soviet Aircraft - Engine Handbook.<sup>95</sup> This project, initiated 2 December 1953, keeps current the handbook of known Soviet aircraft engines.<sup>96</sup> As soon as art work, now in preparation, is completed, the revised performance sheet for the RD-500 engine will be ready for release. (Uncl)

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<sup>93</sup> Project 10169, established 15 May 53.

<sup>94</sup> Project 10151, established 2 Dec 53.

<sup>95</sup> Project 10185, established 2 Dec 53.

<sup>96</sup> ATI Study No. 102-AC-53/3-34, published under a former project 10112, now closed.

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(Uncl) Soviet and Satellite Radar, Communications and Electronic Navigation Handbooks:<sup>97</sup>

These projects were initiated 9 April 1953 to meet a requirement of the Directorate of Intelligence for technical handbooks containing performance characteristics of currently operational Soviet and satellite radar, communications, and navigation equipments. This work is being done under contract by the Capehart-Farnsworth Company.<sup>98</sup> (Uncl)

A preliminary copy of the radar handbook has been checked. The final draft is expected during the early part of July 1954. (Uncl)

For the navigation handbook, the contractor has submitted formats for the various types of communications equipment. These formats are currently being checked for suitability. (Uncl)

(Uncl) Foreign Aircraft and Guided Missile Equipment Data.<sup>99</sup>

This project, which was established to provide a continuous compilation of data on the performance and characteristics of equipment in significant foreign aircraft, proceeded on an orderly but low-priority basis during this period. Information, as secured, is being assimilated. Immediate use is being made of this information in answering specific requests from other defense agencies. Later, this data will be used in a handbook on aircraft equipment. (Uncl)

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<sup>97</sup>

Projects 20059, 20060, 20061, established May 53.

<sup>98</sup>

History of the Air Technical Intelligence Center, 1 Jul - 31 Dec 53, p. 77.

<sup>99</sup>

Project 30067, established 10 Aug 53.

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(Uncl) Revision of Characteristics and Performance Handbook,  
Foreign Aircraft Armament.<sup>100</sup> Chapters "F" and "G" for the revision of Sections I and II of the current edition of the Aircraft Armament Handbook were forwarded to AFOIN-2B3 (Integration Division, Director of Estimates, D/I) on 26 May 1954. Further work on revision was suspended until accurate test results were obtained for incorporation into this handbook. (Uncl)

CONTRIBUTIONS TO NON-ATIC PUBLICATIONS:

The Air Technical Intelligence Center contributes material for intelligence publications issued by the Directorate of Intelligence and others. The chief contributions made during the period are:

(Uncl) Directorate of Intelligence, "Air Intelligence Studies."<sup>101</sup>

Studies on Australia, Finland, France, the Netherlands, Spain, and Switzerland were contributed. Appendix B, "Development of Modern Air Defense Equipment," the ATIC's contribution to AIS 2-20, "Soviet Bloc Air Defense System," (a part of the PVO Force Study) was submitted 12 February 1954. Appendix B, "Weapons and Equipment," the ATIC's contribution to AIS 2-15/1, "Soviet Tactical Aviation," (also a part of the PVO Force Study) was forwarded 29 April 1954. (Uncl)

(Uncl) National Intelligence Survey.<sup>102</sup> Material on the United Kingdom and Rumania was completed. Material on Bulgaria and Yugoslavia is under preparation. (Uncl)

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<sup>100</sup>  
Project 30073, established 15 Oct 53.

<sup>101</sup>  
Projects 10183, 9968, and 9969.

<sup>102</sup>  
Project 10175, established 1 Jul 53.

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(Uncl) National Intelligence Estimates Program.<sup>103</sup> The first study completed for the NIE program consisted of material for NIE 12-54, "Probable Developments in the European Satellites as They Affect the Bloc Capabilities through Mid-1956." Most of the material for this study was prepared by Battelle Memorial Institute under ATIC contract. ATIC contributions to National Intelligence Survey on Poland and Hungary, completed prior to this period, were also furnished as pertinent material for the NIE. (Uncl)

MISCELLANEOUS:

(Uncl) "Hope Chest."<sup>104</sup> This was a long range planning project completed prior to this period but not officially closed until June 1954. The paper prepared by the project monitor has received considerable favorable comment. (Uncl)

(Uncl) Soviet Aircrew Equipment.<sup>105</sup> The rough draft of the ATIC study produced as a result of this project did not include sufficient new information to warrant its publications; therefore, the project was terminated 7 April 1954. The major objectives of the project were satisfied by release of the following technical reports:

TR-AE-24, "Analysis of the YAK-23 Aircrew Equipment."

TR-AE-44, "Analysis of the YAK-23 Ejection System."

TR-AE-45, "MIG-15 Ejection System."

TR-AE-52, "MIG-15 Oxygen System."

(CONFIDENTIAL) (u)

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Project 10194, established 9 Apr 54.

104

Project 30053, established 23 Oct 52 .

105

Project 30060, cancelled.

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(Uncl) Stalin Prize Awards.<sup>106</sup> Since Stalin's death, no Soviet announcement of these awards has appeared. Therefore, if these prizes are not resumed, the study on this subject will not be released because it would have only historical significance. (Uncl)

(Uncl) Evaluation of Aircraft Equipment.<sup>107</sup> The call contract, with the Stratos Division, Fairchild Engine and Airplane Corporation, was allowed to expire 30 June 1954 because no significant items of foreign, pneumatic aircraft equipment were received. The dollar-a-year contract with the Bendix Corporation for analysis of foreign landing gear, wheels, brakes, and fuel systems, let October 1953, was not utilized for the same reason. However, the Bendix Corporation contract is to be extended for fiscal year 1955 in the hopes that their services will be required. ~~(CONFIDENTIAL)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Survey of the Field of Soviet Kinematics.<sup>108</sup>

As soon as a limited number of the contractor's final report is published, this project will be terminated. (Uncl)

(Uncl) Soviet Aircraft Maintenance.<sup>109</sup> A new number, ATI Study 102-AC-54/3-34, has been assigned to the study being prepared on this subject since publication was not accomplished in 1952 as originally planned. Reworked draft of this study will be ready for coordination in July 1954. (Uncl)

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<sup>106</sup> Project 10164. Pending ATI Study No. 102-AC-53/8-34. <sup>DRU EST</sup> 18 Nov 52.

<sup>107</sup> Projects 30063 and 30070.

<sup>108</sup> Project 10110, established 17 Jul 51.

<sup>109</sup> Project 10143, established 7 Feb 52.

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## TECHNICAL ANALYSIS DIVISION

## PROJECTS AND PRODUCTION RECORD

1 Jan - 30 Jun 54

PROJECT ACTIVITY. Quantitatively, the figures below summarize project activity for the period 1 Jan 54 to 30 Jun 54.

	<u>Approved</u>	<u>Completed</u>	<u>Active as of 6-30-54</u> <sup>110</sup>
Aircraft and Propulsion	9	6	48
Electronics	14	2	36
Weapons and Industry	5	7	26
Technical Analysis Div	<u>3</u>	<u>0</u>	<u>15</u>
TOTAL	31	15	125

(Uncl)

PRODUCTION RECORD. The following ATIC publications and other end products were issued in the cited technical fields during the six months covered:

	<u>Aircraft &amp; Propulsion</u>	<u>Electronics</u>	<u>Weapons &amp; Industry</u>	<u>ATIA</u>	<u>Total</u>
ATIC Studies	6	0	2		8
Technical Reports	5	4	14		23
Preliminary Reports & Foreign Equipment	0	5	3		8
Air Intelligence Digest Articles	5	1	22		28
Technical Briefs	239	159	233		631
AF 112's	13	2	5		20
Special Reports				3	3

(Uncl)

<sup>110</sup>

Includes officially approved projects upon which work has not started and those that have been tentatively completed but not officially closed.

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## PERIODIC REPORTS

The Air Technical Intelligence Center publishes three periodic intelligence summaries or reports: "Index of ATIC Project Activity,"<sup>1</sup> "Summary of Significant ATIC Studies"<sup>2</sup> and "Estimated Characteristics of Soviet Air Weapons."<sup>3</sup> (Uncl)

During the period, the "Summary" was changed from a quarterly to a semi-annual report. The ninth edition covering the period 1 July - 31 December 1953 was distributed 7 April 1954. The tenth edition, for 1 January - 30 June 1954, will be released approximately 20 July 1954.

(Uncl)

On 20 May 1954, the "Estimated Characteristics" was changed from a semi-annual to an annual report, change from quarterly to semi-annual having been made prior to this period without change in project title. The next edition is due 3 January 1955. This edition will cover the past, present, and future, --history of the past ten-year development, performance and characteristics of current operational types, and forecast for the next ten-year development. (Uncl)

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<sup>1</sup> Responsibility of Scientific Advisor's Office.

<sup>2</sup> Project 9973, Division Office, Technical Analysis Division.

<sup>3</sup> Project 10140, Responsibility being transferred from Aircraft Branch to Division Office, Technical Analysis Division. Project number will change when transfer is effective.

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The index of projects mentioned in this edition of the Center History, beginning on the next page, has been taken from the "Cumulative Index" and is coded the same: (C) project completed as planned; (T) terminated before completion of project; (P) pending official approval; (D) deferred because of operational difficulties. Projects not coded are active. (Uncl)

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**HISTORY OF** *(05)*  
**AIR TECHNICAL INTELLIGENCE CENTER**

**1 JULY 1954 - 31 DECEMBER 1954**



**AIR TECHNICAL INTELLIGENCE CENTER**

**WRIGHT-PATTERSON AIR FORCE BASE  
OHIO**

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HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
1 July 1954 - 31 December 1954

Prepared by  
Air Intelligence Branch  
AIR TECHNICAL INTELLIGENCE CENTER  
31 January 1955

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FOREWORD  
TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER  
For the Period  
1 July 1954 - 31 December 1954

The format and arrangement of this edition of the History of the Air Technical Intelligence Center is essentially the same as the previous edition for the first half of 1954. It will be noted that the chapters, each dealing with an organizational component of the Center, have been reduced in number, from six to five. This conforms to the reorganizational change effected 7 December 1954.

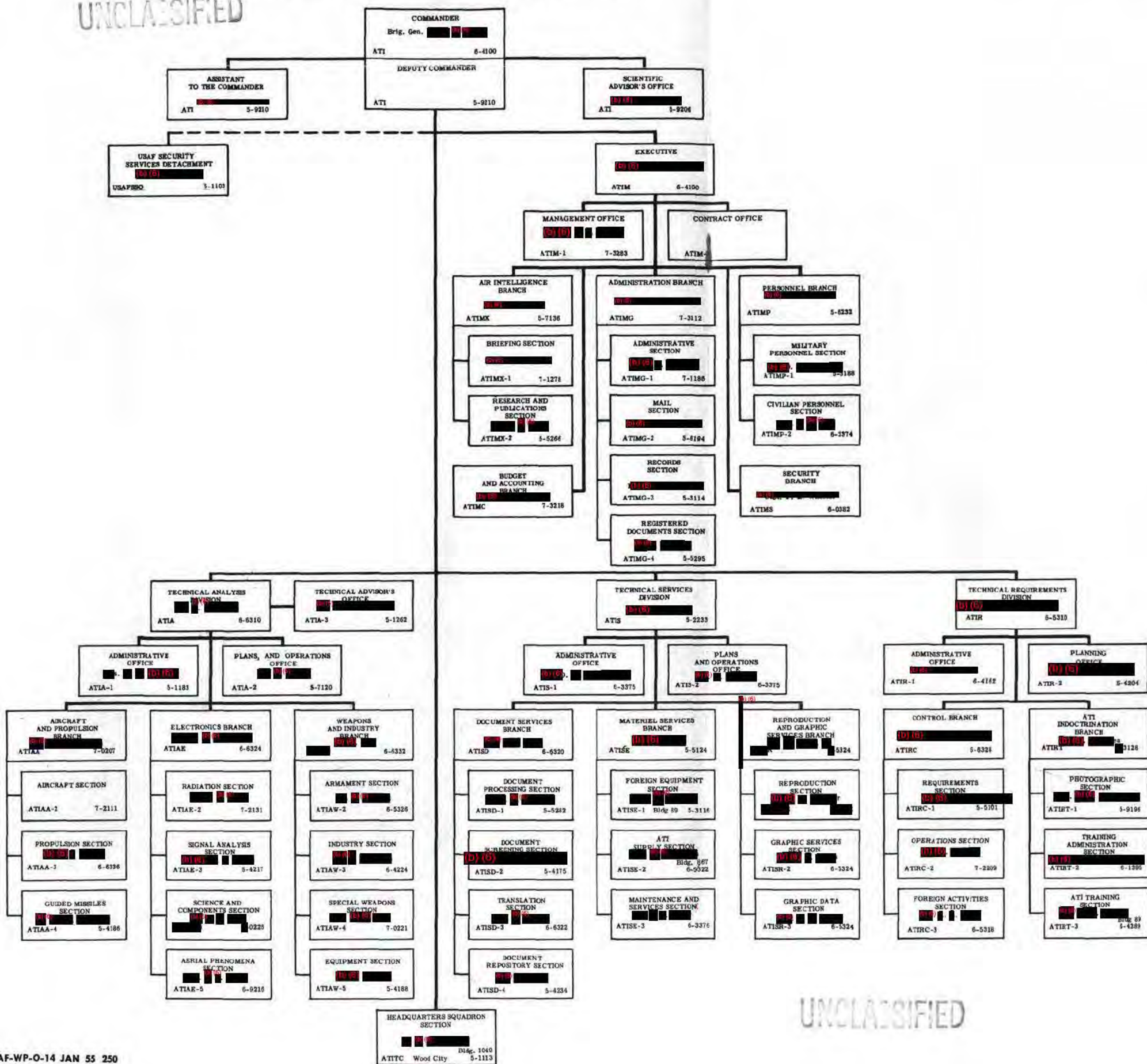
The chart on the following page reflects the principal organizational changes effected 7 December 1954.

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# ATIC ORGANIZATIONAL DIRECTORY CHART

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# OFFICE OF THE COMMANDER

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OFFICE OF THE COMMANDER

I. ORGANIZATION, FUNCTIONS, AND PERSONNEL

On 7 December 1954, the office and functions of the Executive, which included the Internal Security Office, was transferred from the Office of the Commander and established as a separate staff office.<sup>1</sup>  
(Uncl)

On 15 September 1954, Brigadier General (b) (6) who had previously been assigned to the staff of Headquarters, Allied Forces Southern Europe, reported for duty and assumed command of the Air Technical Intelligence Center,<sup>2</sup> replacing Colonel (b) (6).<sup>3</sup> Colonel (b) (6), (b) (3) (E) was assigned as Deputy Commander on the same date.<sup>3</sup> Effective also on the same date, Colonel (b) (6) was relieved from duty as Deputy Commander and assigned to duty as Executive to replace (b) (6),<sup>4</sup> who, since 7 September 1954, had served as Chief, Technical Requirements Division with additional duty as Executive.<sup>5</sup> On 26 November 1954, (b) (6) was relieved from duty

1. 1125th USAF FAG (ATIC), GO #34, 7 Dec 54.

2. Hq 7100th Sup Wg (USAFE), SO #77, 5 Aug 54.

3. 1125th USAF FAG (ATIC), GO #25, 15 Sep 54.

4. Ibid

5. 1125th USAF FAG (ATIC), GO #22, 7 Sep 54.

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as Executive and was assigned to the Office of the Scientific Advisor as a Special Advisor.<sup>6</sup> Colonel (b) (6) was assigned as Executive on 26 November 1954.<sup>7</sup> (b) (6) was relieved from duty as Deputy Commander and assignment to 1125th USAF FAG (Air Technical Intelligence Center) on 3 December and reverted to inactive status to accept a position in industry.<sup>8</sup>

The establishment of the Executive as a separate staff office on 7 December 1954 resulted in the following decrease in the manpower authorizations and positions in the Office of the Commander:

1	colonel	Administrative Staff Officer
1	major	Administrative Officer
1	master sergeant	Administrative Supervisor
1	GS-3, clerk-stenographer	
1	GS-3, receptionist	

The manpower authorizations in the Office of the Commander at the close of this period were:

2	officers (1 brigadier general; 1 colonel)
1	airman (A/1C)
6	civilians (2 GS-15s; 1 GS-6; 2 GS-5s; 1 GS-3)

The key personnel assigned were:

Commander	Brigadier General (b) (6)
-----------	---------------------------

6. 1125th USAF FAG (ATIC), PEPAM 82, 1 Dec 54.

7. 1125th USAF FAG (ATIC), GO #31, 26 Nov 54, as amended by GO #33, 6 Dec 54.

8. DAF, SO #227, 23 Nov 54.

Deputy Commander	(Vacant)
Special Advisor	Colonel (b) (6) (Overage)
Scientific Advisor	(b) (6)
Civilian Assistant	(b) (6)

(Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

(Uncl) ACTIVITIES:

(b) (6) Commander, departed on 23 August 1954 for Europe to visit the Air Technical Liaison Offices in Germany, Sweden, Belgium, France, and England, and to attend, by invitation, the Flying Display and Exhibit of the Society of British Aircraft Constructors at Farnborough, England.<sup>9</sup> (b) (6) arrived in Wiesbaden, Germany, on 25 August 1954, and departed for Stockholm, Sweden, the following day. In Stockholm he discussed various problems and projects with Colonel (b) (6) Air Attache, and Lieutenant Colonel (b) (6) Chief ATLO. He returned to Wiesbaden on 1 September and there conferred with Brigadier General (b) (6) DCS/Intelligence, USAF and Colonel (b) (6) Chief ATLO, USAF, on urgent problems pertaining to funding and certain classified collection projects being carried out by that office.

On 6 September, Colonel (b) (6), (b) (3) (B) arrived in London, England, to visit the ATL Office and to attend the SBAC Show at Farnborough. At this show he had the opportunity to observe the latest British aircraft

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9. 1125th USAF FAG, Ltr Order #64, 17 Aug 54.



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and component developments. On 8 September he returned to Wiesbaden, Germany to resume discussions with Intelligence personnel at USAFE. He could not visit the ATL Offices in Belgium and France, as originally intended, because of the necessity for spending additional time at Headquarters, USAFE, and because of his desire to return to ATIC prior to arrival of the new Commander on 15 September. He arrived at ATIC 13 September and on 15 September Brigadier General (b) (6), (b) (3), (b) (7) assumed command.<sup>10</sup> (Uncl)

Colonel (b) (6) was admitted to the station hospital at Wright-Patterson AFB, Ohio on 6 December 1954 for observation and treatment, and was still hospitalized at the close of this period. (Uncl)

(b) (6) departed on 10 December 1954 for Headquarters, USAFE, Wiesbaden, Germany,<sup>11</sup> to discuss the advisability of establishing an ATIC Field Office in Europe (FOE) and to define the relationship between ATIC and ATLO. Arrangements were made for setting up the Field Office and a definite understanding of the ATIC - ATLO relationship was agreed upon. General (b) (6), (b) (3), (b) (7) returned to Wright-Patterson AFB, Ohio on 19 December 1954. (Uncl)

A thorough review of the services provided by the Battelle Memorial Institute under the omnibus contract popularly referred to as "Project Stork" was made during the period by a special committee appointed by the Commander. This committee consisted of Colonel (b) (6), (b) (3), (b) (7)

10. Footnote 2, supra.

11. 1125th USAF FAG, Ltr Order #966, 6 Dec 54.

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(b) (6), (b) (3) (B) Deputy Commander, (b) (6) Scientific Advisor, (b) (6) Civilian Assistant to the Commander, and Major (b) (6) Contract Officer assigned to the then existing Policy and Management Office. After considering the Committee report and other factors, the Commander decided that Project Stork control should be transferred from Technical Analysis Division to the newly established Contract Office under the Executive.<sup>12</sup> (b) (6) working directly under the Commander, was placed in charge of the project temporarily until a new set of procedures have been worked out and are firmly established. Administrative controls were established to approve requirements placed on the contractor, to screen information supplied the contractor, and to continue review of the services and products provided ATIC by the contractor. A series of directives also have been published to carry out the Commander's policies concerning utilization of Project Stork services. (~~CONFIDENTIAL~~) (uncl)

(Uncl) EVENTS:

A meeting sponsored jointly by the ATIC and Wright Air Development Center, was held on 14 and 15 October for a group of field representatives of Central Intelligence Agency. Lieutenant General (b) (6) Deputy Director of the CIA, attended the meeting on 15 October 1954. The purpose of the meeting was to brief the CIA Field Representatives on the mission and requirements of ATIC, and to bring them up to date on the state of the art in USAF research and development.<sup>13</sup> (CONFIDENTIAL)

<sup>12</sup>. See page 14, infra.

<sup>13</sup>. Project 40018: Collection of ATI Info - Domestic

Air Vice Marshal of the Royal Air Force (b) (6), (b) (3) (B) [REDACTED] CBE, DFC, Assistant Chief, Air Staff, Intelligence, of the British Air Ministry, arrived at Wright-Patterson AFB, Ohio, on 11 November for briefing and orientation on the mission and certain operations of the ATIC. After briefings by each division chief and discussion in the Commander's Office, Vice Marshal (b) (6), (b) (3) (B) [REDACTED] was conducted on an automobile tour of Wright-Patterson AFB and especially Wright Air Development Center and the flight line. (Uncl)

(b) (6) [REDACTED] and (b) (6) [REDACTED] of Sweden, who visited ATIC during the previous reporting period, again visited the Center, accompanied by Major (b) (6), (b) (3) (B) [REDACTED] a technical officer of the Air Materiel Staff of the Swedish Air Force. The visitors arrived 5 December, and on 6 December they conferred with General (b) (6), (b) (3) (B) [REDACTED] and key personnel of the Center. They returned to Washington, D. C. late in the afternoon, 6 December. (Uncl)

PROBLEM:

(Uncl) Proposed Establishment of Operations Office. Plans for the proposed Operations Office which was described briefly in the previous installment of the history were completed, but implementation of these plans was held in abeyance after notification in July that Brigadier General (b) (6), (b) (3) (B) [REDACTED] had been assigned as Commander, ATIC, effective 15 September. Although the Executive was established as a staff office on 7 December 1954 in a manner similar to the proposed organization for the Management Group of the Operations Office, its scope was modified. The Commander, ATIC, at the present time, has the proposal for establishment of the Operations Office under advisement. (Uncl)



(Uncl) ACTIVITIES OF HEADQUARTERS SQUADRON SECTION:

Effective 15 July 1954, one position, Assistant Morning Report Clerk (AFSC 73231), was cancelled as required by the reduction in strength directed by Director of Intelligence, Headquarters, USAF.<sup>14</sup>

The program for improvement of the Airmen's barracks, orderly room, and day room, continued and considerable progress was made on all buildings. Most of the work was done by airmen of the organization.

At the end of the period First Lieutenant (b) (6) was Commander of Headquarters Squadron Section.

Personnel authorization was eight, including the Commander, and there were eight assigned. (Uncl)

(Uncl) USAF SECURITY SERVICES DETACHMENT:

The activity, a detached service from Kelly Air Force Base, San Antonio, Texas, continued to furnish ATIC with expeditious and secure service in the receipt, storage, transmission, and distribution of special intelligence.

At the end of the period Captain (b) (6) was the officer in charge of the activity. In August 1954, Captain (b) (6) replaced (b) (6) (b) (6) as ATIC liaison representative to the Security Services Detachment. Mr. (b) (6), (b) (3) (B) was assigned to the ATL Office in Germany. (Uncl)

<sup>14</sup>. D/F fr Policy and Management Office, ATIC, 15 Jul 54, Subj: Canc of Auth Pos.

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# **THE EXECUTIVE OFFICE (ATIM)**

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## THE EXECUTIVE ORGANIZATION

## I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

The Executive Organization is currently the only staff office in the Air Technical Intelligence Center. It was formed 7 December 1954<sup>1</sup> by removing the position of the Executive from the Office of the Commander and consolidating under the Executive's direction all the staff-administrative and services functions formerly performed by the Policy and Management Office<sup>2</sup>, the Adjutant's Office, the Security Office<sup>3</sup>, and the Air Intelligence Office. (Uncl)

In addition to the functions transferred to the Executive organization with this major reorganization, two functions were added:

Public relations and public information, previously not assigned to any specific component. (Uncl)

Protocol and superintendence of visits of important persons to the Center, previously the responsibility of the ATI Indoctrination Branch, Technical Requirements Division. (Uncl)

1. 1125th USAF FAG (ATIC): GO 34, 7 Dec 54
2. The Policy and Management Office was discontinued with the formation of the Executive Organization. The office symbol for the Policy and Management Office, ATIM, was assigned to the Executive.
3. Functions and personnel of the former Internal Security Branch, Inspector General's Office, were transferred to the Office of the Commander and placed under the supervision of the Executive when the Inspector General's Office was abolished, 3 May 54 (1125th USAF FAG (ATIC): GO 13, 3 May 54). The Security Office ceased to exist as an organizational entity when its functions were thus transferred.



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This reorganization consolidated all the functions not directly related to the Center's primary mission, production of air technical intelligence, under one head and reduced the number of major components from six to four. (Uncl)

The primary purpose of the Executive Organization is to keep the Commander informed on all matters affecting the Air Technical Intelligence Center; to transmit the Commander's decisions, orders, and instructions to appropriate components and insure compliance thereto; to centralize and correlate administration and management matters; and to provide those administrative services that can best be performed by a centralized office. (Uncl)

The Executive Organization consists of two offices and five branches with specific responsibilities as follows:

The Management Office, formerly the Management Analysis Branch of the Policy and Management Office, responsible for organizational structure, manpower, systems, procedures, and general management practices. (Uncl)

The Contract Office<sup>4</sup>, a new organizational entity, responsible for the over-all management of Air Technical Intelligence Center contracts. (Uncl)

The Budget and Accounting Branch, formerly a branch with the same name under the Policy and Management Office, responsible for budget administration, financial planning, fiscal and cost accounting. (Uncl)

4. The Contract Office had not been activated at the close of the reporting period.

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The Personnel Branch, formerly a branch with the same name under the Policy and Management Office, responsible for the Air Technical Intelligence Center personnel program and services.

(Uncl)

The Administration Branch, formerly the Adjutant's Office, responsible for standard administration services provided by an adjutant. (Uncl)

The Security Branch, a re-established organizational entity<sup>5</sup>, responsible for the Air Technical Intelligence Center security program which includes personnel clearances, security indoctrination, physical security, and personnel investigations. (Uncl)

The Air Intelligence Branch, formerly the Air Intelligence Office, responsible for intelligence services for the Air Materiel Command and the Wright Air Development Center, primarily; intelligence periodicals; oral briefings; public information and public relations; visitors and protocol. (Uncl)

Authorized manpower and assigned strength for the Executive Organization at the close of the period were:

	<u>Officers</u>	<u>Airmen</u>	<u>Civilian</u>	<u>Total</u>
<b>Executive's Office</b>				
Authorized	2		1	3
Assigned	1		1	2
<b>Management Office</b>				
Authorized	1		5	6
Assigned	1		4	5

5. Footnote 3, supra.

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	<u>Officers</u>	<u>Airmen</u>	<u>Civilians</u>	<u>Total</u>
<b>Contract Office</b>				
Authorized	1			1
Assigned	0			0
<b>Budget &amp; Accounting Branch</b>				
Authorized	2	1	5	8
Assigned	2	1	5	8
<b>Personnel Branch</b>				
Authorized	2	5	5	12
Assigned	2	6	4	12
<b>Administration Branch</b>				
Authorized	3	8	17	28
Assigned	3	9	16	28
<b>Security Branch</b>				
Authorized	1	1	2	4
Assigned	2	1	2	5
<b>Air Intelligence Branch</b>				
Authorized	2	5	7	14
Assigned	1	6	7	14
<b>Total</b>				
Authorized	14	20	42	76
Assigned	12	23	39	74

(Uncl)

During the period, the following changes occurred in the key personnel of the components that later became a part of the Executive organization:

On 5 August 1954, Captain (b) (6), reported from Headquarters, Central Air Materiel Area, France, as replacement for Captain

6. Hq. 7012th Personnel Processing Section; SO 175, par. 5, 21 Dec 54.

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(b) (6), (b) (3) (B) Security Officer, who departed 7 September 1954, for overseas assignment. (Uncl)

On 6 September 1954, 1st Lieutenant (b) (6), Assistant Adjutant and Top Secret Control Officer, resigned from the service. Lieutenant (b) (6), (b) (3) (B) was replaced by 1st Lieutenant (b) (6) who had reported 18 August 1954. (Uncl)

On 23 September 1954, Lieutenant (b) (6), (b) (3) (B) replaced Major (b) (6) as Adjutant<sup>10</sup>. (b) (6) transferred to the USAF Recruiting Service effective 1 October 1954. (Uncl)

On 27 September 1954, 1st Lieutenant (b) (6) was assigned as chief of the Air Intelligence Office, succeeding Lieutenant Colonel (b) (6) who was reassigned to the 30th Air Division, Willow Run, Michigan<sup>11</sup>. (Uncl)

On 26 November 1954, Colonel (b) (6) Chief of the Policy and Management Office, was assigned additional duty as Acting Executive Officer, vice Colonel (b) (6) relieved. On 6 December 1954, the orders were amended to make Colonel (b) (6), (b) (3) (B) the executive officer, as originally intended, instead of "acting"<sup>12</sup>. When the Executive Organization was formed on 7 December 1954 the position of Chief,

7. 1125th USAF FAG (ATIC): SO 106, par. 4, 12 Aug 54.
8. 1125th USAF FAG (ATIC): SO 105, 11 Aug 54.
9. 1125th USAF FAG (ATIC): PERAM 38, 31 Aug 54, amended by PERAM 60, 8 Sep 54.
10. 1125th USAF FAG (ATIC): GO 26, 23 Sep 54
11. 1125th USAF FAG (ATIC): PERAM 68, 29 Sep 54; SO 116, 1 Sep 54.
12. 1125th USAF FAG (ATIC): GO 31, 26 Nov 54, amended by GO 33, 6 Dec 54.

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Policy and Management Office was abolished. (Uncl)

On 1 December 1954, Major (b) (6)<sup>13</sup>, Contract Administrator, office of the Chief, Policy and Management Office, transferred to Headquarters, AMC. With (b) (6) transfer, the position of contract administrator was abolished, the work to be absorbed by the newly established Contract Office and the Budget and Accounting Branch. The allotment for (b) (6) former position was transferred to the Budget and Accounting Branch and was filled by 2nd Lieutenant (b) (6)<sup>14</sup>, accountant, 14 December 1954. (Uncl)

On 3 December 1954, Major (b) (6)<sup>15</sup> was assigned as Adjutant, and Lieutenant (b) (6), (b) (3) (B) reverted to her original assignment as Assistant Adjutant and Top Secret Control Officer. (b) (6) was formerly the chief of the Documents Services Branch, Technical Services Division. (Uncl)

On 23 December 1954, Captain (b) (6)<sup>16</sup>, who had been serving with 316th Air Division (Def) Morocco, reported and assumed duties as Security Officer on 27 December 1954, which relieved Captain (b) (6), (b) (3) (B) who was awaiting reassignment. (Uncl)

13. 1125th USAF FAG (ATIC): SO 142, 10 Nov 54.

14. 1125th USAF FAG (ATIC): FERAM 84, 14 Dec 54.

15. 1125th USAF FAG (ATIC): GO 32, 3 Dec 54.

16. Hq. 7210th Personnel Processing Section: SO 276, 15 Nov 54.



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At the end of the period, key personnel were:

Executive	- Colonel (b) (6)
Chief, Management Office	- Lt. Colonel (b) (6)
Chief, Contract Office	- (not designated)
Chief, Administration Branch (Adjutant)	- Major (b) (6)
Chief, Personnel Branch	- Major (b) (6)
Chief, Budget and Accounting Branch	- Captain (b) (6)
Chief, Security Branch (Security Officer)	- Captain (b) (6)
Chief, Air Intelligence Branch	- Lieutenant (b) (6)
(Uncl)	

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## II. ACTIVITIES, EVENTS, PROBLEMS

ATIC FINANCIAL PROGRAMS:

(Uncl) Budget Estimates, FY 1956. In July, 1954, revision of the ATIC budget estimates for fiscal year 1956 resulted in a reduction of \$50,000 in Project 731 funds. No change was made in the other budget project estimates. Revised budget estimates for FY 1956 are:

Project 481, "Command Administration"	\$1,715,950
Project 731, "Contingencies"	2,389,000
Project 443, "Schools and Training"	45,253
Sub-Project 531.10, "PCS Movement of Military Personnel within Major Commands in Zone of Interior"	6,035
Total	\$4,156,238

~~(Uncl)~~  
(unclas)(Uncl) Financial Plans, FY 1955:

Financial plans for the second quarter of FY 1955 were revised to provide for a signal analysis facility within the Center. Establishment of this facility required an increase of \$143,817 over the FY 1955 budget authorization. (Uncl)

A change in funding Project 731 by sub-allocation instead of allotment, 1 October 1954, enabled the Center to allot funds to overseas offices. (Uncl)

(Uncl) Appropriation Accounting:

The most significant change in accounting procedure was the establishment of the Center as a fiscal station with responsibility for the fiscal accounting of 731 funds, effective 1 July 1954. (Uncl)

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A change in the method of funding ATL offices by allotment in lieu of obligation authorities was accomplished for Austria and Japan on 1 October 1954. The changeover to this method of funding the ATL office in Germany was pending as the period closed. (Uncl)

The new Air Force system of accounting as established in AFM 177-1 was installed on 1 July 1954. (Uncl)

(Uncl) Status of Funds. The status of current ATIC funds at the close of the period was as follows:

Project 731 - Contingency Funds:

Annual Budget authorization	\$1,988,000
Allotments	1,400,000
Commitments	1,179,171
Obligations	958,900
Uncommitted Balance	808,829
Percent Utilization	59.3%

Project 481 - Command Administration Funds:

Annual Budget Authorization	\$1,698,996
Allotments	964,000
Commitments	923,642
Obligations	841,182
Unobligated Balance	82,460
Percent Utilization	54.5%

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(unclas)

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(Uncl) ATIC MANPOWER:

(Uncl) Authorizations. It was not until 13 July 1954 that the ATIC<sup>17</sup> was notified that a new personnel allotment voucher, issued 21 June 1954, had reduced its military authorizations by 18 officers and 6 airmen and had changed 8 lieutenant authorizations to warrant officers. On 30 July 1954, another PAV (personnel allotment voucher)<sup>18</sup> was issued, increasing officer authorizations by 10, changing 1 civilian allotment from ungraded to graded, and transferring 2 graded civilian positions from command administration<sup>19</sup> to schools and training.<sup>20</sup> As a result of these changes, manpower authorizations and grade ceilings for ATIC at the end of the period differed from those at the beginning of the period, as follows:

	<u>1 July 1954</u> <u>Allotment</u>	<u>31 December 1954</u> <u>Allotment</u>	Difference
Officers	196	188	- 8
Airmen	111	105	- 6
Civilians	327	327	0
Total	634	620	-14

(~~CONFIDENTIAL~~)  
(unclas)

17. PAV 89/4-15, 21 Jun 54.

18. PAV 91/6, 30 Jul 54.

19. Budget Project 481.

20. Budget Project 443.

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(Uncl) Grade Ceilings. Grade ceilings compared as follows:

	<u>1 July 1954</u> <u>Grade Ceilings</u>	<u>31 December 1954</u> <u>Grade Ceilings</u>	<u>Difference</u>
Gen Ofcrs & Colonels	12	12	0
Lt Colonels	27	29	+ 2
Majors	44	45	+ 1
Captains	75	71	- 4
Lieutenants	38	23	-15
Warrant Officers	0	8	+ 8
Master Sergeants	23	23	0
Technical Sergeants	23	22	- 1
Staff Sergeants	20	20	0
Airmen 1/C	21	20	- 1
Airmen 2/C	22	18	- 4
Airmen 3/C	2	2	0
Graded Civilians	312	313	+ 1
Wage Board Civilians	15	14	- 1

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(Uncl) Distribution of Manpower Authorizations. Manpower authorizations at end of the period for ATIC components were as follows:

	<u>Total</u>	<u>Civilians</u>	<u>Officers</u>	<u>Airmen</u>
ATI - Office of the Commander	8	5	2	1
ATIM - Office of the Executive	76	42	14	20
ATIR - Technical Requirements Div	216	56	110	50
ATIA - Technical Analysis Div	165	114	43	8
ATIS - Technical Services Div	144	107	18	19
ATTTC - Hq Squadron Section	8	0	1	7
Manpower Pool	<u>3</u>	<u>3</u>	<u>0</u>	<u>0</u>
TOTAL	620	327	188	105

(~~CONFIDENTIAL~~)  
(uncl) (60)

(Uncl) Personnel Strength. At the end of the period, 181 officers, 113 airmen, and 304 civilians were assigned, making a total of 598 persons as compared to a total of 574 at the beginning of the period (162 officers, 113 airmen, 299 civilians). Civilian strength increased 5 and officer strength 19, while airman strength remained constant. Average strength for officers throughout the period was 173, for airmen 112.

(Uncl)

(Uncl) Personnel Turnover. During the period, 43 officers left the Center and 63 processed in, 25 airmen left and 25 reported in, 36 civilians left and 41 were added to the rolls. Nine of the officers and the same number of the airmen separated from the service, while 34 officers and 16 airmen were transferred. (Uncl)

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(Uncl) Other Personnel Changes. In addition to personnel gains and losses, 37 civilians,<sup>21</sup> 2 officers, and 18 airmen were promoted. Thirty-five civilians were changed to lower grade,<sup>22</sup> and 2 airmen were reduced in grade. Thirty-one civilians were reassigned without change in grade. (Uncl)

(Uncl) ATIC Position Structure. During the period, 20 new positions were established, 24 positions cancelled, 23 positions were reclassified, and the title of 9 positions were changed without change in duties or grade. Based on the 327 civilian positions authorized, this represents approximately a 20 percent change in position structure, which is a reduction of 115 percent over the preceding period. (Uncl)

(Uncl) Freeze on Position and Personnel Actions. To prevent further personnel and position changes until pending organizational changes could be decided, a freeze was placed on position and personnel actions, 15 December 1954.<sup>23</sup> (Uncl)

(Uncl) ATIC ORGANIZATION:

In addition to the major reorganization resulting from the combination of all staff functions into the Executive organization,<sup>24</sup> several minor organizational changes occurred. (Uncl)

21. Twenty of the promotions resulted from the position classification survey completed 30 Jun 54.
22. Thirty-two of the changes to lower grade resulted from the position classification survey completed 30 Jun 54.
23. Memo fr ATIM to Divisions and Staff Offices, 15 Dec 54, "Freeze on Position and Personnel Actions".
24. Page 14, supra.

On 15 July 1954, the ATIO Processing Section of the Personnel Branch was discontinued,<sup>25</sup> the functions being absorbed by the Civilian Personnel Section of this branch. On the same date, the Plans, Operations and Administrative Office of the Technical Analysis Division was divided into two offices: the Administrative Office, and the Plans and Operations Office.<sup>26</sup> (Uml)

On 5 October 1954, the Flight Operations Office in the Technical Services Division was discontinued and the functions, equipment and personnel transferred to the Training Section, ATI Indoctrination Branch, Technical Requirements Division.<sup>27</sup> (Uml)

(Uml) ATIC Organizational and Directory Chart. Two revisions of the ATIC Organizational and Directory Chart were made during the period. The first was published in August 1954<sup>28</sup>; the second, in January 1955, is included in this edition of the history.<sup>29</sup> (Uml)

(Uml) New Plan for Organizational Approval. As an aid to stabilizing internal organization, a new plan for approving organizational proposals was adopted during the period. This plan entails operation of the proposed organization on a trial basis for a limited period of time before the organization is officially established. (Uml)

25. 1125th USAF FAG (ATIC): GO 17, 15 Jul 54.

26. Ibid.

27. 1125th USAF FAG (ATIC): GO 29, 5 Oct 54.

28. Aug 54 edition of the ATIC chart was included in the "History of the Air Technical Intelligence Center, 1 Jan - 30 Jun 54", p.3.

29. Page 3 .

(Uncl) Survey of Separated Personnel.<sup>30</sup> This project continued but the rate of response decreased considerably. (Uncl)

(Uncl) Performance Requirements Program.<sup>31</sup> Semi-annual supervisory conferences on this program were held in August 1954. Representatives of the Headquarters, AMC Central Civilian Personnel Office and of the AMC Staff Civilian Personnel Division attended as guests of the ATIC. Following these conferences, a number of requests for information concerning the ATIC program were received from Air Materiel Command components. (Uncl)

(Uncl) ATIC Project Control System. Work on revision of this system was suspended because of change in commanders. (Uncl)

(Uncl) Development of Supervisory Personnel. There was no major activity on a Center-wide basis in relation to this program. However, within the divisions much was accomplished informally in supervisory development through the efforts of the division officials and the Central Civilian Personnel Office's placement and employee relations advisor. (Uncl)

(Uncl) Monthly Meetings of Personnel. One meeting was held, 17 September 1954, in the cafeteria of Bldg. 280, to welcome the new commander, Brigadier General (b) (6). Both Colonel (b) (6), (b) (3) (B) the outgoing commander, and General (b) (6), (b) (3) (B) addressed the assembled group of military and civilian personnel. (Uncl)

30. History of ATIC, 1 Jan 54 - 30 Jun 54, page 26.

31. History of ATIC, 1 Jan 54 - 30 Jun 54, page 27.



(Uncl) Civilian Employees Committee: A reorganization of the Civilian Employees' Committees on Wright-Patterson AFB led to establishment of a new ATIC Civilian Employees Committee, superseding the old committee. Under the new plan, organization of Employees' Committees was made optional with components and tenant organizations on the base. The outgoing committee for the ATIC recommended continuance of the committee system in ATIC and it was approved by the Commander. Accordingly, in October 1954, a new ATIC Civilian Employees Committee was formed under an ATIC office instruction.<sup>32</sup> (b) (6) is Chairman and (b) (6) is Vice Chairman of the Committee. (b) (6) also serves as the ATIC representative to the Wright-Patterson AFB Civilian Advisory Council and (b) (6), (b) (3) (B) is his alternate. (Uncl)

This committee has held regular monthly meetings and has considered problems pertaining to improvement of physical working conditions, has promoted the base-wide "Litter Bug" campaign within the ATIC, and is screening a number of employee complaints for future study and advice to the Commander. (Uncl)

(Uncl) Policy Directives. In December 1954, a new type of directive was established, the ATIC Policy Directive. This type of publication is issued over the Commander's signature for the purpose of transmitting his personal desires and decisions. Hereafter, functions assigned to components will be published as policy directives rather than in an organization and functions manual. (Uncl)

<sup>32</sup>. ATIC OI 14-4, 11 Oct 54.



(Uncl) Records Management:

(b) (6) of the Headquarters USAF Records Management Office visited the Center 11-13 October 1954 to inspect the ATIC Records Management Program. (b) (6) expressed satisfaction with the program as a whole. (Uncl)

On 20 and 21 October 1954, the Headquarters AMC Civilian Training Unit, in conjunction with the ATIC Records Officer, conducted a brief course of instruction for ATIC personnel on the standard AF filing system. (Uncl)

Change-over to the AF subject classification filing system was approximately 90% completed by the end of the calendar year. Complete change-over was planned to be effected by 1 January 1955. Delay in revision of the ATIC Project Control System made impossible meeting this target date. (Uncl)

A number of changes contained in the revision of the AF manual on records disposition<sup>33</sup> will necessitate amendment or complete revision of all ATIC Records Control Schedules by April 1955. (Uncl)

(Uncl) Registered Documents and Top Secret Control:

Control of code words and nicknames was added to the responsibilities of this activity during the period. (Uncl)

An initial inventory of all Top Secret material was begun 6 September 1954 and completed 4 October 1954. A policy was established to conduct inventory semi-annually, with inspections annually. (Uncl)

33. AFM 181-5, "Disposition of Records", 1 Aug 54.

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The ATIC office instruction<sup>34</sup> implementing and interpreting security regulations was revised and published incorporating the recent numerous changes in the USAF security system for safeguarding highly classified security information. (Uncl)

A reduction of files, accomplished during the period, relieved the space problem considerably, not only in the registered documents storage area, but in the ATIC repository as well. Strict adherence to records control schedules is necessary to keep this problem under control. (Uncl)

(Uncl) Air Intelligence:

A survey of the needs of a selected group of USAF installations to receive intelligence publications was completed 5 October 1954. The results of this survey were used to revise distribution lists. (Uncl)

Air Research and Development Command made informal request on 6 December 1954 that the title of the briefer disseminated to Wright Air Development Center activities be changed from "ATIC-WADC Briefer" to "ATIC-ARDC Briefer" and distribution expanded to include all activities of the ARDC. This was approved by the Commander, ATIC, to be effective upon receipt of formal request. (Uncl)

At the end of the period plans were well under way to survey the effectiveness of oral briefings to WADC activities. (Uncl)

(Uncl) Security Program:

Requests for 92 security clearances for new personnel were initiated during the period, 74 final clearances were granted, and 62 were pending

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34. ATIC OI 205-5.

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at the close of the period. Eighty clearances were cancelled because of personnel transfers and separations. Eight persons were denied security clearances for ATIC assignment. (Unc1)

Throughout the period, increased emphasis was given to the prevention of security violations, chiefly through education provided by the Unit Security Officer Program. (Unc1)

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**TECHNICAL SERVICES  
DIVISION  
(ATIS)**

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## TECHNICAL SERVICES DIVISION

## I. ORGANIZATION, FUNCTIONS AND KEY PERSONNEL

During the second half of the year 1954, there were no major changes in the organization structure or assigned functions of the Technical Services Division.

The following changes of key personnel were effected:

Major (b) (6) was relieved of assignment as Chief, Document Services Branch, on 8 December 1954 and reassigned to the Executive Office for appointment as Adjutant.<sup>1</sup>

Major (b) (6) who had reported to ATIC from Headquarters, USAFE, was assigned as Chief, Documents Services Division on 8 December 1954.<sup>2</sup>

GWO (b) (6) was assigned to 2750th USAF Hospital, Wright-Patterson Air Force Base, Ohio, and was retired from active service 30 November 1954.<sup>3</sup>

There were no changes in manpower allotments or position assignments during the period.

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1. 1125th USAF FAG (ATIC), PERAM 83, 8 Dec 54.

2. Ibid.

3. 1125th USAF FAG (ATIC), SO 99, 3 Aug 54.

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The following were key personnel of the division at the end of the reporting period:

Chief, Technical Services Division

Chief, Documents Services Branch

Chief, Materiel Services Branch

Chief, Reproduction & Graphic Services Branch

Manpower allotments and assignments as of 31 December 1954:

	AUTHORIZED	ASSIGNED	
OFFICERS	18	18	
AIRMEN	19	19	
CIVILIANS	107	99	(Uncl)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

### DOCUMENT SERVICES BRANCH:

An average of approximately 9000 documents were received monthly, of which 55 percent were discarded after pre-screening; the remaining 45 percent were completely processed and disseminated to interested activities. The high percentage of documents discarded were primarily made up of Foreign Broadcasting Information Service cards, Wringer,<sup>4</sup> and Treasure Island<sup>5</sup> reports. The afore-mentioned reports have little or no technical value to ATIC. A study was made of the various documents received and how each fills the technical requirements of ATIC. Of the 45 percent of these reports that are utilized by ATIC only about 15-18 percent are finally discarded as having no value to our technical analysts. (UNCLAS)

4. Interrogation of repatriates from the Soviet orbit.

5. Abstracts of open source Slavic periodicals.

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As a result of discussions held between personnel of Air Information Division of Library of Congress and ATIC during the past several months, approximately 750 Russian language books received by ATIC prior to July 1953 were transferred to AID, Library of Congress.<sup>6</sup> This Center will receive in lieu of the books, identification cards listing pertinent abstracts prepared by AID from the books. (Uncl)

An investigation into the feasibility of establishing an ATIC Office in the New York City area for accomplishment of translations by technically qualified translators on an individual contract basis revealed the following facts:<sup>7</sup>

Security problems would be increased since clearances would have to be made piecemeal as the need for the individual translators arose.

The cost of an office in New York would be prohibitive both from budget and manpower considerations.

Translations accomplished by an individual translator would undoubtedly vary in form, quality, and accuracy in the same ratio as the number of personnel employed.

Reproduction facilities would be extremely limited if not nonexistent.

As a result of these conclusions a decision was made to abandon the idea of establishing a New York office. (~~CONFIDENTIAL~~)  
(unclas)

A plan has been put into effect whereby ATIC, AID and CIA are jointly responsible for the abstracting of Soviet technical and scientific

6. Ltr to ATIC fr Air Information Division, Library of Congress, 8 Dec 54.

7. History of ATIC, 1 Jan 54 - 30 Jun 54, page 49.

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periodicals received in the United States. Abstracts of these periodicals provide the "user" with a comprehensive summary of information not hitherto exploited. (~~CONFIDENTIAL~~)  
(Uncl)

The work project of indexing ATIC publications was again studied. This project was initiated some time ago but has been hampered by the pressure of other work with a higher priority.<sup>8</sup> (Uncl)

The problem of personnel shortages has been greatly alleviated by the assignment of additional military personnel. The lack of personnel, however, to fill civilian positions (Clerk Typist GS-2) has continued to seriously handicap the operation of the branch during the entire reporting period. (Uncl)

MATERIEL SERVICES BRANCH:

This branch was given the additional responsibility of coordinating and checking all specific requests for information for foreign equipment being requested for exploitation purposes. This procedure was established to prevent duplication of acquisition by ATIC of items already available within other services. To facilitate the carrying out of this responsibility, the information contained in Joint Technical Intelligence Sub-Committee reports,<sup>9</sup> (Notification of Receipt, Enemy or Foreign Materiel) was entered on 5 X 8 cards and filed under general subjective headings. ATIC provided the committee with one office and one civilian to aid in this compilation. Listings have been completed. (Uncl)

8. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 48.

9. A committee of the Joint Technical Intelligence Service.

During the early part of November 1954, the Commander, ATIC, authorized a Centralized Signal Analysis Program to be conducted by the Technical Analysis Division. The Technical Services Division participation in this project called for monitoring, and providing for, the modification of the assigned building and procuring the necessary signal analysis equipment and modification items for the building. The deadline set by the Commander for the completion of this project was such that the normal workload within the Branch Office, the ATI Supply Section, and the Maintenance and Services Section, was set aside and all effort was concentrated on this requirement. Close and constant liaison was maintained with Air Installations and Base Procurement. Completion of the project was set for 31 January 1955. (Uncl)

During this period the Foreign Equipment Section received and processed 480 items weighing 21,000 pounds. Of this total, 332 have been distributed to analysts for action.<sup>10</sup> (Uncl)

There were 3,672 pictures taken of nameplates and marking data.<sup>11</sup> By 10 December 1954, all old film containing markings and nameplate data had been assembled in numerical order and filed in the Foreign Equipment Section for use by all services. This task was performed by the Reproduction Section and the Foreign Equipment Section, and three months were required to complete it. (Uncl)

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10. Project 60001: Handling of Foreign Equipment.

11. Project 60002: Nameplate and Marking Data.



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On 2 November the Foreign Equipment Section received a DEFA Type 541 French 30mm Aircraft Automatic Gun, which embodies revolver type operating principles. This gun aroused considerable interest among the Armament analysts of the Technical Analysis Division. It has been shipped to a civilian contractor for further analysis and evaluation. (Uncl)

PHYSICAL CHANGES:

The ATI Supply Section was moved from Building 278 to Building S-867. The new office and warehouse substantially increased the supply facilities for the Center. (Uncl)

Repainting of the main building occupied by the Center was started during the period and about 50 percent of the task was completed. (Uncl)

PROBLEMS:

The primary problem in Technical Services Division has been the unusual number of crash priority procurement requests. In the month of December for instance, 24 priority Purchase Requests were processed. Continuation of this trend could cause a real and definite personnel problem. The personnel available was not sufficient to handcarry such items, provide the constant liaison required, and maintain the normal workload. (Uncl)

The location of Building 89, in relation to Headquarters, ATIC (Building 263) handicaps the effectiveness of the Foreign Equipment Section and the Technical Analysis Division. Plans have been completed and work has started on modification of a building, very close to the ATIC main building, which will be occupied by the Foreign Equipment Section upon completion. (Uncl)

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REPRODUCTION AND GRAPHIC SERVICES BRANCH:

The Graphic Data Section was fully staffed at the close of the period and in total operation for the first time since it has been established.

(Uncl)

A Lith-Master No. 4 Camera was placed in operation in the Reproduction Section. This equipment reduces oversize line drawing to fit an 8 $\frac{1}{2}$  X 11 Xerox plate. Prior to the procurement of this equipment it was necessary to have this type of reproduction done by AMC printing plant.

(Uncl)

(b) (6) Chief of Reproduction and Graphic Services Branch, was presented a Superior Accomplishment Award for outstanding achievement. General (b) (6), (b) (3) (b) (6) made the presentation. (Uncl)

The project of cataloging of visual aids was 95 percent completed, and the branch was able to keep up with current production. The remaining 5 percent is made up of old and possibly obsolete aids, which may eventually be discarded.<sup>12</sup> (Uncl)

Average monthly production figures for the branch were as follows:

Reproduction by oxalid, photostat and mimeograph - 7000 pieces.

Reproduction by multilith - 60,000 pieces.

Reproduction by photo offset - 10,000 pieces.

Photographic processes - 55,000 frames.

Photographic interpretation - 1140

Illustrations, (Administrative and Technical) - 285 pieces.

(Uncl)

12. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 48.

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# TECHNICAL REQUIREMENTS DIVISION (ATIR)

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## TECHNICAL REQUIREMENTS DIVISION

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

During the reporting period, the Technical Requirements Division acquired the Flight Operations function from the Technical Services Division.<sup>1</sup> This function was transferred as soon as the ATIC was allocated a C-47D Aircraft (SN 43-48856) to support the special training and classified cargo transport mission. The Flight Operations function was assigned to the ATI Indoctrination Branch since the aircraft will be used primarily for special training purposes. (Uncl)

The following changes in key personnel occurred:

Colonel (b) (6) Chief, ATIR was transferred to Hq 1142d USAF Special Activities Squadron, United States Forces in Austria, effective 1 October 1954.<sup>2</sup>

Colonel (b) (6) who was previously assigned as Executive, was assigned Chief, ATIR, effective 7 September 1954.<sup>3</sup>

Lt Colonel (b) (6) Chief, ATI Indoctrination Branch was transferred to Hq 4th Air Division, SAC, Barksdale AFB, Louisiana, effective 2 November 1954.<sup>4</sup>

1. 1125th USAF FAG ATIC, GO 29, 5 Oct 54.

2. 1125th USAF FAG ATIC, SO 118, 8 Sep 54.

3. 1125th USAF FAG ATIC, PERAM 58, 31 Aug 54.

4. 1125th USAF FAG ATIC, SO 130, 5 Oct 54.

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Major (b) (6) was assigned Chief, ATI Indoctrination Branch, effective 29 October 1954.<sup>5</sup> (Uncl)

In July, this division lost 10 officer authorizations through a mandatory cut of vacant positions; six positions, however, were added to the authorized strength during the month of August. One airman authorization was gained with the transfer of the Flight Operations function. (Uncl)

At the end of the period, the primary mission of the Technical Requirements Division was to consolidate and compile the requirements of the ATIC for air technical and scientific intelligence information, and to locate, recommend, and evaluate means for obtaining this information. The selection, training, guidance, and general administration of field personnel engaged in collection activities were also major responsibilities of this division. In direct support of specialized training given by the ATIC, the Technical Requirements Division was also responsible for the Flight Operations function within the ATIC. (Uncl)

On 31 December 1954, manpower allotments and personnel strength were: 110 officers authorized, 92 assigned; 50 airmen authorized; 48 assigned; and, 57 civilians authorized with 50 assigned. (Uncl)

Organizational components and key personnel at the end of the period were:

Chief, Technical Requirements Division	Colonel
Chief, Planning Office	Lt Col

(b) (6)

5. 1125th USAF FAG ATIC, PERAM 77, 2 Nov 54.

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Chief, Control Branch

Major

Chief, ATIC Indoctrination Branch

Major

Administrative Assistant

Mrs.

(Uncl)

(b) (6)

## II. ACTIVITIES, EVENTS, AND PROBLEMS

During this reporting period, work progressed on the following projects as indicated:

### (Uncl) COLLECTION PROGRAMS:

(Uncl) REG Program.<sup>6</sup> During August and September target brochures for Postfachs 14 and 405<sup>7</sup> were returned from the Scientific Estimates Committee, Washington, D.C., and forwarded to the Technical Analysis Division where they were reviewed and accepted. The Scientific Estimates Committee returned to the ATIC target brochures for Postfachs 6 and 26 to be rewritten to conform to a revised format. Nine other target brochures were also returned to the ATIC for final editing prior to publication. Editing revealed gaps in the intelligence coverage of Postfachs 908, 648, 456 and 489. Requirements covering these gaps were added and the brochures were returned to Central Intelligence Agency for publication.

~~(SECRET)~~ (u)

### (Uncl) Scientist Program:<sup>8</sup>

Prior to this reporting period the majority of the scientists employed by the ATIC were hired on short-term contracts during the summer

6. Project 40024, Collection of ATIC Info - REG.

7. History of ATIC, 1 Jan 54 - 30 Jun 54, page 56, footnote 10.

8. Project 40016, Collection of ATIC Information (Specialized Personnel).



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months. Requirements for information on specific objectives were not furnished these scientists and as a result the reports prepared following the completion of their overseas tours were of limited air technical intelligence value. (Uncl)

In an effort to improve this program, a procedure was established whereby requirements for coverage of specific fields of air technical intelligence interest were solicited from the Technical Analysis Division; an active recruiting program to obtain qualified scientific personalities was conducted; and the program was expanded to provide for year-round participation. (Uncl)

Under the revised program two new contracts were negotiated, one extended and one terminated. (Uncl)

(Uncl) Scientific Meetings and Trade Fairs:<sup>9</sup>

During the six months covered by this history, advance information on 50 trade fairs and scientific meetings was circulated to the Technical Analysis Division. Fifteen SRI's were initiated. A case folder has been established on each of the meetings and fairs in which the Technical Analysis Division expressed an interest; and, a complete history will be kept on each case. The information will be used later to evaluate the overall productivity of the program. (Uncl)

To further the timely collection of intelligence information, authorization for disbursing 731 Funds for the coverage of meetings and trade fairs was granted the Chief ATLO in USAFE, USFA and FEAF. (~~CONFIDENTIAL~~) (u)

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9. Project 40017, Exploitation of Technical and Scientific Meetings.

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(u)  
~~(CONFIDENTIAL)~~ Domestic Exploitation Program:<sup>10</sup>

From the first of July through the 31st of December, CIA solicited requirements from ATIC on 416 sources. Three hundred thirty-seven (337) requirements were placed on 97 of these sources. Of these requirements, 109 were fulfilled or cancelled, and 196 remain active. ~~(SECRET)~~ (u)

Under the Notification of Foreign Travel Program, ATIC received a total of 280 Notification of Foreign Travel forms and forwarded them to the CIA. Of these sources, 47 were utilized. ~~(CONFIDENTIAL)~~ (u)

(Uncl) General Requirements:<sup>11</sup> Work accomplishments under this project are still being delayed because of lack of personnel who can devote full time to the preparation of general requirements. It has been necessary to continue to utilize the services of the project monitor on other projects of higher priority. During the period, however, ATIC requirements in the field of Environmental Control and Standards were compiled and forwarded to the D/I USAF Screening Panel. (Uncl)

(Uncl) Photo Acquisition:<sup>12</sup>

A working relationship was established with the CIA Graphic Register whereby ATIC can now obtain special priority on requests for graphic reproduction. Previously, the normal amount of time involved in handling requests was from 20 to 30 days. ~~(CONFIDENTIAL)~~ (u)

Arrangements were completed with D/I USAF to assure that the original negatives of foreign airshow fly-bys will be forwarded immediately from the D/I USAF to the ATIC for processing. Prior to this procedure,

10. Project 40017, Exploitation of Technical and Scientific Meetings.
11. Project 40021, Collection of ATI Information (General Requirements).
12. A Sub-Project of Project 40012, Collection of ATI Information (General).

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negatives were processed within the D/I USAF and photographs were forwarded to the ATIC. This often caused a considerable amount of delay in the preparation of special prints for evaluation and in the actual evaluation of the aircraft photographed. (~~CONFIDENTIAL~~) (u)

<sup>13</sup>  
(Uncl) Specific Requests for Information:

On 1 July 1954 there were 200 active SRI's. During the reporting period, 224 SRI's were initiated and 203 were cancelled, leaving 221 active on 31 December 1954. Thirty-two of the SRI's initiated were formulated within the Requirements Section. (Uncl)

Arrangements were made for a monthly list of all SRI's initiated, with a brief abstract of the information requested to be furnished the domestic Air Technical Liaison Officers in order that they might have a better knowledge of current ATIC requirements and thereby increase their reporting effectiveness. (~~CONFIDENTIAL~~) (u)

<sup>14</sup>  
(Uncl) "Blue Fly":

This project remained in a "stand-by" status during this reporting period and was not activated. (Uncl)

A problem arose as to the priority classification assigned to "Blue Fly" project by the 18th Air Force. The liaison officer, Major (b) (6) and the ATIC Project Monitor met and resolved this and other problems of minor importance. As a further result of this conference,

- 
13. Project 40001, Collection of ATI Information - Specific Requests.
  14. Project 40020, Collection of ATI Information - Foreign Equipment and Materiel.

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Hq 62d Troop Carrier Wing (Heavy) put into effect an operations plan which provides for complete support of "Blue Fly" within twelve hours after receipt of an alert notice by that headquarters. (~~SECRET~~) (u)

In order to insure constant availability of qualified personnel for "Blue Fly," four ATIC officers were assigned duty as assistant project monitors. This assignment takes priority over other Operations Section projects when "Blue Fly" is alerted for travel. (~~CONFIDENTIAL~~) (u)

(Uncl) Fly-Bys. The results of the photographic coverage of the Soviet Tushino Air Show held during August 1954 were marginal. Because of the close surveillance within the area, the photographer was seriously hampered in his attempts to photograph the aircraft observed.

(~~SECRET~~) (u)

(Uncl) SPECIAL COLLECTION DEVICES:

(Uncl) Lenses:

The U. S. National Aircraft Show held in Dayton, Ohio, 4, 5 and 6 September, was photographically covered by members of the ATIC. Three pieces of equipment were used: A 24-inch refractor lens with 35mm motion picture camera; a 40-inch refractor lens of British manufacture with 4.5 x 4.5 inch, K-24 aerial camera; and, an 80-inch refractor, Old Delft lens with Leica back. (~~CONFIDENTIAL~~) (u)

The 80-inch lens produced very good photographs; the entire system, however, must be refined before consistent results can be expected. The 80-inch lens is probably the limit for manual panning techniques. Modification of the 80-inch system is currently being made by the Wollensak Optical Company. (~~CONFIDENTIAL~~) (u)

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A lens/camera combination similar to the 40-inch telephoto assembly used to cover the National Aircraft Show will be fabricated. This combination will provide a larger format to aid in the tracking problem and a motor-driven film advance to enable the photographer to devote more attention to tracking the aircraft to be photographed. (~~CONFIDENTIAL~~) (u)

The U. S. Signal Corps 100-inch lens was inspected and found to be bulky and heavy, with no advantages over lenses presently used by the ATIC. (Uncl)

<sup>15</sup>  
(Uncl) Recorders. No changes have occurred in the miniature recording program during the period of this history. There is still a need for a small tape recorder. Two miniature recorders of American manufacture are now on loan to the Center for test and evaluation. If tests indicate that they are adaptable to ATIC requirements, action will be initiated to procure a sufficient number for field use. (Uncl)

<sup>16</sup>  
(Uncl) Film:

Preliminary tests have resulted in a controlled system whereby the emulsion speed of film can be greatly increased provided complete exposure data and test film strips are made available to the laboratory technician. This increase in speed permits the use of longer focal length lenses for photographing moving targets, yet does not adversely affect grain size. (~~CONFIDENTIAL~~) (u)

15. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 62.

16. History of ATIC 1 Jan 54 - 30 Jun 54, Page 63.

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Eastman Kodak Co. has developed a spectrographic film for microfilm cameras. This film is not commercially available; Eastman Kodak Co. can, however, supply ATIC with a limited amount for test purposes. (~~CONFIDENTIAL~~)

~~CONFIDENTIAL~~ (u)

(Uncl) GUIDANCE MATERIAL:

(Uncl) Manuals: <sup>17</sup>

Final drafts of ICGM-Intelligence Photography (AFM 200-9) were submitted to D/I USAF on 27 September 1954, and printed copies are expected to be available in January 1955. This manual reflects all of the guidance information necessary for field collectors to produce worthwhile photographs, and has been endorsed by the Departments of the Army and the Navy, and, therefore, will be released as a Joint Defense Department intelligence publication. (Uncl)

All sections of ICGM-Aircraft Materials (AFM 200-16) were completely reworked, with the exception of the one on "Rubber" which previously had been completed and approved. All reworked sections were approved, and as soon as the mounting and final processing of approximately 150 supporting illustrations are completed, the manual will be ready for submission to D/I USAF for release. Target date for completion is 15 January 1955. (Uncl)

Only three manuals remain to be prepared: Fuels and Lubricants, Industrial, Methods and Research Facilities. Considerable amounts of

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17. Project 40014, Preparation of ATI Collection Guidance Manuals.

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basic material for these publications have already been contributed by the Technical Analysis Division and work is progressing satisfactorily. It is hoped that all three manuals will be completed during 1955.

(Uncl)

(Uncl) Technical Trip Briefs:<sup>18</sup>

The technical trip briefs prepared by the ATIC and submitted to the D/I USAF were favorably received. D/I USAF requested that ATIC send a representative to participate in future meetings of the "Travel Folder Working Group" in Washington, D. C. Selection of an individual to attend these meetings has not yet been made. ~~(CONFIDENTIAL)~~ (u)

During this reporting period, nine additional trip briefs were prepared and forwarded to D/I USAF for the use of field collectors.

~~(CONFIDENTIAL)~~ (u)

(Uncl) Target Folders.<sup>19</sup> At the request of D/I USAF, a list of 50 cities (in order of priority) considered by ATIC as being of collection importance was submitted to that office. D/I USAF will use this list in planning 1955 travel itineraries for pertinent air attaches. Trip briefs will eventually be prepared by ATIC on each of these target cities. ~~(CONFIDENTIAL)~~ (u)

(Uncl) AIR TECHNICAL LIAISON PROGRAM:

An outline of a projected ATL Program was presented to the Commander, ATIC, who directed that a briefing on the status quo of the ATL Program

18. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 64.

19. Ibid.

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be given to D/I USAF. This briefing was presented on 2 December 1954. Plans were made to review the entire program and present a finished report to D/I USAF on 1 April 1955. (Uncl)

During the period covered by this history, five officers, three airmen, and six civilian personnel completed tours of overseas duty, and nine officers, three airmen, and five civilians departed for overseas destinations. (Uncl)

Six Air Technical Liaison Officers and two civilian technical specialists were returned from overseas for reorientation and debriefing at ATIC. This reorientation program continues to produce very beneficial results. (Uncl)

The table below reflects manpower and personnel figures relating to the Air Technical Liaison Program:

	Auth 1 Jul 54		Asgd 1 Jul 54		Auth 31 Dec 54		Asgd 31 Dec 54	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
ATL Office, Austria	26	8	21	8	26	8	19	6
ATL Office, Germany	65	15	51	15	62	17	55	14
ATL Office, Japan	9	1	8	1	8	1	7	1
TOTAL	100	24	80	24	96	26	81	21

(Uncl)

A requirement still exists for additional military manpower authorizations for the purpose of training military personnel for replacements in the ATL Program. (Uncl)

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A recruiting program was initiated within the Foreign Activities Section in an attempt to obtain greater numbers of qualified personnel for integration into the Air Technical Liaison Program. The voluntary system did not produce a sufficient number of applicants to satisfy the needs of the ATL Offices overseas. (Uncl)

(Uncl) COLLECTION PLANS AND STUDIES:

(Uncl) U. S. Missions Abroad.<sup>20</sup> A plan for technical intelligence exploitation of U. S. Missions abroad was completed on 14 July 1954.

(Uncl)

(Uncl) Very Low Frequency Communications.<sup>21</sup> Approved program proceeded according to plan. On 30 November 1954, a conference was held at Hq USAF Security Service, Brooks AFB, Texas, with personnel from ATIC, USAFSS, and selected personnel from industry. Purchase Request was initiated for modifying Low Frequency receiving system. ~~(SECRET)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Foreign Travel of USAF and Contractor Personnel.<sup>22</sup> Administrative difficulties encountered in attempts to implement plans for this project resulted in the project being temporarily closed.

(Uncl)

(Uncl) Special Collection Devices.<sup>23</sup> D/I USAF disapproved the request of ATIC for the equipment from Physical Security Equipment Agency (PSEA). The PSEA had been previously deactivated. ~~(CONFIDENTIAL)~~ (u)

20. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 67.

21. Ibid.

22. Ibid.

23. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 68.

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(Uncl) Foreign Manufactured Equipment (Project Janus).<sup>24</sup> Project Janus was approved by D/I USAF, on 30 November 1954. Plans for implementation of the project were completed on 2 December 1954. ~~(SECRET)~~ (u)

(Uncl) Solar Eclipse.<sup>25</sup> No action was taken to debrief the Cambridge Research Team upon their return from their overseas activities. Project was closed on 10 July 1954. (Uncl)

(Uncl) Sonic and Seismic Aircraft Detections.<sup>26</sup> Field test program was held during months of September through October with recordings taken which included advanced types of propulsion. Exploitation of these recordings is being accomplished by Contractor. Additional action was taken on 28 December 1954 to procure new equipment for overseas location. ~~(SECRET)~~ (u)

(Uncl) International Geophysical Year.<sup>27</sup> In December 1954, this project was incorporated in the "Scientist Program" which is operational in the Control Branch of the Technical Requirements Division. (Uncl)

(Uncl) German Patent Office.<sup>28</sup> This project was abandoned on 20 July 1954 because this is an active project with field collection agencies. (Uncl)

(Uncl) Foreign Documents Collection.<sup>29</sup> Recommendation was submitted to D/I USAF, on 22 November 1954, requesting that the Publications

24. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 68.

25. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 68.

26. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 69.

27. Ibid.

28. Ibid.

29. Ibid.

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Air Technical Liaison Officer of USAFE be sent to Moscow on three-months' TDY to assist in the publications procurement program. No action had been taken on this request as of 31 December 1954. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Foreign Release Function.<sup>30</sup> On 20 July 1954, Coordinating Air Staff, Hq USAF, disapproved the transfer of the function of foreign release of documents from ARDC. (Uncl)

(Uncl) G-2 Organization. Approval was received from D/I USAF, for ATIC personnel to attend G-2 CIC School<sup>31</sup>. This approval was received on 16 November 1954. Plans for implementing this project have been completed. ~~(SECRET)~~ (u)

(Uncl) De-Sensitizing Photographic Intelligence. A plan was devised to establish the policy and prescribe the procedures for de-sensitizing photographic intelligence within the ATIC before release to non-intelligence organizations. The purpose of this procedure is to obliterate source and method of acquisition of photographs. ATICOI 200-1 was published as a guidance for implementing this policy on 27 December 1954. (Uncl)

(Uncl) MONITORING EVALUATION OF INTELLIGENCE REPORTS:<sup>32</sup>

During the period covered by this history 526 intelligence reports were evaluated. Of the total reports evaluated, 439 were mandatory and

30. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 70.

31. Army Counterintelligence School.

32. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 70.

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the remaining 87 were voluntary evaluations prepared by the analysts of the Technical Analysis Division. Evaluations averaged about 88 per month. (Uncl)

The Requirements Section of this division no longer handles D/I USAF requests for evaluations. This responsibility was assumed by the Document Services Branch, Technical Services Division, in November 1954. (Uncl)

(Uncl) TRAINING ACTIVITIES:

During the past six months, minor changes were made in the training program. In September, the responsibility for the ATIC Work Pool<sup>33</sup> was transferred to the Management Office. Also during September, the Technical Requirements Division assumed the responsibility for the presentation of technical briefings to Air Attaches. These briefings were previously given by the Technical Analysis Division. A five-hour briefing program was prepared and on 9 September, qualified instructors from the USAF Technical Intelligence School, ATIC, presented the first program. Student response to this briefing was excellent. (Uncl)

(Uncl) INSTRUCTION COURSES:

(Uncl) Photographic Training:

A formal program of instruction for Intelligence Photography was completed and published. (Uncl)

One hundred sixty-three (163) selected personnel received specialized photographic training during this period. Two officers from the

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33. Personnel awaiting security clearance.

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Office of Naval Intelligence were given 80 hours of instruction in aerial photography and the use of the Leica camera. (Uncl)

(Uncl) Reserve Officer Training. A new project, 70026, was initiated to cover the ATIC training of Air Force Reserve Officers. This phase of the training program was previously included in Project 70019. Conferences were held with officials of the Air Reserve Center, Dayton, Ohio, regarding the possible assignment of ATIC M-Day assignees and designees to that Center for training. Correspondence outlining this proposal was also sent to the D/I USAF for comment. As of 31 December 1954, no action had been taken on this proposal. (Uncl)

(Uncl) Airmen On-the-Job Training. Headquarters, Air Training Command, furnished ATIC with copies of the new Package Courses covering three Air Force Specialties. These specialties are Senior Photographer, Intelligence Operations Specialist and Personnel Specialist. These new courses are in book form and contain the OJT (On-the-Job) Outline and Training Standard, job knowledges, work experiences, references, and guidance necessary to develop the required proficiency in the designated Air Force Specialty. When these package courses are received, they are distributed to various components within the ATIC where airmen possessing the applicable AFSC and requiring OJT are assigned. The immediate supervisors of the airmen are given instructions on the implementation of these training courses. Thus far, the Training Command has prepared courses on only a few of the Air Force Specialties pertinent to ATIC. Additional courses will be forwarded to ATIC as they become available. (Uncl)

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(Uncl) ATLO Training. The formal ATL Training Program was published and distributed. Seven officers and two airmen completed the course during the period covered by this history, and eleven officers and one airman were receiving training at the close of the period.

(Uncl)

(Uncl) Air Attache Training. Four groups of Air Attaches, comprising 11 officers, received special orientation courses of thirteen-days' duration. Eleven airmen also were trained under this program.

(Uncl)

(Uncl) ATI Training. Classes 54C and 54-D were graduated from the USAF Technical Intelligence School. Twenty-seven officers attended the Intelligence Technical Officer Course OB-2061 and seven airmen attended the Technical Intelligence Technician Course AL-20570 on a formal basis. In addition, ten students attended the course in informal status. (Uncl)

(Uncl) Employee Orientation:

An eleven-hour orientation course for newly assigned ATIC personnel (military and civilian) was prepared and distributed within the ATIC for comment. (Uncl)

During the period, ninety-two newly assigned personnel received training consisting of a briefing on the organization and mission of the ATIC and an explanation of Air Force and ATIC security practices. Security examinations were also given to these personnel. (Uncl)

(Uncl) MISCELLANEOUS ACTIVITIES AND PROBLEMS:

(Uncl) Photographic Services. The Photographic Section produced 7221 negatives and 4999 photographic prints for the ATIC during the reporting period. (Uncl)

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(Uncl) Training of Instructors. Four military personnel and one civilian from the ATI Indoctrination Branch attended the Academic Instructor's Course at Maxwell AFB, Alabama. (Uncl)

(Uncl) Travel:

(b) (6) civilian instructor, Intelligence Photography, visited the Air Attache Offices in Paris, France; London, England; and, Bern, Switzerland, from 23 August until 10 September for the purpose of studying photographic operations at these stations, with a view toward improving the training offered by the ATIC. ~~(CONFIDENTIAL)~~ (u)

Captain (b) (6) visited the OSI School, Washington, D. C. from 15 through 18 November for the purpose of examining training programs and instructional materials for possible future use in Technical Intelligence School courses. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Renovation of School Facilities. Renovation of the school facilities was completed with the exception of a few minor details. The school area now contains two large classrooms and one combination briefing room, conference room and library, a much larger student lounge area, and individual offices for various school units. (Uncl)

(Uncl) ATIC Aircraft. A proposal was submitted to Headquarters, USAF, requesting approval for the modification of the C-47 aircraft assigned to the ATIC. The modification would provide for the installation of two vertical camera wells in the bottom of the fuselage and installation of six seats and sound proofing in the passenger cabin. No action had been taken on this request as of the close of the period.

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(Uncl) Personnel. One qualified officer is still needed for the position of Electronics Instructor in the ATI School. The relatively rapid turn-over among instructor personnel continued to be a problem.

(Uncl)

(Uncl) Requirement for Foreign Aircraft. The ATI School needs late types of foreign aircraft which can be used for the instruction of students. Most of the newer equipment used in the field problem is of American manufacture. The Technical Services Division has been exploring the possibility of getting the MIG-15 assigned to the Center for use in the ATI School. (Uncl)

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**TECHNICAL ANALYSIS  
DIVISION  
(ATIA)**

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## TECHNICAL ANALYSIS DIVISION

### I. ORGANIZATION, FUNCTIONS, AND KEY PERSONNEL

During the reporting period the Plans, Operations and Administrative Office was abolished and an Administrative Office and a Plans and Operations Office were established.<sup>1</sup> Major (b) (6) and Major (b) (6) were reassigned to the Plans and Operations Office for duty as Special Project Officers.<sup>2</sup> Major (b) (6) was relieved from assignment as Executive Office of the Division, 3 August 1954, for the purpose of attending Air Command and Staff School.<sup>3</sup>

Major (b) (6) who had reported to ATIC from duty as an ATL Officer in Germany, was assigned as Executive Officer of the Division on 3 August 1954.<sup>4</sup>

Lieutenant Colonel (b) (6) Chief of the Aircraft and Propulsion Branch, was relieved from assignment on 6 August 1954, and transferred to Headquarters, WADC, Wright-Patterson AFB.<sup>5</sup> (b) (6) (b) (6) Branch Technical Advisor, was assigned Acting Chief.

1. 1125th USAF FAG (ATIC), GO 17, 15 Jul 54.
2. 1125th USAF FAG (ATIC), PERAM 46, 23 Jul 54.
3. 1125th USAF FAG (ATIC), SO 95, 22 Jul 54.
4. 1125th USAF FAG (ATIC), PERAM 50, 3 Aug 54.
5. 1125th USAF FAG (ATIC), SO 79, 23 Jun 54.

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Major (b) (6), (b) (3) (B) Chief of the Aircraft Section, was relieved from assignment 30 July 1954 for the purpose of attending a two year course at USAF Institute of Technology.<sup>6</sup>

Lieutenant Colonel (b) (6) was assigned as Chief, Guided Missiles Section, 28 July 1954, relieving Captain (b) (6)<sup>7</sup> Lieutenant Colonel (b) (6) reported to ATIC from Holloman Air Development Center, New Mexico.

One civilian, GS-11, declared surplus during the last reporting period, was transferred to the Procurement Division, Wright-Air Development Center.

The division lost one officer (Captain) authorization due to reduction in force directed by D/I, USAF.

Total authorized and assigned strength for the Technical Analysis Division at the close of the period was:

	<u>Civilians</u>	<u>Officers</u>	<u>Airman</u>
Authorized	114	43	8
Assigned	108	45	10

Key personnel assigned at the end of reporting period were:

Chief, Technical Analysis Division

Deputy Chief

Executive Officer

Technical Advisor

Chief, Plans and Operations Office

(b) (6)

6. 1125th USAF FAG (ATIC), SO 98, 30 Jul 54.

7. 1125th USAF FAG (ATIC), PERAM 48, 28 Jul 54.

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Chief, Administrative Office

Chief, Aircraft and Propulsion Branch

Chief, Electronics Branch

Chief, Weapons and Industry Branch



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## II. ACTIVITIES, EVENTS, AND PROBLEMS

During the last half of 1954, the Technical Analysis Division concentrated on carrying to a conclusion the analysis and study of actual items of equipment acquired prior to this reporting period. (Uncl)

A reassessment was made of the project activities involving the principal contractor, Battelle Memorial Institute (Project Stork). Changes were made in administrative controls, approval of requirements, and material screening processes. (Uncl)

In the detailed descriptions of projects which follow, projects are grouped generally by subject instead of by project number sequence. (Uncl)

A table summarizing quantitatively the division's project activity for the reporting period is included at the end of this section.<sup>8</sup>  
(Uncl)

(Uncl) ANALYSIS OF FOREIGN AIR TECHNICAL CAPABILITIES.<sup>9</sup> This project was established primarily to utilize the services of the Battelle Memorial Institute, Columbus, Ohio, which provides the ATIC with scientific research and analytical services under an open-end, omnibus contract to supplement and support the efforts of ATIC personnel. The reports furnished by Battelle provide basic data for ATIC intelligence products. (~~CONFIDENTIAL~~) (u)

8. Page 109, infra.

9. Project 9974, contract let 17 Apr 51. See page 8, supra.

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(Uncl) AIRCRAFT:

(Uncl) MIG-15:

Preliminary plans were made during the period to combine all the data obtained on the MIG-15, under various separate projects, into a summary technical report.<sup>10</sup> Very little progress, however, was made during the period toward implementing these plans for the MIG-15 story. (Uncl)

The most recent MIG-15 received at the Wright-Patterson Air Force Base,<sup>11</sup> the "Zeta" MIG, delivered by the North Korean pilot to the United Nations Forces after the cease-fire truce, and initially examined at Okinawa, was thoroughly examined and tested. The surface was checked to determine effects of the salty atmosphere in which it had been for approximately two months. The engine was removed, completely disassembled, examined, and reassembled for subsequent flight test. Instruments were installed to obtain performance data, together with a USAF oxygen system, VHF communications system, and a harness to insure pilot safety. (~~CONFIDENTIAL~~) (u)

Following the completion of tests at the Wright-Patterson Air Force Base, the MIG was sent to Eglin Air Force Base, 22 March 1954, for technical evaluation tests. Tests at Eglin AFB included comparisons with the USAF B-47, B-36, F-86, and F-84, and tests of the MIG's reflection quality against infra-red detection devices, requested by the Wright Air Development Center. The MIG was returned to the Wright-Patterson Air Force Base the latter part of October 1954 for additional flight testing.

10. Proposed Project 10207, 7 Dec 54, awaiting decision. Original MIG-15 project No. 10115, to be incorporated in this new project, if approved.

11. Received in January 1954.

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Report of the Eglin tests was being prepared by the Air Defense Division of the Air Force Operational Test Center, Air Proving Ground Command, Eglin AFB, but had not been received by the end of the period. ~~(CONFIDENTIAL)~~

~~(CONFIDENTIAL)~~ (u)

Upon return of the MIG to Wright-Patterson AFB, after 180 hours of flight, the engine was again disassembled, reinspected, and repaired. Work was completed and the MIG made ready for flight by the first week of December 1954. (Uel)

In December 1954, three flights were made for additional tests of infra-red feasibility, at the request of the WADC Armament Laboratory. On 24 December 1954, a program consisting of 15 flights for tactical evaluation of the aircraft by Navy personnel from Patuxent River, Maryland, was started, and five of these flights were completed by the end of the year. Lack of suitable flying weather prevented more flights.

~~(CONFIDENTIAL)~~ (u)

Technical reports on the MIG-15<sup>12</sup> distributed during the period included:

TR-AE-33, (Uel) "Analysis of the Bullet-Resistant Windshield in MIG-15," 26 May 1954, distributed 23 August 1954. (Uel)

TR-AE-48, (Uel) "Systems Coding of the MIG-15," 9 February 1954, distributed 6 July 1954. (Uel)

TR-AE-51, (Uel) "Electrical Power System of the MIG-15 Aircraft," 25 March 1954, distributed 30 August 1954. (Uel)

12. Project 9975, (Uel) "Processing of Foreign Equipment," which is a continuing project established to accomplish the initial examination of foreign equipment and to report the results of preliminary examination of significant items. ~~(CONFIDENTIAL)~~ (u)

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TR-AE-55, (Uncl) "MIG-15 Actuating System", 17 May 1954, distributed 30 November 1954. (Uncl)

TR-AE-59, (Uncl) "MIG-15 Instrumentation", 9 June 1954, distributed 28 October 1954. (Uncl)

Another technical report on the VK-1 turbojet engine contained in the "Zeta" MIG has been completed and will be issued early in the next period.<sup>13</sup> (Uncl)

(u) ~~CONFIDENTIAL~~ MIG-15 Pilot's Operating Manual.<sup>14</sup> In November 1954, work was resumed on preparing a pilot's manual for flying a MIG-15. This project, established in 1952 at the request of the Strategic Air Command, through the Director of Intelligence, had been in deferred status since 1953. This manual will enable USAF pilots, captured or forced down in Soviet controlled territory, to escape should they be able to commandeer a MIG. Target date for publication has been set for 15 April 1955.

~~CONFIDENTIAL~~ (u)

(u) ~~CONFIDENTIAL~~ MIG-17 (FRESCO).<sup>15</sup> Additional information obtained during the 20 June 1954 Soviet Air Show necessitated revision of the performance calculations based on the May Day, 1954 observations and contained in ATI Study No. 102-AC-54/2-34. The June observations revealed an after burner installed in this aircraft. Revision of calculations

13. TR-AC-42, (u) ~~CONFIDENTIAL~~ "Inspection and Performance Calibration of a Soviet VK-1 Turbojet Engine", completed October 1954, scheduled for distribution January 1955. Report classified SECRET. Work performed under Project 10187.

14. Project 10135, (u) ~~CONFIDENTIAL~~ "Special Study of USSR Aircraft for Escape and Evasion Bulletin", April 1952.

15. Project 10180, (u) ~~CONFIDENTIAL~~ "Preliminary Analysis of the Soviet Type-38 Aircraft", 5 Jan 54.

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were 60 percent complete at end of reporting period. When finished, these revisions will be distributed as amendments to the basic study.

~~(CONFIDENTIAL)~~ (u)

(Uncl) <sup>16</sup> TU-4 Bomber. This research has been deferred indefinitely until additional data on the engine performance of this aircraft necessitates revision of the existing study, I/D Study No. 102-AC-50/36-34.

(Uncl)

(u) ~~(CONFIDENTIAL)~~ <sup>17</sup> MI-4 Helicopter (HOUND):

The Type-36 helicopter was identified as the Soviet MI-4 in October 1954. It was also discovered during the period that the size of this aircraft was greater than previously estimated. By the close of the period it had been determined that the rotor diameter was about 25 percent greater than the 56.5 feet previously estimated. Preliminary analysis indicated that other dimensions will also be somewhat greater, although in smaller proportion. The GAZ-69 vehicle, known to have been carried in this aircraft at the 1954 Tushino Air Show, could not have been encompassed by the previous width estimate for the fuselage of the HOUND. Estimates of the load carrying capacity of the HOUND, however, were not revised, since they were based on demonstrated capacity.

~~(CONFIDENTIAL)~~ (u)

The first indication of greater size was revealed by cabled reports

16. Project 10176, (Uncl) "Soviet TU-4 Bomber", July 1954.

17. Project 10188, <sup>(u)</sup> ~~(CONFIDENTIAL)~~ "Preliminary analysis of the Soviet Type-36 Helicopter", 12 Feb 54: Code designation, HOUND, assigned to aircraft September 1954. ~~(CONFIDENTIAL)~~ (u)



of the June 1954 Tushino Air Show.<sup>18</sup> The written reports of this air show, received in August 1954, confirmed this surmise. In November 1954, information supplied by the U. S. Army identified the GAZ-69 truck carried in the HOUND and gave the truck's weight and dimensions. On 3 December 1954, clear flight photographs of the HOUND as it appeared in both the 1953 and 1954 Soviet air shows, together with vertical aerial photographs, showing the HOUND on the ground, were received. The vertical photographs were most useful in estimating the greater size of the HOUND. ~~(S)~~ (U)

Because of this later information, work on the study announced in the preceding edition of the ATIC History was suspended.<sup>19</sup> However, identification of the MI-4 was announced in SIRAB, No. 230, 29 November 1954, and revised conclusions concerning this aircraft were announced in the ATIC BULLETIN, 24 December 1954. In addition, an article was submitted to the AIR INTELLIGENCE DIGEST in October 1954 which will probably be published in the January 1955 issue. This article discussed the probability that this helicopter utilized some ground run in order to take off in the loaded condition. ~~(S)~~ (U)

(Uncl) YAK-23. TR-AE-56 ~~(S)~~ (U) "YAK-23 Actuating System", 19 May 1954, was distributed 28 October 1954,<sup>20</sup> and TR-AE-58, ~~(S)~~ (U) "YAK-23 Fuel Systems", 13 July 1954,<sup>21</sup> was distributed 21 December

18. ATIC Bulletins, 8 Oct and 3 Dec 54.

19. History of the Air Intelligence Center, 1 Jan - 30 Jun 54, Page 87.

20. Project 9975. Page 66, supra.

21. Project 9974, 17 Apr 51. Page 64, supra.

Another technical report and a film, "Project Alpha",<sup>22</sup> have been completed but have not been released because of question as to sensitivity of the subject matter. ~~(SECRET)~~ (U)

(U) ~~(CONFIDENTIAL)~~ Type-31 Bomber.<sup>23</sup> Analysis of this aircraft was deferred until more information is obtained. Decision will be made later whether to close this project or revise the existing study, ATI Study No. 102-AC-53/13-34, 31 March 1954.<sup>24</sup> (Uncl)

(U) ~~(CONFIDENTIAL)~~ Type-37 Aircraft (BISON).<sup>25</sup> Preliminary analysis of this aircraft was completed. Proposed study has been written and was in coordination at the end of the period. (Uncl)

(U) ~~(CONFIDENTIAL)~~ Type-39 (BADGER) Aircraft.<sup>26</sup> Analysis was completed and proposed ATIC study<sup>27</sup> drafted. The study was in coordination at the end of the period. (Uncl)

(Uncl) Soviet Aircraft Maintenance System.<sup>28</sup> Before the study on this subject, completed 23 August 1954, could be sent for publication, a

22. Project 10178, (Uncl) "Project Alpha", 26 Oct 53: The report under question was TR-AC-28 ~~(CONFIDENTIAL)~~ "Evaluation of the YAK-23".

23. Project 10160, ~~(CONFIDENTIAL)~~ (U) "Analysis of Type-31 Bomber", 27 Jun 52.

24. (Uncl) ATI Study No. 102-AC-53/13-34, 31 Mar 54.

25. Project 10195, ~~(CONFIDENTIAL)~~ (U) "Analysis of Soviet Type-37 Aircraft", 27 May 54. ATI Study No. 102-AC-54/4-34 proposed. Designation "BISON" is tentative. ~~(CONFIDENTIAL)~~ (U)

26. Project 10196, ~~(CONFIDENTIAL)~~ (U) "Analysis of Soviet Type-39 Aircraft", 27 May 54. Designation "BADGER" is tentative. ~~(CONFIDENTIAL)~~ (U) ATI Study No. 102-AC-54/5-34.

27. ~~(CONFIDENTIAL)~~ (U) "Preliminary Analysis of Soviet Type-31 Aircraft".

28. Project 10143, (Uncl) ATI Study No. 102-AC-54/3-34 to be issued.

decision was made to completely revamp it. Accordingly, a new plan was prepared, which was approved 8 November 1954, but work on the revision had not started by the end of the period. (Uncl)

(Uncl) Boundary Layer Control Devices.<sup>29</sup> Analysis of the effect of boundary layer control devices on the performance of Soviet aircraft was practically at a standstill during the period. It was hoped to be able to complete a summary report on this subject by 1 April 1955. (Uncl)

(Uncl) AIR-WEAPON TREND STUDIES:

There was some progress in the individual projects classed under this general subject. (Uncl)

Approximately 50 percent of the preliminary work was completed for estimating the development of Soviet fighter aircraft<sup>30</sup> and a start was made on a similar study of Soviet bombers.<sup>31</sup> Significant information and conclusions on the range and radius of Soviet glider-towplane combinations were included in the material contributed by the ATIC to AIR INTELLIGENCE STUDY 2-15.<sup>32</sup> (Uncl)

In the field of guided missiles, no further data were developed on Soviet surface-to-air missiles since the publication of NATIONAL INTELLIGENCE ESTIMATES 11-6-5 in which appeared performance data developed by the

29. Project 10144, (Uncl) "Potentialities of Boundary Layer Control Devices on Soviet Aircraft", 12 Feb 52.

30. Project 10190, (Uncl) "Estimated Development of Soviet Fighter Aircraft", Feb 54.

31. Project 10192, (Uncl) "Estimated Development of Soviet Bomber Aircraft", Feb 54. Project 10118 will be merged with 10192.

32. Project 10141, To be merged with 9968 (Uncl) "ATIC Contribution to AIS 2/15/1".

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ATIC. These figures have been quoted in a number of recent Department of Defense publications.<sup>33</sup> (Uncl)

Sufficient information was obtained to warrant the publication of an ATIC study on Soviet surface-to-surface guided missiles with 2500 nautical miles minimum range. Work on this study had not been completed by the end of the period.<sup>34</sup> ~~(CONFIDENTIAL)~~ (u)

The ATIC's project concerning Soviet guided missiles with mass destruction warheads, launched from aircraft, ship, or submarine, was cancelled because a Navy intelligence report, published in 1952, contained similar information.<sup>35</sup> ~~(CONFIDENTIAL)~~ (u)

The lack of sufficient data prevented any progress being made in the study of Soviet air-to-air refueling capabilities.<sup>36</sup> (Uncl)

A special report on the development of certain U. S. heavy bomber prototypes was distributed on a limited basis in October.<sup>37</sup> (Uncl)

33. Project 10182, (Uncl) "Soviet Surface-to-Air Guided Missiles".

34. Project 10139, (Uncl) "Soviet Surface-to-Surface Guided Missiles": ATI Study No. 102-AC-53/11-34 under preparation. (Uncl)

35. Project 10138, cancelled 30 Sep 54.

36. Project 10157, (Uncl) "Soviet Air-to-Air Refueling Capabilities", 1952.

37. Project 9974, 17 Apr 54, See page 64, Special report No. 8 distributed, (Uncl), "A Study of the Development of Selected U. S. Heavy Bomber Aeroplane Prototypes", 1 Oct 54.

(Uncl) GUIDED MISSILES:(u) ~~(SECRET)~~ Project Draggie:

In addition to the guided missile activities reported under "Air-Weapons Trend Studies", a study on guided missile sites was released and Project Draggie<sup>38</sup> was established in October 1954. This project was designed to cover ATIC participation in the Air Research and Development Command's project for developing a long range reconnaissance radar that will serve as another means of acquiring information on foreign guided missiles. The ARDC project has been assigned the secret code word, "Draggie". ~~(SECRET)~~ (u)

The ATIC part in this joint project to date has consisted of serving as a member of the technical steering committee that is advising the contractor, General Electric Company, on the development of this radar; the ATIC being the advisor on the intelligence requirements for such equipment. Plans have been made for ATIC to participate in analyzing the intelligence data that may be collected with this equipment.

~~(SECRET)~~ (u)

Before the official code word was assigned, this project was referred to by a variety of popular terms, such as "Billboard", "Railroad", and "Rag Mop". (Uncl)

By the end of the period, erection of a domestic test installation, probably in the vicinity of El Campo, Texas, had been approved.

~~(SECRET)~~ (u)

38. ATI Study No. 102-AC-54-11/34, ~~(SECRET)~~ (u) "Possible Surface-to-Air Guided Missile Sites in the Moscow Area": Project 1021, originally designated "Railroad Radar", 6 Oct 54.



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(Uncl) POWER PLANTS (ENGINES):

(Uncl) ASH-62IR Engine.<sup>39</sup> TR-AC-25, (Uncl) "Soviet ASH-62IR Aircraft Power Plant Performance Characteristics", was distributed in July 1954. Additional tests of this engine using Soviet fuel had to be deferred until a later date. (Uncl)

(Uncl) VK-1 Engine. The work accomplished on analysis of this engine has been included in the MIG-15 research.<sup>40</sup> (Uncl)

(Uncl) VK-107A Engine.<sup>41</sup> An attempt was made to secure additional Soviet fuel with a 99/115 octane rating for use in further testing of this Soviet engine to determine its detonation limits. When only 99/127 fuel could be obtained, arrangements were made with Gulf Oil Company to blend this fuel back to the 99/115 rating, but these plans were held in abeyance until the initial supply of 99/115 fuel was exhausted. Results obtained from the tests using the initial supply of 99/115 fuel revealed little additional intelligence information would be gained by continuing the 99/115 fuel testing program. Therefore, the plan to convert 99/127 fuel to 99/115 fuel was abandoned. A summary report of the entire research on the VK-107A engine was under preparation at the end of the period. This report contains comparisons to U. S. engines of comparable design and horsepower. ~~(CONFIDENTIAL)~~ (u)

39. Project 10101, 16 Jun 51.

40. Project 10187.

41. Project 10105, 15 Jun 51.

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<sup>42</sup>  
(Uncl) Rocket Power Plant Developments. A study on Soviet rocket power plants was completed 23 August 1954 and a technical report on French rocket power plants, 22 November 1954. Both were being coordinated at the end of the period. (Uncl)

<sup>43</sup>  
(Uncl) RD-500 Turbojet Engines. Release of the technical report on this engine completed this project which was formally closed 18 August 1954. (Uncl)

<sup>44</sup>  
(Uncl) JUMO 022 Turbojet Engine. The technical report, reported in publication at the close of the preceding period, was cancelled to permit issuance of an intelligence study on the same subject. Drafting of the study was completed 22 November 1954. Completion of coordination and publication was set for March 1955. (Uncl)

<sup>45</sup>  
(Uncl) Turbojet Engines in BISON and BADGER Aircraft. The project on this subject was approved 3 December 1954. An intelligence study has been drafted and will be coordinated early in the next period. (Uncl)

42. Project 10165, 20 Nov 52

43. Project 10186, 2 Dec 51. TR-AC-42, (u) "Inspection and Performance Calibration of a Soviet RD-500 Turbojet Engine" distributed, 25 Jul 54

44. Project 10193, (Uncl) "Soviet JUMO 022 Turboprop Engine Development and Production Capabilities", 25 Mar 54. Proposed TR-AC-37 changed to proposed ATI Study No. 102-AC-54/8-34, same title as the project.

45. Project 10200, (Uncl) "Estimated Turbojet Engine in BISON and BADGER Aircraft", 3 Dec 54. (Uncl) ATI Study No. 102-AC-54/9-34, same subject, planned.

(u) ~~(CONFIDENTIAL)~~ <sup>46</sup> "Soviet Turbojet Engine No. 26883, Series 6."

This project was completed with distribution of ATIC report TR-AC-33, (Uncl) "Evaluation of Improved Soviet Turbojet Engine", dated 28 October 1954. Project closed 12 November 1954. ~~(CONFIDENTIAL)~~ (u)

(Uncl) "Interpolation of Performance for Ramjet and Pulsejet Engines".<sup>47</sup> This project was closed 27 October 1954 because there was no immediate need for information of this type. (Uncl)

(Uncl) Turbojet Engines of Friendly Nations.<sup>48</sup> This project was proposed in December 1953, but was not approved by the Commander. In November 1954, the project proposal was returned for revision and re-submission. Higher priority work prevented completion of a revised plan for this research. (Uncl)

Other engine projects proposed during the period, but not approved by the end of the period, included:

Project 10202, (Uncl) "Soviet Turbine Engines in Lyulka Design", proposed 19 October 1954. (Uncl)

Project 10203, (Uncl) "British Turbojet Engines: Production, Service, and Developments", proposed 2 December 1954. (Uncl)

Project 10206, (Uncl) "Turbojet Engine Design and Performance Analysis", proposed 2 December 1954. (Uncl)

46. Project 10179. TR-AC-33, (Uncl) "Evaluation of Improved Soviet Turbojet Engine", distributed 22 Oct 54.

47. Project 10134.

48. Project 10189 (Tentative)

(Uncl) PROPELLER RESEARCH:

Three technical reports<sup>49</sup> prepared from data supplied by Hamilton Standard Propeller Company under contract AF33(038)-26090 were released on Soviet propellers.<sup>50</sup> (Uncl)

In November, Curtiss Wright Corporation, under contract AF33(600)-24034, completed materials data for inclusion in Technical Reports, TR-AC-20 on VISH-107-10 propeller, and TR-AC-38 on VISH-111-V-20 propeller.<sup>51</sup> Publication of this additional material was delayed because the contractor failed to submit original artwork with his report. (Uncl)

(Uncl) Development of Soviet Propeller and Propeller Control For Turboprop Engines. This new project was approved 19 October 1954. Preliminary work of collection and screening of intelligence documents on this subject had been started by the end of the period.<sup>52</sup> (Uncl)

(u) ~~(CONFIDENTIAL)~~ Photographic Means of Analyzing Propellers.<sup>53</sup> This is a revision of project 10192 to determine propeller efficiency by photographic means. It was proposed 18 October 1954. A conference was held with Colonel (b) (6) Chief of Technical Requirements Division, to discuss photographic collection requirements for this research. At the close of the period, the project had not been approved.

~~(CONFIDENTIAL)~~ (u)

49. TR-AC-34, (Uncl) "Soviet AV-5L-24 Propeller Analysis", 6 Aug 54; TR-AC-35, (Uncl) "Soviet AV-7N-161 Propeller Analysis", 10 Aug 54; TR-AC-36, (Uncl) "Soviet V-501-D-81 Propeller Analysis", 6 Aug 54.

50. Project 10107, 17 Jul 54.

51. Ibid.

52. Project 10198.

53. Proposed Project 10204, (u) ~~(CONFIDENTIAL)~~ "Determination of Propeller Efficiency by Photographic Means".



(Uncl) FUELS AND LUBRICANTS:<sup>54</sup>

On 1 November 1954, a contract was awarded to the Phoenix Laboratory, Inc, Chicago, Illinois, to analyze fuels and lubricant samples. By means of this contract, it was hoped to reduce the backlog of unanalyzed samples that had accumulated during 1954 and to prevent future backlogs from accumulating. (Uncl)

The study<sup>55</sup> of the samples analyzed in 1952 and 1953 was released 12 July 1954. The plan reported in the preceding edition of the History to issue quarterly reports subsequent to this study did not materialize because laboratory facilities were not available. (Uncl)

TR-AC-39, (Uncl) "Calculation of Theoretical Performance of the System Trithioacetaldehyde: WFMA", was distributed 15 October 1954. A formal study to be titled, (Uncl) "A Study of Some Chemical Compounds Investigated as Rocket Fuels by the Soviet Union", was being prepared at the end of the period. Another study, (Uncl) "Catalytic Cracking in the USSR", was also nearing completion.<sup>56</sup> (Uncl)

A new project on synthetic lubricants<sup>57</sup> was established in October 1954, and collation of data was started in December 1954. The time required to complete the study will depend upon how rapidly foreign documents containing this data can be translated. (Uncl)

54. Project 10095, (Uncl) "Analysis and Evaluation of ATIC Foreign Aircraft Fuel and Lube Samples", 21 Mar 51.

55. ATI Study No. 102-AC-53/14-34, (74) ~~(CONFIDENTIAL)~~ "Soviet Aircraft Fuels and Lubricants Sample Analysis Report".

56. Projects 10172, 16 Oct 53, and 10184, 23 Dec 53.

57. Project 10197, (Uncl) "Soviet Synthetic Lubricant Development for Turbojet Engine Lubrication", 28 Oct 54.



(Uncl) METHODS OF ANALYSIS (ENGINEERING DATA):

To facilitate the computation of engineering data required in intelligence analysis, a high speed digital computer was ordered for ATIC, which was scheduled for delivery in March 1955. When this computer is received, ATIC will no longer have to depend on the WADC for machine services of this nature. Preparation for utilization of this machine, accomplished during the period, included sending a man to the factory to learn how to maintain the machine, developing methods and setting up problems for machine solution, and training research personnel in use of the machine. (Uncl)

Specific projects pertaining to methods of analysis progressed as follows:

(Uncl) Aircraft Group Performance Data.<sup>58</sup> The time devoted to preparation for use of the computer prohibited much work being accomplished on the handbook that was being prepared under this project. (Uncl)

(Uncl) Weight Estimation.<sup>59</sup> Methods of estimating aircraft weights and AMPR (empty airframe) weights were refined by including additional data pertaining to both foreign and domestic aircraft, collected during the period. (Uncl)

(Uncl) Performance Calculation Methods for Guided Missiles.<sup>60</sup> As soon as a handbook on these methods can be compiled, the project will be closed. No progress was made in compiling this handbook during the period. (Uncl)

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58. Project 10092, 16 Mar 51.

59. Project 10158, 7 Jul 52.

60. Project 10152, 9 Jun 52.

(Uncl) ATIC CONTRIBUTIONS TO OTHER PUBLICATIONS:

(Uncl) FAIS 2-14/1.<sup>61</sup> A project was initiated late in the preceding period to supervise and correlate the ATIC contribution to Force Air Intelligence Study 2-14/1, "Soviet-Bloc Long-Range Aviation". Appendix B, "Long-Range Aviation Weapons and Equipment", the ATIC contribution, was completed 20 September 1954. The project was then placed in deferred status until the next revision is due. (~~CONFIDENTIAL~~) (u)

(Uncl) FAIS 2-2.<sup>62</sup> Plans were made for completion of the ATIC part of the next revision of this study, due 24 January 1955. (Uncl)

(Uncl) AIS 2-15/1.<sup>63</sup> Inasmuch as no requirements were placed on ATIC for contributions to Air Intelligence Study 2-15/1, this project was in deferred status during the period. On 13 December 1954, however, the ATIC coverage was broadened to include contributions on transport and glider aircraft and airborne support. (~~CONFIDENTIAL~~) (u)

(Uncl) NIS.<sup>64</sup> ATIC contributions to National Intelligence Studies, accomplished during the period, included material on Bulgaria and Yugoslavia (Chapter VII), material for sections 70 and 71 on the USSR chapter, and materials for section 17 on Sweden and Denmark. (~~CONFIDENTIAL~~) (u)

(Uncl) NIE.<sup>65</sup> The ATIC contributed to National Intelligence Estimates 21-55, "Probable Developments in the UK", and 22-54, "Probable Developments in France". (~~CONFIDENTIAL~~) (u)

61. Project 9965, approved 18 Aug 54.

62. Project 9969.

63. Project 9968.

64. Projects 10175 and 10170. Project 10170 was closed 30 Sep 54.

65. Project 10194, 9 Apr 54.

(Uncl) ELECTRONICS:(Uncl) Signal Analysis:<sup>66</sup>

Continued effort has been devoted to phasing the various activities of this project into separate projects to facilitate the work. (Uncl)

The analysts have concentrated on the analysis of data from regular and special ferret missions. There has been a backlog in this work and considerable effort was made to bring it up-to-date. ~~(SECRET)~~ (u)

A contract was awarded to Telechrome Manufacturing Corporation for a Video Recorder.<sup>67</sup> (Uncl)

The Aeronautical Research Laboratory of WADC has made available the OARAC Computer to compute data to determine the area of usefulness of direction finding by time measurements.<sup>68</sup> ~~(SECRET)~~ (u)

A contract was let for construction of a digital pulse analyzer which will automatically print pulse recurrence frequency, beam width, and scan rate directly from an audio recording of a scanning radar.<sup>69</sup> The first machine received under this contract was unsatisfactory and was returned for re-design. ~~(SECRET)~~ (u)

Considerable effort was spent on machine processing of electronic signals data. Conferences were held with all interested Air Force Commands and agencies and a standard IBM card arrangement was adopted. Computer techniques were finalized. A modified BOSCAR Model "C" machine was received and is now in operation, reducing data taken on the ERB-29 aircraft.

66. Project 20024: See History of ATIC, 1 Jan 54 - 30 Jun 54, Page 108.

67. Future reports on Video Recorder will be handled under Project 20093.

68. History of ATIC, 1 Jan 54 - 30 Jun 54, Page 109.

69. Ibid.

A Telereader and a Telecordex, made by Telecomputing Corporation, has been delivered to Strategic Air Command. They have been using these machines for reducing AN/APD-4 data. WADC has made plans to run a time and motion study on the two machines to evaluate their various features. Plans were also made to compare the CP-216, being developed for Federal Telecommunications Laboratory, with the other devices, all of which use IBM card output. ~~(CONFIDENTIAL)~~ (u)

A contract was made with Haller, Raymond and Brown Company for low frequency antennas to extend the frequency range of the special Crystal Video Receiver installation. These antennas have been completed, tested and shipped by the contractor. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Countermeasures Consulting Services.<sup>70</sup> Field tests concerning new methods of collecting guided missile information was nearly completed during the period. No evaluations had been made at the close of the year. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Instrumentation of Exploratory Type Electronic Reconnaissance Aircraft ERB-29.<sup>71</sup>

The aircraft instrumentation has been completed, flight tested, and a number of minor modifications made as a result of early flight test. (Uncl)

In general, the equipment installed in the aircraft has lived up to its expectation, and final flight testing was continued up to the close of the year. ~~(CONFIDENTIAL)~~ (u)

70. Project 20062: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 112.

71. Project 20067: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 110.

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ATIC has been very active in obtaining special devices for installation on this aircraft. ATIC has also aided in the flight testing of the electronic equipment. Phase I flight test, which covers the acceptance of the aircraft, has been completed and a portion of the Phase II flight test, involving its capabilities as a ferret aircraft, was in process at the end of the period. An evaluation of intercept operations was to be made on the data collected during these flight tests.<sup>72</sup>

~~(CONFIDENTIAL)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Evaluation and Modification of AN/PRR-4 Electronic Intercept Receiver.<sup>73</sup> In accordance with the recommendations reported

in the previous period, the contractor was asked to construct a breadboard or prototype receiver on the basis of the experience gained with the AN/PRR-4. Work on the new type was initiated and a delivery date was set for about 1 March 1955. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Collection and Analysis of LF and VLF Data:<sup>74</sup>

During this period a team was assembled, comprised of representatives from Stanford Research Institute, Sperry Gyroscope Corporation, WADC and ATIC, together with special laboratory equipment to make actual field trials of new techniques to be employed in interception of significant pulsed transmissions. The trials were highly successful and have lead to a detailed long-range program. ~~(CONFIDENTIAL)~~ (u)

As a part of the long-range programming, an agreement was reached at a conference with USAFSS for ATIC to take complete responsibility for

<sup>72</sup>. Project 20072.

<sup>73</sup>. Project 20075: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 110.

<sup>74</sup>. Project 20078: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 111.

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development of intercept facilities in the 10-500 Kc range, which will include development of equipment engineering of field facilities and experimental operation during the development stage. Upon completion of new equipment and techniques devised under this development program, USAFSS will assume full operating responsibility. ~~(SECRET)~~ (u)

A contract was initiated with Stanford Research Institute to undertake the necessary equipment development and conduct field tests of equipment to insure its adequacy for employment in the field. ~~(CONFIDENTIAL)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Technical Intelligence Aspects of East-West Embargo Items.<sup>75</sup> ATIC continued to contribute comment on intelligence significance of electronic embargo items to the Department of Defense. ~~(CONFIDENTIAL)~~ ~~(SECRET)~~ (u)

(Uncl) Soviet Bloc Capabilities in Application of Infrared to Aerial Warfare:<sup>76</sup>

This project is designed to present all current information on the capabilities of the USSR and satellite nations in the field of infrared radiations applicable to aerial operations. The project was established toward the end of the last reporting period. (Uncl)

A study was completed 25 October 1954 which indicates that:

East Germany provides a valuable contribution to the Soviet military infrared potential. ~~(CONFIDENTIAL)~~ (u)

The Soviets now have the ability to produce optical materials satisfactory for military use in passive detection devices. Their technical capabilities in the field of passive infrared detection in

75. Project 20080: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 111.

76. Project 20081: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 106.

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the medium wavelength region are the same as those in the United States.

~~(CONFIDENTIAL)~~ (u)

The Soviets have the scientific background to progress to other detectors, but production of these presents many difficulties and it is not considered likely that they will have any of these detectors in operation before 1958. ~~(CONFIDENTIAL)~~ (u)

No information has been received concerning the detection of far infrared radiation. ~~(CONFIDENTIAL)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Interrogation of Returned German Specialists

("MOON").<sup>77</sup> This project is in the process of being closed. No work was accomplished during the reporting period. (Uncl)

(u) ~~(CONFIDENTIAL)~~ Machine Processing of Electronic Intercept Data:<sup>78</sup>

This new project is a supplement to an existing contract containing a new task which includes the study of machine processing of electronic intercept data. It is intended to fill the void presently existing in machine (IEM) handling of these data. ~~(CONFIDENTIAL)~~ (u)

A complete study of the requirements of machine processing of intercept data has been made, covering requirements of ATIC, SAC and Hq USAFSS. Various methods and machines available have been studied and feasibility of using this equipment has been determined. ~~(CONFIDENTIAL)~~ (u)

As a result of the above work, and a number of conferences held with interested parties, the complete program of machine handling of data was outlined. Efforts in this field indicate that all electronic intercept data may be handled in the future by machine processing. ~~(CONFIDENTIAL)~~ (u)

77. Project 20083: History of ATIC, 1 Jan 54 - 30 Jun 54, page 112.

78. Project 20084.

(Uncl) WEAPONS AND INDUSTRY:

(Uncl) Status of the Technology of Aircraft Metallurgy in the USSR: <sup>79</sup>

One study was distributed in connection with this project during the period. (Uncl) "The Status of Aircraft Metallurgy in the USSR (Aircraft Quality Steels)" was released 14 September 1954.<sup>80</sup> (Uncl)

Another study, (Uncl) "The Status of Aircraft Metallurgy Research and Development",<sup>81</sup> was printed and forwarded for distribution late in December. (Uncl)

A third study in this project, (Uncl) "Status of Welding Technology in the USSR",<sup>82</sup> was reviewed within the Center and by interested components of WADC before being forwarded to D/I USAF for approval, which was received 9 December. At the close of the period it was in the process of reproduction. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Investigation of Foreign Fire Control Equipment: <sup>83</sup>

Report TR-AE-21, entitled "Installation of Guns in Turrets of TU-4", was received from Emerson Electric Company, St. Louis, Missouri. This completed the contract with that firm.<sup>84</sup> ~~(CONFIDENTIAL)~~ (u)

79. Project 30022: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 101.

80. ATIC Study No. 102-AE-53/5-34.

81. ATIC Study No. 102-AE-53/4-34.

82. ATIC Study No. 102-AE-54/3-34.

83. Project 30037: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 88.

84. Air Force Contract AF 33(600)-18147.

~~CONFIDENTIAL~~ UNCLASSIFIED

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A request to extend the contract<sup>85</sup> with the Crosley Division of AVCO Manufacturing Corporation, Cincinnati, Ohio, was approved for the fiscal year 1955. One requirement under the contract with AVCO, a report of ~~(CONFIDENTIAL)~~ <sup>(u)</sup> "Soviet Air Gunnery Trainer AIP and AIK", was active during the period. It was approximately 85 percent complete at the end of the period. ~~(CONFIDENTIAL)~~ <sup>(u)</sup>

Requirement for report on ~~(CONFIDENTIAL)~~ <sup>(u)</sup> "Installation of an ARO Radar in the MIG-15, MIG-17 and future Soviet Interceptors" was forwarded to AVCO 18 November 1954. ~~(CONFIDENTIAL)~~ <sup>(u)</sup>

ATIC Technical Report, TR-AE-32, (Uncl) "MIG-15 Fire Control System", was distributed during the period. This report resulted from the utilization of information obtained from three other requirements placed on AVCO; report on "GSK-1500 Aircraft Generator", report on "Soviet Aircraft Generators", and use of the gunsight aim point camera mount built in simulated firing tests of MIG-15 in flight.

~~(CONFIDENTIAL)~~ <sup>(u)</sup>

(Uncl) Critical Production Factors in the Soviet Precision Industry.<sup>86</sup> The object of this project was to produce a staff study for very limited distribution which would indicate the criteria to be used in evaluating the Soviet level of technology in the precision industry category. The project was postponed for an indefinite period because of other higher priority projects, the excessive routine workload, and

85. Air Force Contract AF33(600)-24502.

86. Project 30042: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 106.

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because it was believed that information to be secured from other projects could be used to judge the extent of further survey required and criteria to be developed in this project. Accordingly, this project was cancelled on 14 December 1954. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Status of Soviet Synthetic Resins as Applied to Aircraft.<sup>87</sup>

Distribution of ATIC Study 102-AE-53/10-34, (Uncl) "Status of Soviet Synthetic Resins as Applied to Aircraft" was accomplished on 8 July 1954. Since this completed the requirements of the project it was closed on 4 August 1954. (Uncl)

(Uncl) Aircraft Rubber Technology in the USSR.<sup>88</sup> Distribution

of the basic study No. 102-AE-54/2-34 entitled (Uncl) "Aircraft Rubber Technology in the USSR" on 22 November 1954 and its separate appendix on 14 December 1954 completed the requirements of this project. The project was closed on 27 December 1954. (Uncl)

(Uncl) Soviet Capabilities in Aircraft Instrument Manufacturing.<sup>89</sup>

Delivery of the coordination copy of a study from Project Stork was delayed until 26 August 1954 because of higher priority projects taking precedence through the coordination office at that facility. Although considerable revision of the report was necessary by the contractor prior to its being forwarded to ATIC, a review by the ATIC project

87. Project 30046: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 103.

88. Project 30049: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 103.

89. Project 30050: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 106.



engineer indicated additional re-write work was yet to be done. Accordingly, the report was returned to Project Stork in December 1954 with specific recommendations for changes. (~~CONFIDENTIAL~~) (u)

(Uncl) Status of the Nuclear Energy Program in the USSR:<sup>90</sup>

This is a continuous-type project involving the collation and integration of information into the Technical Intelligence Processing System (TIPS) file at Project Stork at a pre-determined rate of effort. The first progress report of the contractor, (Battelle Memorial Institute) was issued 30 September 1954. This report indicated that about 28,900 entries into the TIPS file had been made from the 2,300 documents processed under this project to date. Extensive use was made of the information contained in this portion of TIPS file in preparing a study authorized under a work request on the Institute of Physical Problems imeni S. I. Vavilov, Moscow. This report was completed and delivered to ATIC in March 1954 for use of D/I USAF. (SECRET)

In connection with this project, ATIC personnel visited D/I USAF, Atomic Energy Commission, and the Department of State to coordinate various phases of project activity including a technical report prepared on the BISON and BADGER aircraft.<sup>91</sup> Arrangements were made for participation of an ATIC representative on an atomic energy working group under sponsorship of the Joint Atomic Energy Intelligence Committee.

(~~CONFIDENTIAL~~) (u)

90. Project 30051: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 107.

91. ATIC Technical Report TR-AE-62.

An addendum to the basic project initiation proposal was submitted on 30 December 1954. This plan involves the incorporation of Project Stork related activity under "Integration of Information into TIPS", "Nuclear Power Reactor Materials Bibliography", and "Bibliographies and Biographical Reports of Soviet Physicists", with this project. Under this plan the work would be phased through December 1955 in an effort to determine the technical and scientific capability of the Soviet bloc countries to develop and utilize nuclear power plants either for aircraft or guided missiles. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Status of the Technology of Aircraft and Guided Missile Instrumentation in the USSR and its Satellites:<sup>92</sup>

An interim report dated 15 July 1954 was received from the contractor, Battelle Memorial Institute, "Project Stork", during this period. After a review of this report, a revision of the original work request was forwarded to the contractor on 27 September 1954. It was apparent from the report that there was insufficient intelligence information on which to base separate reports on the state of the art in aircraft and missile instrumentation in Soviet and Satellite nations. For that reason only one report is to be required in fulfillment of this request. Coordination of this report by ATIC was set for 1 April 1954.

~~(CONFIDENTIAL)~~ (u)

In addition to reviewing the activity of the contractor, the ATIC Project Monitor made a trip in July 1954 to West Coast aircraft

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92. Project 30057: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 91.

manufacturing facilities to secure background data pertinent to this project. ~~(CONFIDENTIAL)~~ (u)

(Uncl.) Characteristics and Performance of the Soviet 23mm NR Automatic Aircraft Gun.<sup>93</sup> ATIC Technical Report TR-AE-34, entitled, (Uncl) "Analysis of Soviet NR-23 Automatic Aircraft Gun" was distributed on 7 September 1954. This fulfilled the requirements of the project and it was closed on 15 September 1954. (Uncl)

(Uncl.) Development of Analog Ratios for Vacuum Tube Production Facilities.<sup>94</sup> Activity during this period was generally restricted to collation and integration of intelligence information by the contractor under the guidance of the ATIC Project Monitor. Discussions were held with Project Stork personnel in September and December, and a report was forwarded for coordination from that activity on 30 December 1954.

~~(CONFIDENTIAL)~~ (u)

(Uncl.) Evaluation of Aircraft Equipment.<sup>95</sup> This project, which was initiated to monitor contract AF33(600)-24194 with the Stratos Division of Fairchild Engine and Airplane Corporation was cancelled on 8 July 1954 following expiration of the contract at the end of Fiscal Year 1954. This course of action was deemed advisable since utilization of the contractor had not been possible because of the unforeseeable lack of significant foreign material (pneumatic equipment) for analysis. ~~(CONFIDENTIAL)~~ (u)

93. Project 30061: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 89.

94. Project 30062: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 106.

95. Project 30063: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 118.

(Uncl) Status of Foreign Air Weapons Metallurgy:<sup>96</sup>

Four reports were received on this project from ATIC contractor, Battelle Memorial Institute. The Addenda Report on the USSR, (102-AE-54/4-34) was received 1 July 1954 and is being reviewed by ATIC with additions being made to include significant information from the "Summary" report previously received under ATIC Project 30022.<sup>97</sup> Reports on Czechoslovakia (102-AE-54/5-16), Hungary (102-AE-54/6-5) and East Germany (102-AE-54/7-23) were received in August and in December were approved by the Directorate of Intelligence for publication. (Uncl)

In addition to the work by Battelle Memorial Institute, a contract (AF33(600)-28412) with Dr. (b) (6) of New York University dated 24 August 1954 requested evaluation of specific items on call. A total of \$3,000 has been allotted to the contract and two calls have been issued. Call Letter #1 was issued 1 October 1954 for an analysis of titanium sponge and evaluation of English digests of twenty-two foreign metallurgical articles. Call Letter #2 was issued 4 November 1954 and called for a letter report on an analysis of titanium sponge and powder samples. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Status of Aircraft and Guided Missile Mechanical Equipment in the USSR and its Satellites:<sup>98</sup>

The first interim report originally planned for 15 April 1954, was received from the contractor, Battelle Memorial Institute, 23 July 1954.

96. Project 30065: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 101.

97. Footnote 79 supra.

98. Project 30066: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 92



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It was reviewed and on 21 September 1954 the future activity of the contractor was outlined in an addendum to the work request. One of the specific recommendations made, was to have a single report on both USSR and Satellite aircraft and missiles mechanical equipment issued by Project Stork. Coordination date of 30 June 1955 with a cut-off date of 15 March 1955 were specified. Western Europe nations coverage was deleted from the requirements. ~~(CONFIDENTIAL)~~ (u)

During this reporting period four unedited, informal sets of translations of foreign technical documents on the subject of mechanical equipment and systems were forwarded by Project Stork to the ATIC Project Monitor. ~~(CONFIDENTIAL)~~ (u)

On 9 November 1954 an additional requirement was imposed on the contractor for the submission to ATIC of all presently available data on Soviet research, development, test facilities and personalities engaged in research, development and testing of equipment covered by this project. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Foreign Aircraft and Guided Missile Equipment Data.<sup>99</sup>

During this period it became apparent that sufficient information had been received to warrant publication of a handbook on this subject, and accordingly, activity was stepped up and directed toward that end. ~~(CONFIDENTIAL)~~ (u)

99. Project 30067: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 115.

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(Uncl) Status of Development of Soviet and Satellite Aerial Photographic Reconnaissance Equipment.<sup>100</sup> This project resulted in the distribution of an ATIC Study (102-AE-54/1-34) in August 1954 and represented the efforts of the contractor, Battelle Memorial Institute, as well as ATIC. During this reporting period Project Stork personnel visited the Library of Congress in July and Director of Intelligence in October to coordinate their previous findings with the information available to complete the report planned under this work request. The work request was modified in September 1954 to include requirement for only one report, on both USSR and its Satellites, to be received in ATIC for coordination 1 March 1955. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Status of the Technology of Aircraft and Guided Missile Electrical Equipment in USSR and Other Countries.<sup>101</sup> An interim report on the status of work at the contractor's facility was received in ATIC on 2 July 1954. Further action on this work request was outlined by ATIC in a written comment to Project Stork dated 25 September 1954. Specifically, it was proposed that Project Stork prepare one report on the research and development capability of the Soviet bloc nations in the field of aircraft and missile electrical equipment. It was further proposed that the closing date for information to be included in the report be 31 December 1954, and that a coordination copy of the report be made available to ATIC on 30 April 1955. ~~(CONFIDENTIAL)~~ (u)

100. Project 30068: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 93.

101. Project 30069: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 92.

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(Uncl) Evaluation of Aircraft Equipment (Bendix Aviation Corp).<sup>102</sup>

This \$1.00 a year call type contract (AF33(600)-26266), was extended for one year on 1 July 1954. This contract, which provides for the examination of foreign landing gear and engine control equipment, remained dormant during the current reporting period through lack of significant material. (~~CONFIDENTIAL~~) (u)

(Uncl) Analysis of Soviet N-37 Automatic Aircraft Gun.<sup>103</sup> ATIC

Technical Report TR-AE-35, entitled (~~CONFIDENTIAL~~) "Analysis of Soviet N-37 Automatic Aircraft Gun" was distributed 15 July 1954. This completed the requirements of this project and it was closed 29 July 1954. (~~CONFIDENTIAL~~) (u)

(Uncl) Western Europe Metallurgical Research Capabilities.<sup>104</sup>

This project was designated to examine the capabilities of West European nations in the field of metallurgical research. As a result of work on this project, ATIC Technical Report TR-AE-65, entitled (Uncl) "Air Weapons Metallurgical Capabilities of Western Europe" was in the coordination stage at the end of the period. (Uncl)

(Uncl) Evaluation of Research and Development in Synthetic Resins and Elastomers in USSR and Satellites.<sup>105</sup> Work on the initial phases of this project was accomplished by Battelle Memorial Institute.

102. Project 30070: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 118.

103. Project 30076: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 90.

104. Project 30077: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 102.

105. Project 30078: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 103.

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~~CONFIDENTIAL~~ UNCLASSIFIED<sup>76</sup>

A coordination copy of a report on Soviet satellites was received 1 October 1954. It was reviewed and a decision was made to publish it only after prominent scientific and technical personnel in industry have reviewed it and submitted recommendations. Delivery of a final report on the USSR was set by the contractor for 1 February 1955. ~~(CONFIDENTIAL)~~

~~(S)~~ (u)

(Uncl) Foreign Production Status of Titanium: 106

This new project was initiated 8 July 1954 to ascertain the present and future status of foreign titanium technology on a world-wide basis to better satisfy Scientific Estimates Committee (SEC) and Joint Technical Intelligence Services (JTIS) requirements. As stated in the project plan, the foreign status of titanium technology is significant to the air technical intelligence and research and development missions since this metal, when utilized, will exert a significant bearing on the operational performance of future air weapons, as well as conserve critical materials. ~~(CONFIDENTIAL)~~ (u)

Definite dates for submission of reports were not planned, although letter reports to the Director of Intelligence and SEC will be required annually. (Uncl)

A lecture, presented to the Assistant Secretary of Defense for Research and Development, was given limited distribution on 13 August 1954 as ATIC Technical Report TR-AS-61 entitled (Uncl) "Lecture on Foreign Status of Titanium". (Uncl)

106. Project 30079.

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(u) ~~(CONFIDENTIAL)~~ Adaptability of the Soviet Aircraft Industry to Heavy Bomber Production: <sup>107</sup>

A report from the contractor, Battelle Memorial Institute, was received on 17 November 1954. This report, together with a trip report dated 21 January 1954, were considered sufficient to fulfill the contractor's obligations under the initial work request. Further utilization of this information by ATIC in either a technical report or estimate was planned by the project monitor. ~~(CONFIDENTIAL)~~ (u)

ATIC obtained an analysis of the producibility of a heavy bomber apparently soon to be produced in the USSR from Boeing Aircraft Company. This analysis plus a similar analysis by Douglas Aircraft Company, will be used with the Project Stork trip report as the basis for a technical report. ~~(CONFIDENTIAL)~~ (u)

(Uncl.) Evaluation of the Swedish KH-29 Universal Gyroscope. <sup>108</sup>

Publication of a technical report giving the results of WADC evaluation and testing of this gyroscope was originally planned for October 1954. The test program, however, has been delayed by lack of an adequate power source and a translation of technical data on the instrument. ~~(CONFIDENTIAL)~~ (u)

(Uncl.) Evaluation of a Foreign Aircraft Weapon. <sup>109</sup> The French

300F 30mm Aircraft Gun, to be evaluated by Armour Research Foundation under contract AF33(600)-28834, was received on 27 October 1954.

107. Project 30080: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 105.

108. Project 30081: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 92.

109. Project 30082: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 90.



Ordnance Engineers of the French Government visited ATIC on 9 December 1954 and briefed personnel of ATIC and the contractor on the gun. The gun, spare parts, tools, and ammunition were delivered to Armour on 15 December 1954 and firing tests were planned to begin on 10 January 1955. ~~(CONFIDENTIAL)~~ (u)

(Uncl.) Consultation on Foreign Aircraft Armament.<sup>110</sup> This project was initiated 20 July 1954 to obtain consultation services and exchange of information regarding armament systems development through the medium of a \$1.00 per year contract with the Hughes Aircraft Company. A purchase request was initiated 15 July 1954 and the contract was signed in December 1954. (Uncl.)

(Uncl.) Evaluation of Research and Development in Ceramics and Cermets in Significant Nations.<sup>111</sup>

Coordination copies of an ATIC Study were received from the contractor, Battelle Memorial Institute, on 1 October 1954. They were returned for extensive revision by ATIC and resubmitted by Project Stark on 15 November 1954. A copy of the study was forwarded to WADG for review and comment in December. The study has not been published due to a desire to have it reviewed by outstanding scientific personalities in this field. ~~(CONFIDENTIAL)~~ (u)

In addition to activity by Project Stark, a purchase request was initiated 22 December 1954 to secure the services of Dr. (b) (6), (b) (3) (5) (b) (6), (b) (3) (5) of Kearfott Company, Inc., Clifton, New Jersey, to prepare

110. Project 30083: This number was originally assigned to a rubber and plastics project which was not given final approval. See History ATIC, 1 Jan 54 - 30 Jun 54, Page 103.

111. Project 30084: History of ATIC, 1 Jan 54 - 30 Jun 54, Page 105.



reports or studies reflecting his findings from review of such information as may be furnished him by ATIC on a call-letter basis.

(CONFIDENTIAL)

(Uncl) Evaluation of Foreign Aircraft Armament.<sup>112</sup> This new project was initiated 4 August 1954 to monitor the activities of Armour Research Foundation under a \$1.00 per year call contract. The purchase request was initiated 12 May 1954 to provide for conferences with, and reports from, the contractor. A revision to the purchase request was submitted 7 October 1954, specifying that such reports as would be required of Armour would be informal in nature. ~~(CONFIDENTIAL)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Estimate of the USSR Heavy Press Capability in Air Weapon Development.<sup>113</sup> This new project was established 28 December 1954. Purpose of the project is to survey basic information to determine the status of the USSR in the utilization of heavy presses in the fabrication of air weapons components. It is contemplated that overt scientific data in fields associated with heavy press research will provide significant indications. These indications plus pertinent intelligence information will form a basis for an estimate.

~~(CONFIDENTIAL)~~ (u)

(Uncl) The Status of Research and Development in Dielectrics in the USSR.<sup>114</sup> This project is designed to determine the status of Soviet research and development in dielectrics and their applications. A survey study was completed in August 1954, and made ready for print-

112. Project 30086.

113. Project 30088.

114. Project Stork (9974): Page 64 Supra.

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ing and distribution. The Soviet research and development data concerning dielectrics were gathered, separated and grouped according to facility; evaluated, summarized and compared with dielectric accomplishments elsewhere, particularly in the United States. The Soviets have, for many years, maintained a good dielectric research and development program together with satisfactory coordination with industry. It is clear that the Soviets have a good knowledge of dielectric work in the United States, and that their dielectric capability may be as good as that of the United States in certain fields.

~~(CONFIDENTIAL)~~ (u)

(Uncl) Initial Report on the Capability of the USSR in Astronomy and Astrophysics:<sup>115</sup>

The purpose of this project is to prepare a report describing the initial results of a study, whose ultimate objective is the determination of the capability of the USSR in those phases of astronomy which might contribute to progress in the operation or development of air weapons systems. ~~(CONFIDENTIAL)~~ (u)

In a study which was completed 30 November 1954, the immediate objective was to present a collation of the information assembled on Soviet astronomy, to describe the present status of Soviet astronomy based upon a preliminary interpretation of these data, and to delineate those phases of Soviet astronomy which, because of their

<sup>115</sup>. Project Stork (9974): Page 64 supra.

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probable relation to air operations, necessitate further detailed study and evaluation.

It was found that:

The over-all volume of Soviet effort in astronomy is at least comparable and probably exceeds that of the United States.

Soviet astronomers have as much potential for practical military research as their American counterparts.

No evidence was obtained suggesting that political influence has warped or impeded the progress of Soviet astronomy, so far as its presently conceived military applications are concerned.

Training in the USSR in astronomy and associated sciences is at a very high level. It is believed to be higher in quality than in the United States. Also, in the USSR, the degree of standardization between schools is greater than in the United States.

Soviet astronomical literature seems to be more classical and less specialized than that in the United States.

Soviet instrumentation in astronomy is not so fully developed as astronomical instrumentation in the United States.

Soviet astronomers are much more cognizant of American astronomical developments than are most American astronomers of Soviet developments.

Fields of Soviet astronomy which are believed to contribute most to Soviet capabilities to wage aerial warfare, and which require priority in a program for further detailed analysis and evaluation are; celestial mechanics, positional astronomy, meteorics, solar physics as related

to solar-terrestrial phenomena, and astronomical contributions to geodesy and gravimetry. ~~(CONFIDENTIAL)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Foreign Biological and Chemical Warfare Activities: <sup>116</sup>

This is a new project to utilize the TIPS <sup>117</sup> program at Project Stork for integration of Biological and Chemical Warfare intelligence receipts into those files on a continuing basis. Letter reports are submitted every six months by Project Stork. The second report, dated 27 July 1954, showed that a total of 969 cards were added to the file in the preceeding six months, and that the B/W and C/W files showed a pronounced void of information in regard to weapons. ~~(SECRET)~~ (u)

During the six-month period ending 31 December 1954, a total of 419 items, including documents from ATIC and published literature were processed through the TIPS program. A small amount of information was gained in regard to weapons, but not a sufficient amount to warrant a separate study. During this period, available information on a given list of men and institutes was reproduced by Project Stork and forwarded to ATIC for subsequent delivery to D/I, USAF. ~~(SECRET)~~ (u)

(u) ~~(CONFIDENTIAL)~~ Status of Soviet Vacuum Tube Metallurgy and Methods of Manufacture: <sup>118</sup>

This work program, initiated in 1952, has been carried out under contract by Project Stork and covered a comprehensive study of the

116. Project Stork (9974): Page 64, supra.

117. Technical Intelligence Processing System.

118. Project Stork (9974): Page 64, supra



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subject by Mr. (b) (6) Consultant to Stork. The reports, produced as a result of this study, were submitted separately as Phase I (Metallurgy) and Phase II (Methods of Manufacture). The Phase I report was utilized by ATIC in the publication of ATIC Report TR-AE-20, entitled, (Uncl) "Status of Soviet Vacuum Tube Metallurgy" on 28 August 1953. (~~CONFIDENTIAL~~) (u)

Phase II activity culminated on 30 November 1954 with the receipt at ATIC of two Project Stork reports: SR No. 69, (Uncl) "Soviet and East German Electron Tube Non-metallic Materials" and SR No. 70, (Uncl) "Soviet and East German receiving Tube Manufacturing Technology". SR No. 69 has been utilized in preparing an ATIC Report TR-AE-66, which was in the coordination stage at the close of the period. SR No. 70 required numerous changes to conform to ATIC requirements and was returned to the contractor on 28 December 1954 for revision. (~~CONFIDENTIAL~~) (u)

(u) (~~CONFIDENTIAL~~) Compilation of Foreign Aviation Medicine, Aircrew Equipment, and Meteorological Data.<sup>119</sup> This is a continuous-type project requiring the contractor, Battelle Memorial Institute, to process intelligence documents, and integrate into the TIPS files information on scientific and technical literature from the USSR and Satellite nations in the field of aviation medicine, aircrew equipment, and meteorological equipment and techniques. A status report from the contractor dated 28 October 1954 indicated an insufficient amount of information in the TIPS files to warrant a more complete study under any of the three fields. (~~CONFIDENTIAL~~) (u)

119. Project Stork (9974): Page 64, supra.

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(Uncl) MISCELLANEOUS:

(Uncl) Blue Book <sup>120</sup> (Unidentified Flying Objects:)

A total of 217 unidentified flying object reports were received for the period 1 July to 31 December 1954. This is very near to the average received for like periods. One hundred and eight-one or 83% of the reports, during this period were classified as known objects or phenomena, 19 or 9% contained insufficient data for evaluation and 17 or 8% remain as unknown. (Uncl)

During 1954 there was a marked increase in the number of foreign sightings, particularly the reports of a cigar-shaped object. It was first reported in Italy and reports of sightings soon spread to France, Sweden, Germany, Greece and other European countries. This increase in foreign sightings have been attributed chiefly to publication of Major (b) (6), (b) (3) (B) books on Flying Saucers, which were translated and served to stimulate sighting reports. (Uncl)

Following the establishment of this project in 1947, the reported sightings remained on a fairly even level until 1952 when there was a tremendous increase. The reported sightings that year reached a peak figure of 1700. It appears that the increase was directly related to press treatment of "Flying Saucers". Prior to 1952, press coverage had been mediocre, but when sightings were reported over Washington D. C., along with other significant sightings, there was nation-wide press coverage, followed by an exceptional increase in reports. (Uncl)

120. Project 10073. History of ATIC, 1 Jan 54 - 30 Jun 54, page 82.

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A coordination conference was held between project Blue Book personnel and personnel of Hq 4602d AISS in Colorado Springs, Colorado during the week of 15 - 22 November. As a result of this conference, the UFO program as specified in AFR 200-2, "Unidentified Flying Objects Reporting (Short Title: UFOB)", dated 12 Aug 54, was placed into full operation and has been functioning since that time. A notable increase in timely and accurate reporting has already been experienced. (Uncl)

(Uncl) Foreign Physical Science Related to Air Operations: <sup>121</sup>

This is a new project established to determine the air technical intelligence possibilities associated with the activities of foreign countries in the field of atmospheric geophysics, and certain phases of astronomy. (Uncl)

From 15 September to 24 October 1954, the Project Monitor, Dr.

(b) (6) toured Europe, visiting Rome, Frankfurt, Wiesbaden, Cambridge, London, Brussels, and Paris, to examine European science at close range and to attend the Tenth Assembly of the International Union of Geodesy and Geophysics at Rome. This assembly was followed by a meeting of the Commission of this Union for planning the International Geophysical Year. (Uncl)

He learned that European science is developing rapidly, is very basic in nature, and its applied impacts on future air operations will be significant. (Uncl)

A report was prepared by (b) (6) for the Commander, ATIC, pointing up Air Force interest in the activities of the International Union

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of Geodesy and Geophysics, and the intelligence possibilities associated with international activities in the fields of atmospheric science and solar astronomy. (Uncl)

ATI Study 102-EL-53/4-34, (Uncl) "The Status of Selected Fields in Geophysics in Foreign Countries", was distributed 5 August 1954. It was prepared under Project Stork (9974) from a report submitted by the contractor, Battelle Memorial Institute. (Uncl)

122

(Uncl) Photographic Reconnaissance from Extreme Altitudes. This project was initiated and approved in November 1954. Formal plans for accomplishing the project were being prepared at the close of the year. (Uncl)

Miscellaneous products not listed under other subjects included:

Report of preliminary examination, FE-5242-AE, (Uncl) "Tube Tester (Kennlinienschreiber) RFG-2", distributed 30 July 1954. (Uncl)

123

ATI report, TR-AE-55, ~~(CONFIDENTIAL)~~ (u) "USAF/RAF Technical Intelligence Conference Report on Soviet and Satellite Aircraft Armament", distributed 31 August 1954. ~~(CONFIDENTIAL)~~ (u)

124

(Uncl) Stalin Prize Awards. <sup>125</sup> Other than maintenance of information, previously collected on this subject, in the AFIC intelligence reference files, there was no action on this project. (Uncl)

122. Project 10205, approved 26 Nov 54.

123. Project 9975, "Processing of Foreign Equipment".

124. Project 9993, "D/I, Hq USAF Requests".

125. Project 10164.

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(Uncl.) HANDBOOKS:

In addition to the handbooks mentioned under Methods of Analysis,<sup>126</sup>  
various handbook projects progressed as follows:

(Uncl.) "Characteristics and Performance Handbook, USSR Aircraft".<sup>127</sup>

Introductory pages and indexes were revised. Handbook sheets for Type-37  
and Type-39 aircraft were completed. Material was not released because  
of policy that pertinent studies will be published prior to handbook  
sheets. (Uncl.)

(Uncl.) "Handbook on Foreign Aircraft, Other Than Soviet".<sup>128</sup> It  
was proposed during the period to issue one handbook on all friendly  
nations' aircraft instead of the present ones on each nation on geo-  
graphic location. Pending decision on this proposal, preliminary plans  
were made for accomplishing this consolidated handbook. (Uncl.)

(Uncl.) "Handbook on Foreign Engines of Friendly Nations".<sup>129</sup> The  
section on French engines was completed and sent for publication. Dis-  
tribution will be made early in 1955. The remaining sections on other  
nations were well underway by the end of the period. (Uncl.)

(Uncl.) "Handbook on Foreign Guided Missiles".<sup>130</sup> Work was started  
on this handbook which is a new one established during this period.  
By the end of the period, nothing had been published or distributed on  
this handbook. (Uncl.)

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126. Page 79.

127. Project 10128, 26 Oct 51.

128. Projects 10150, 9 May 52 and 10169, 15 May 53.

129. Project 10151, 2 Dec 53.

130. Project 10192, 20 Aug 54.

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(Uncl) Revision of Characteristics and Performance Handbook on Foreign Aircraft Armament.<sup>131</sup> While work on this project was not completed in accordance with the original plan, much was accomplished on the revision of various chapters of Section I (USSR), and Section II (Satellites). The "Gun" and "Ammunition" chapters were distributed in October 1954. The "Fuzes" and "Bomb" chapters were sent to Hq USAF for printing. The "Computers and Optical Sights" chapter was in the coordination stage at the close of the period. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Soviet and Satellite Radar Handbook.<sup>132</sup> Interim reports in this handbook were received from the contractor, Farnsworth Electronics Company, and changes and additions were made. Delivery of final report was set for about 1 February 1955. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Soviet and Satellite Communication Handbook.<sup>133</sup> This handbook was completed by contractor and delivery was scheduled for about 1 April 1955. (Uncl)

(Uncl) Soviet and Satellite Electronic Navigation Handbook.<sup>134</sup> Completion of this handbook by the contractor was set for about 1 May 1955. (Uncl)

131. Project 30073.

132. Project 20059.

133. Project 20060.

134. Project 20061.



Activities: Quantitatively, the figures below summarize project activity for the period 1 July 1954 through 31 December 1954.

	<u>Approved</u>	<u>Completed</u>	<u>Active as of 12-31-54</u>
Technical Analysis Div	2	0	17
Aircraft & Propulsion Br	5	9	44
Electronics Branch	4	5	40
Weapons & Industry Br	3	9	24

The following ATIC publications and other end products were issued in the cited technical fields during the reported period:

	<u>ATIA</u>	<u>Aircraft &amp; Propulsion</u>	<u>Electronics Br</u>	<u>Weapons &amp; Industry</u>
ATIC Studies		2	5	5
Technical Reports		8	7	14
Preliminary Reports on Foreign Equipment		0	2	0
Air Intelligence Digest Articles		5	2	22
Technical Briefs		231	163	232
AF 112's		7	0	4
Special Reports	2	1	0	0

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<u>PROJECT NUMBER</u>		<u>PAGE REFERENCE</u>
1021	Project "Druggie"	73
9965	ATTC Contribution to FAIS 2-14/1	80
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9969	ATTC Contribution to FAIS 2-2	80
9974	Analysis of Foreign Air Technical Capabilities "Project Stork"	64, 69, 72, 99, 100, 102, 103
9975	Processing of Foreign Equipment	66, 69
10073	Blue Book (Unidentified Flying Objects)	104
10092	Aircraft Group Performance Data	79
10095	Analysis of Foreign A/C Fuel and Lube Samples	78
10101	Performance Characteristics of ASH-62IR Engine	74
10105	Soviet VK-107A Engine	74
10107	Foreign Propellers	77
10115	Evaluation of MIG-15	65
10134	Ramjet and Pulsejet Engines	76
10135	Special Study of USSR Aircraft for Escape and Evasion Bulletin	67
10136	Soviet Missiles with Mass Destruction Warheads	72
10139	Soviet Surface-to-Surface Guided Missiles	72
10141	ATTC Contribution to AIS 2/15/1	71
10143	Soviet Aircraft Maintenance System	70

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10144	Potentialities of Boundary Layer Control Services on Soviet Aircraft	71
10152	Performance Calculation Methods for Guided Missiles	79
10157	Soviet Air-to-Air Refueling Capabilities	72
10158	Weight Estimation	79
10160	Analysis of Type-31 Bomber	70
10165	Soviet Rocket Power Plants	75
10170	ATTC Contribution to NIS	80
10172	Study of Chemical Compounds Investigated as Rocket Fuels by Soviet Union	78
10175	ATTC Contribution to NIS	80
10176	Soviet TU-4 Bomber	68
10178	Project Alpha	70
10179	Evaluation of Improved Soviet Turbojet Engine	76
10180	Preliminary Analysis of Soviet Type-38 Aircraft	67
10182	Soviet Surface-to-Air Guided Missiles	72
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10189	Turbojet Engines of Friendly Nations	76
10190	Estimated Development of Soviet Fighter Aircraft	71

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10193	Soviet J39D 022 Turboprop Engine	75
10194	ATIC Contribution to NIE	80
10195	Analysis of Soviet Type-37 Aircraft	70
10196	Analysis of Soviet Type-39 Aircraft	70
10197	Soviet Synthetic Lubricant for Turbojet Engine	78
10198	Soviet Propeller Control for Turboprop Engines	77
10200	Estimated Turbojet Engine in Bison and Badger Aircraft	75
10204	Determination of Propeller Efficiency by Photographic Means	77
10207	Technical Summary Report on All MIG-15 Information	65
20024	Electronic Signal Analysis	81
20062	Countermeasures Consulting Service	82
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20072	Evaluation of Intercept Operations	83
20075	Eval. and Mod. of AM/PRR-4 Receiver	83
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20083	Interrogation of Returned German Specialists	85
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30066	Status of A/C and GM Mechanical Equipment in the USSR and Satellites	92
30067	Foreign Aircraft and Guided Missile Equipment Data	93
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30069	Status of Tech. of A/C and GM Electrical Equipment in USSR and Other Countries	94



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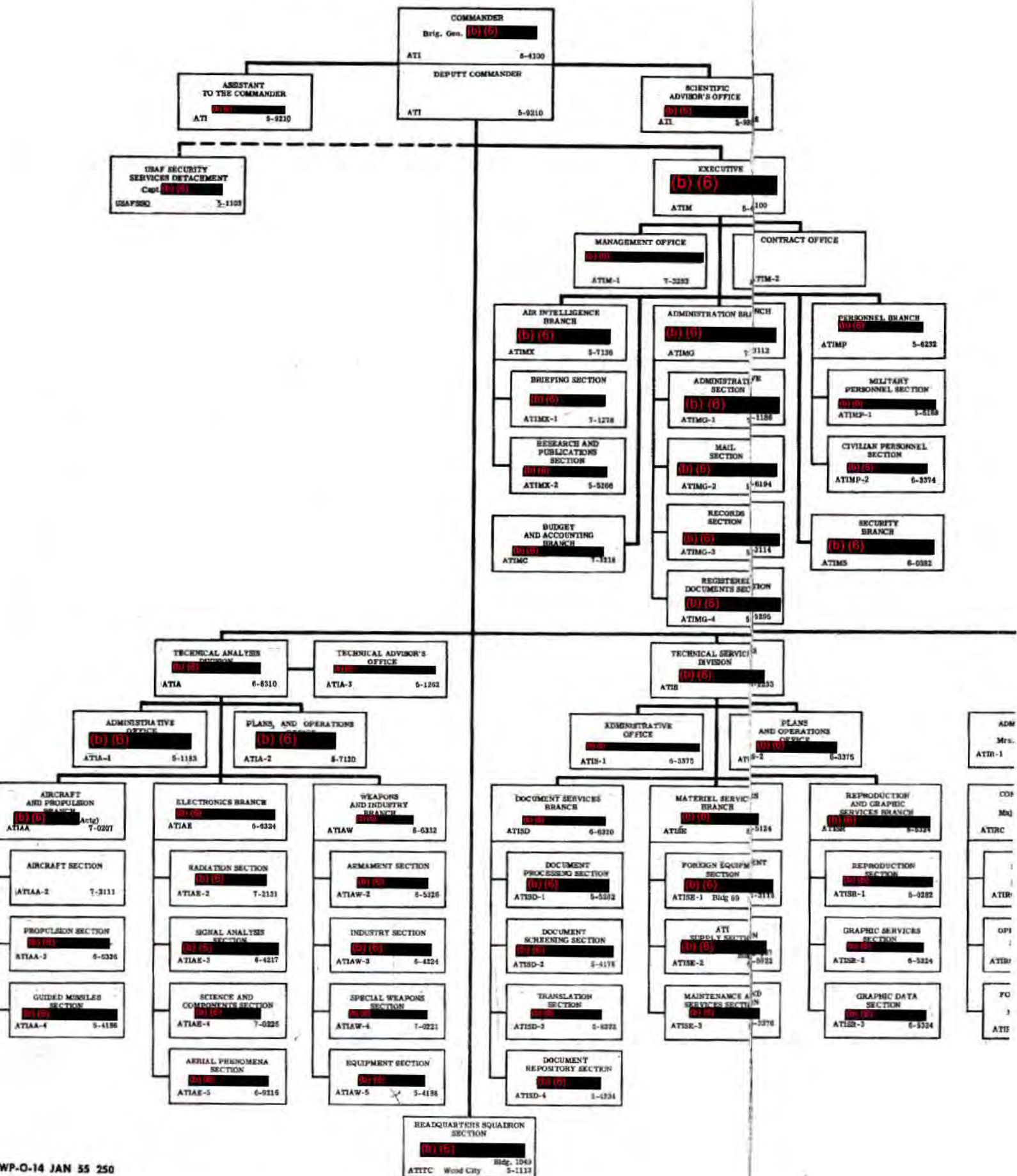
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# ATIC ORGANIZATIONAL DIRECTORY CHART





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HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER  
1 January 1955 - 30 June 1955

Prepared by  
Air Intelligence Office  
AIR TECHNICAL INTELLIGENCE CENTER  
31 July 1955

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FOREWORD  
TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER  
For the Period  
1 January 1955 - 30 June 1955

In preparing this edition of the History of the Air Technical Intelligence Center, an effort was made to improve the contents and format in accordance with the suggestions outlined in the critique of the previous editions. Organization, mission, and personnel matters are covered on a Center-wide basis instead of a division breakdown, and the chapters on each division are devoted only to operations of that division.

A major reorganization of the Center, which was planned during this reporting period, became effective shortly after the close of the period. This reorganization will be fully recorded in the next edition of the history.

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## I. ORGANIZATION, MISSION, AND PERSONNEL

### ORGANIZATION:

The Air Technical Intelligence Center is the technical intelligence element (AFOIN-4) of the Directorate of Intelligence. It is located at Wright-Patterson Air Force Base, Dayton, Ohio. (Uncl)

The organization of the Center is essentially the same as it was at the close of the last reporting period. It consists of the Commander and Staff, Technical Requirements Division, Technical Services Division, and Technical Analysis Division. Each division is further broken down into branches and sections to facilitate specialization, and for convenience in administration and operation. (Uncl)

Shortly after the beginning of 1955 the Commander formulated plans to review the organization of the Center to determine if changes were needed to facilitate the accomplishment of the present day mission. It was his belief that the operational elements of the Center should be relieved of time-consuming tasks which are not a part of their currently assigned responsibilities. The ultimate goals under consideration were the complete segregation of administrative work from technical work, a better grouping and aligning of operational elements in order to more clearly define

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responsibilities, and general management improvement designed to increase the quantity and quality of the Center's intelligence products. Division Chiefs were directed to study the problem, and, if a need for reorganization was indicated, to present recommendations and plans. At the close of the reporting period, 30 June 1955, recommendations and plans for reorganization were in the hands of the Commander for study and decision. (Uncl)

On 1 April 1955 Detachment 1 (ATIC) was organized and assigned to the 1125th USAF Field Activities Group.<sup>1</sup> The purpose and function of the Detachment are to collate and analyze technical information pertaining to Soviet Guided Missiles. The Detachment was designated and established at Kelly Air Force Base, Texas because of the necessity for working in close coordination with Headquarters, USAF Security Service. The detachment was authorized six military positions and 20 civilian positions. Colonel (b) (6) was appointed Officer in charge of the Detachment on 9 June 1955. (~~CONFIDENTIAL~~) (u)

#### MISSION:

The mission, functions, and objectives of the Center have not changed during the period covered by this report.

The mission of the Center is to accomplish the technical portion of the over-all mission of the Director of Intelligence.

1. Hq. Comd., USAF, G.O. 19, 7 Apr 55, as amended by G.O.20, 14 Apr 55.

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The technical portion of that mission is threefold:

- (1) To lessen the possibility of technological surprise.
- (2) To provide a sound basis for counsel on air preparedness.
- (3) To provide air technical intelligence to support the planning and conduct of air operations.

The objectives established to fulfill the mission of the Center are:

- (1) To acquire, collate, and report on air technical intelligence information and material.
- (2) To produce air technical intelligence required to prevent technological surprise.
- (3) To produce air technical intelligence required for national planning.
- (4) To provide air technical intelligence estimates as basis for operational and development planning.
- (5) To produce air technical intelligence required by research and development agencies.
- (6) To support the USAF intelligence collection effort and conduct such special collection activities as are required.

PERSONNEL:

b7c [REDACTED], who assumed command of

the Center 15 September 1954, was designated Deputy Director for Technical Intelligence on 4 May 1955.<sup>2</sup>

(b) (6) reported to the Center on 1 June 1955 and was assigned as Deputy Chief, Technical Requirements Division.<sup>3</sup> (b) (6) was assigned from Headquarters, USAF, where he had served as Chief of Special Activities Branch under the Deputy Chief of Staff for Operations, USAF.

Key personnel of the Center were:

(b) (6)

Special Advisor to Commander  
Scientific Advisor to Commander  
Civilian Assistant to Commander  
Executive  
Chief, Technical Requirements  
Division  
Deputy Chief, Technical Re-  
quirements Division  
Chief, Planning Office,<sup>4</sup>  
Technical Requirements Division  
Chief, Technical Services  
Division  
Chief, Technical Analysis  
Division

2. Ltr fr (b) (6) to (b) (6) 4 May 55.

3. Hq. USAF S.O. 21, 31 Jan 55.

4. Promoted to Colonel per DAF S.O. 70, 11 Apr 55.

**(b) (6)**

Deputy Chief, Technical  
Analysis Division  
OCI, Detachment 1

**(b) (6)** who had been attending the Air University, was assigned to the Center effective 21 June 1955. At the end of the reporting period he was on leave enroute to join. Colonel Eriksen will be assigned as Deputy Commander of the Center. (Uncl)

(Uncl) Manpower Authorizations. At the beginning of the period, the ATIC was authorized 188 officers, 105 airmen, and 327 civilians, a total of 620. At the end of the period, 196 officers, 105 airmen, and 374 civilians, total 675, were authorized. Manpower distribution at the end of the period was:

	CIVILIANS	OFFICERS	AIRMEN	TOTAL
Office of the Commander	5	2	1	8
Executive Organization	17	8	5	30
Personnel and Management Office	10	4	5	19
Adjutant's Office	20	3	8	31
Technical Requirements Division	57	110	51	218
Technical Analysis Division	136	45	8	189
Technical Services Division	107	17	20	144
Headquarters Squadron Section	0	1	7	8
Detachment Number 1	20	6	0	26
Pool	2	0	0	2
Total	374	196	105	675

Of this number, 26 civilians, 70 officers, and 27 airmen allotments were assigned to the overseas ATIC program. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Personnel Strength. As of 1 January 1955, 304 civilians, 180 officers, and 113 airmen, total 597, were assigned. At the close of the period, 314 civilians, 194 officers, and 118 airmen, total 626, were assigned. (Uncl)



## II STAFF ACTIVITIES

(Unc1) Briefings and Noteworthy Visits:

Early in this reporting period the Commander established a program designed to acquaint major users of technical intelligence with the facilities, capabilities and projects of the Air Technical Intelligence Center. The media to implement this program included oral and graphic presentations to civilian and military officials who visited the Center in response to invitations, visits of qualified Center personnel to other commands and agencies for the purpose of special briefings, and increased dissemination of technical intelligence by use of authorized written texts for briefings of technical studies and estimates. Staff responsibility for these presentations and the preparation of briefing texts was delegated to the Air Intelligence Office, which is staffed with qualified speakers, writers and editorial specialists. (Unc1)

In the first half of 1955 approximately 100 briefings were presented to key personnel of US agencies including the Department of Defense, Department of the Air Force, Major Air Force Commands and Department of the Army. Briefings were presented at many points throughout the US, as well as at the Center itself. Some of the important briefings are recorded below. (Unc1)

(b) (6) (IA-Ref) and (b) (6)  
members of the Clark Committee of the Hoover Commission, visited

the Center on 6 January 1955. The purpose of the visit was to make a survey of the material made available through the USAF Special Security Office located at the Center, and to determine the usefulness of the material to the operations of the Center. (Uncl)

On 12 January 1955, (b) (6) briefed (b) (6), (b) (6), and (b) (6) (USN-Ret), of the Hoover Commission, on the mission and functions of the Center. These Hoover Commission members visited the Center to survey the functions and effectiveness of the Center as a part of the Directorate of Intelligence and the intelligence community as a whole. (Uncl)

(b) (6) and (b) (6) of the Institute of the Aeronautical Sciences, New York, visited the Center on 24 February 1955. (b) (6) is Director of the Institute and (b) (6) is the Secretary. (b) (6) and (b) (6), Scientific Advisor, discussed with these visitors matters of mutual interest, particularly the capability of the institute to assist intelligence in the field of translation. The visitors were given a general briefing of the activities of the Center and were conducted on a tour of the foreign aircraft display. (Uncl)

On 3 March 1955, (b) (6), Deputy Director of Intelligence, visited the Center and was given a general orientation briefing on the ELINT<sup>1</sup> activities of the Center. (Uncl)

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A group from Headquarters, USAF, visited the Center on 15 April 1955. Members of the group were (b) (6) and (b) (6) of the Office of Assistant for Development Planning, and (b) (6), (b) (6), (b) (6), (b) (6), (b) (6) of the Directorate of Intelligence. (b) (6) and his staff briefed the group on the capabilities of the Center to contribute information on the Inter-Continental Ballistic Missile that would be useful in the preparation of Development Planning Objectives. ~~(SECRET)~~ (u)

Honorable (b) (6), Assistant Secretary of the Air Force (Materiel) and his Executive, (b) (6), visited the Center on 27 April 1955. (b) (6) briefed the visitors on the mission and functions of the Center, with particular emphasis on the expanded ELINT activity. (b) (6) expressed his extreme interest in the operations of the Center. (Uncl)

(b) (6) of the National Advisory Committee for Aeronautics, Washington, D. C., visited the Center on 3 May 1955. The purpose of his visit was to discuss with General (b) (6), (b) (6), (b) (6) and the Center staff the conclusions reached by Center personnel as a result of the meeting with the Joint Intelligence Bureau at London, England, in October 1954. Particular emphasis was placed on discussion of Soviet aircraft engines and estimates of the engines in the BISON (type 37) and BADGER (type 39) aircraft ~~(CONFIDENTIAL)~~ (u)

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(b) (6), Deputy to General Erskine, who is Director of Special Operations in the Office of Secretary of Defense, and his assistant, (b) (6), visited the Center 7 June 1955. They were briefed on the facilities of the Center and our ELINT activities. (Uncl)

On 8 June 1955, (b) (6), Director of Intelligence visited the ELINT facility of the Center and was given a thorough briefing on the operation of that activity. (Uncl)

(b) (6), Professional Staff Advisor of the Senate Appropriations Committee, conferred with (b) (6) Acting Commander, and staff members of the Center on 28 June 1955. (b) (6)

(b) (6)'s discussion centered around the proposed new building to house the Center, which was under consideration by the Senate Committee. His inquiries indicated that he was concerned as to why we wanted a building similar to the one at Rome Air Development Center, and he seemed to be under the impression that their technical intelligence activities and those of this Center were a duplication of effort and that construction of another such building would not be economical use of funds. He was assured that the mission of the Center and RADG were not similar in scope or nature, and that the building at Rome was only referred to as a type that would completely fill the needs of the Center without the expense of designing a new structure. When those points had been clarified, Mr. (b) (6) seemed convinced of our need for a new building and of the economy of using an existing design. (Uncl)

#### IV. SERVICES DIVISION OPERATIONS

As a result of the efforts of the Technical Requirements Division and the intelligence collectors in the field, thousands of documents, photographs, recordings, and pieces of equipment are received at the Center. All of these items require screening, indexing, and processing to insure that each item is referred without delay to that section of the Center having primary interest. Numerous documents must be translated and many of the items must be reproduced to permit simultaneous study by several analysts. Photographs are interpreted as soon as they are received. The Technical Services Division is responsible for all of those functions in support of the operations of the Center. (Uncl)

##### DOCUMENTS:

During the first half of 1955 the Center received and processed 30,500 documents. Each document was screened to determine subject matter and to establish routing to persons having an interest in the document. More than 65,000 cards were required to cross-index the documents received during the period. There were approximately 225,000 documents on file in the Repository at the close of the period. (Uncl)



The Translation Section translated more than 780,000 words of foreign text; and translation agencies, with which the Center has contracts, translated more than 2 1/4 million words at a cost of \$55,297.00. (~~CONFIDENTIAL~~) (u)

In the early part of 1955 the Central Intelligence Agency made a survey of the abstracts accomplished under the Program on Exploitation of Foreign Language Literature to determine the feasibility of continuing the project. As a result of the survey, CIA felt it advisable to discontinue abstracts per se and to initiate an extracting resume type program pertaining to Soviet scientific and technical periodicals. Other agencies participating in this program, however, took the CIA proposal under advisement and recommended that abstracting continue, but suggested a revision of the list of periodicals to be abstracted. A new program for abstracting 55 periodicals was established in February 1955. This Center will abstract 23 periodicals, 19 will be abstracted by CIA, and 13 by the Air Information Division of the Library of Congress. The participating agencies discussed a plan to have these periodicals abstracted by contract agencies in 1956. (~~CONFIDENTIAL~~) (u)

During the fiscal period which closed 30 June 1955 a contract in the amount of \$100,000 was let by the Center to two translation agencies. Because of the unsatisfactory performance of both contractors, the Center was prevented from taking full advantage of the appropriation

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allotted for its translation services. The factors that contributed to unsatisfactory service on this contract were:

Both contractors lacked technical capability in accomplishing translations.

Organizational structure of both contractors was inadequate to fulfill translation requirements of the Center.

Editorial supervision was apparently entirely lacking.

One contractor never received a security clearance for his translators. ~~(S)~~ (u)

In an attempt to correct the unsatisfactory performance of both contractors, considerable time was expended in examining returned translations and listing suggested corrections to be used by contractors in reaccomplishing the translations. (Uc1)

A review of all difficulties encountered in obtaining satisfactory performance from translation agencies whose services have been procured through open bids in the past, proves conclusively that the only way to obtain the optimum degree of performance is to obtain the services of a reputable translation agency on a sole source contract. A year contract, as proved by experience, is insufficient to properly educate translation agencies in all matters pertaining to Center requirements. If a sole source can be obtained, it would have the desired effect of providing progressively more satisfactory service in the future. ~~(S)~~ (u)

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MATERIALS AND FOREIGN EQUIPMENT:

The Center received 388 items of foreign material and equipment with a total weight of 57,000 pounds. All of these items were made available to the analysts for examination and study. Many of the items of material were sent to contract laboratories for analysis as to content. A total of 11,500 photographs were made of nameplate and marking data. Information obtained from these nameplates and markings furnishes a lead to production rates and manufacturing techniques. (~~SECRET~~) (u)

Arrangements were made to construct a stand for display of foreign equipment in the Air Room of the Chief of Staff, USAF. It is scheduled for completion on 1 August 1955. (Uncl)

Representatives of Air Proving Ground Command visited the Center during May 1955 for the purpose of examining the P2M Soviet Radar Set with the intention of putting it in operation for use with Strategic Air Command in their electronic countermeasures training. During this visit it was learned they had an urgent need for WW II German Electron Tubes for use in the Baby Wurtzburg Radar Set. Since no spares were available, SAC often had to completely re-wire a tube circuit before substitution of a replacement could be made. The Center assisted them in locating and obtaining approximately 100 lbs. of German tubes and components. (~~SECRET~~) (u)

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## V. ANALYSIS DIVISION OPERATIONS

The end product of the Center is finished air technical intelligence in the form of estimates, studies, technical reports, and special reports, covering the entire field of foreign aeronautics and air weapons. These finished intelligence products are the end result of the efforts of collectors in the field and the entire ATIC organization. This finished intelligence is made available to those who are responsible for national planning and for our research and development efforts. (Uncl)

The Technical Analysis Division, which is the production element of the Center, is responsible for the Center's finished intelligence products. The Analysis Division is composed principally of scientists, engineers, and technicians who are trained and experienced in the evaluation and analysis of raw intelligence and basic information concerning aeronautics and related fields. (Uncl)

Raw intelligence received by the Center during the first half of 1955 provided sufficient information on which it could base good estimates and studies of developments in aeronautics, air weapons, and related fields, particularly within the Soviet bloc.

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(Uncl) AIRCRAFT STUDIES AND ESTIMATES:(Uncl) Special Study of BEAR, FLASHLIGHT and FARMER Aircraft:

A program to analyze information secured from rehearsal fly-bys of Soviet Air Force aircraft was given top priority during May and June 1955. The high priority of this study was necessitated by the fact that new aircraft were identified, plus the intensified emphasis being placed by the Soviets on aircraft programs to develop a strategic warfare capability (simultaneous crash development of BISON, BEAR and BADGER). In addition, it is known that there has been an accelerated development program of high-thrust turbojet engines for these aircraft and the concurrent development of an improved fighter aircraft capability with new axial-flow engines for the FLASHLIGHT and FARMER. ~~(SECRET)~~ (U)

Fly-by rehearsals by the Soviet Air Force were started early for the 1955 May Day show. Data was secured from 11 fly-bys between 3 April and 28 April. The air show portion of the May Day Show was cancelled because of inclement weather. Two rehearsals were held after the May Day Show. ~~(SECRET)~~ (U)

The data obtained from these practice runs resulted in the identification of three new aircraft - the BEAR, a swept-wing bomber powered by 4 turbo-prop engines, the FLASHLIGHT, a two-place

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swept-wing all-weather fighter with two nacelle-mounted axial-flow engines on the wings, and the FARMER, a single-place twin-engine day fighter (believed to be a further development of the MIG series). The sighting of the FLASHLIGHT and FARMER at this time confirmed previous ATIC estimates that the Soviets were developing such aircraft. ~~(CONFIDENTIAL)~~ (u)

Analysis of these aircraft is being accomplished in three phases: (1) ATIC analysis; (2) U.S. Industry analysis and (3) British analysis, after which, through a coordination conference between the ATIC and British representatives, the final estimates will be made. ~~(CONFIDENTIAL)~~ (u)

U.S. Industry participation was by the Bell, Boeing, Chance-Vought, Convair, Douglas, Lockheed, McDonnell, Glenn L. Martin, North American Aviation, and Northrup Companies. These companies were given sufficient material from which they are to prepare an overall weight analysis, in-board profile, and performance and characteristics estimates with a deadline date of 1 July 1955. ~~(CONFIDENTIAL)~~ (u)

Propulsion performance figures are being prepared independently in consultation with NACA and several major engine companies in the U.S. These include United Aircraft (Pratt-Whitney & Hamilton Standard), Curtiss-Wright, and General Electric. ~~(CONFIDENTIAL)~~ (u)

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To supplement ATIC engineering personnel, the services of personnel from ATIC contractor, Battelle Memorial Institute, Columbus, Ohio (Project WHITE STORK) were secured in the capacity of technical writers to assist in the writing of the studies. A total of five studies will result from this effort; two studies on propulsion units and three on characteristics and performance estimates. In addition, information on the BISON aircraft, as reported in a previous ATIC study,<sup>1</sup> will be revised. ~~(SECRET)~~ (u)

As the period closed, rehearsals were being held for the annual Tushino Aviation Show in Moscow, set for 3 July 1955. Preliminary data indicates a new twin-rotor helicopter, the analysis of which will be handled on a similar crash basis in close coordination with G-2, US Army. ~~(SECRET)~~ (u)

(Uncl) Analysis of Bison and Badger:

Two characteristics and performance projects were completed during this period<sup>2</sup> upon the publication of "(Uncl) Analysis of BISON"<sup>3</sup> and "(Uncl) Analysis of BADGER"<sup>4</sup>. Both are technical reports based on aircraft observed in the 1954 May Day Air Show in Moscow and in rehearsals preceding the show. ~~(SECRET)~~ (u)

1. ATIC Study 102-AC-54/4/34.

2. ATIC History 1 Jul-31 Dec 54, Page 70.

3. ATIC Study 102-AC-54/4-34.

4. ATIC Study 102-AC-54/9-34.

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The BISON, a swept-wing, four-engine, heavy jet bomber has a gross weight of 365,00 pounds and an estimated wing span of 170 feet. It was initially observed at Ramenskoye Airfield in 1953. Appearance of this bomber in the 1954 May Day Airshow confirmed the development of a Soviet jet heavy bomber and supported the AFIC estimate of its service availability in 1957. The appearance of the BISON in numbers (possibly 19 aircraft participating) in the 1955 air show rehearsal has necessitated a revision of the service availability estimate to 20 aircraft delivered to units in mid-55. ~~(SECRET)~~ (U)

The BADGER, a swept-wing twin-jet aircraft, is apparently designed to fulfill the medium bomber role. The aircraft is estimated to have an operational take-off weight of 150,000 pounds and a wing span of 116 feet. It was originally observed at KAZAN in 1953. The design of BADGER appears to have derived little from Western bomber designs. It's appearance in numbers at the 1954 Air Show indicates that a medium jet bomber aircraft is available for service use. ~~(SECRET)~~ (U)

(Uncl) MIG-15 (Project ZEPH):

Performance flight testing of the MIG-15 aircraft at Wright-Patterson AFB was completed during this period. Navy flight evaluation was completed on 12 February. The aircraft is being maintained in flyable storage condition pending a flight test program to begin on 1 August 1955 in which the Air Proving Ground Command,

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Eglin AFB, will evaluate the F-86-K against the MIG-15. ~~(S)~~ (U)

Three technical reports<sup>5</sup> were released, based on the analysis and evaluation of individual items from the MIG-15. Progress toward incorporating these and other MIG-15 intelligence products into one summary report<sup>6</sup> was delayed due to higher priority work during this period. ~~(S)~~ (U)

Progress toward publication of the MIG-15 Pilot's Operating Manual<sup>7</sup> was quite satisfactory. The manual will probably be published in July 1955. ~~(S)~~ (U)

(Uncl) Analysis of YAK-23. A project<sup>8</sup> to estimate the performance and characteristics of the Soviet YAK-23 Aircraft was completed, upon publication in May 1955 of a technical report, "(Uncl) Soviet YAK-23 Aircraft".<sup>9</sup> The YAK-23, first observed in the 1948 Moscow Air Show, saw limited use in the Soviet Air Force, but is presently in operational use in Satellite Air Forces. The YAK-23 is a single-seat, low-wing, lightweight jet fighter, the latest in a series designed by Yakovlev. ~~(S)~~ (U)

5. TR-AE-49 "(Uncl) Fuel System of the MIG-15", 26 Mar 55,  
TR-AE-67 "(Uncl) Electro-Mechanical Actuator, 7 Mar 55,  
TR-AE-68 "(Uncl) Soviet Aircraft Gear Pumps", 16 Mar 55.

6. ATIC History 1 Jul-31 Dec 54, Page 65.

7. ATIC History 1 Jul-31 Dec 54, Page 67.

8. ATIC History 1 Jul-31 Dec 54, Page 70.

9. TR-AC-28, 4 April 1955.

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(Unc1) Joint ATIC-WADC Report on Project MX-1794:

Publication of an ATIC Technical Report<sup>10</sup> in February 1955 completed a joint study by ATIC and WADC of a radical (circular) aircraft design by (b) (6) Canada, Ltd., which is in the development stage. ~~(SECRET)~~ (u)

The subject of this report deals with a proposal for a new type aircraft by (b) (6) one of Canada's most progressive members of the aircraft industry. The ultimate purpose of presenting this study was two-fold; to correct a distorted picture presented in previous releases by other agencies, and to acquaint the intelligence community with the current state-of-the-art facts in order to alert them to any air intelligence information which may become available indicating Soviet interest in this specialized field.

~~(SECRET)~~ (u)

Other aircraft projects, upon which considerable work was accomplished, included studies and estimates of the FRESCO fighter,<sup>11</sup> HOUND helicopter,<sup>12</sup> and the Soviet aircraft maintenance system.<sup>13</sup> Work on the FRESCO study progressed steadily, but periodic receipt of new data on modified versions of that aircraft increased the

10. TR-AC-47, 15 February 1955.

11. ATIC History 1 Jul-31 Dec 54, Page 67.

12. ATIC History 1 Jul-31 Dec 54, Page 68.

13. ATIC History 1 Jul-31 Dec 54, Page 70.

scope of the study. Four variations of the FRESCO have been sighted and data on each design will be incorporated in the study. ~~(S)~~

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(Uncl) GUIDED MISSILE STUDIES:

Project "~~(S)~~ DRAGGLE" was redesignated "~~(S)~~ ASLOPE" during this period.<sup>14</sup> This is a project to cover ATIC participation in the USAF program for developing a long-range reconnaissance radar. The principal purpose of the project is to provide means of acquiring intelligence data on the trajectory and velocity of foreign guided missiles. Equipment was constructed and tested in May 1955, and was installed at the overseas field site. Operation started on 1 June 1955. ~~(S)~~ (u)

A new ATIC project "~~(S)~~ Soviet Bloc Surface-to-Air Guided Missile Launch Sites" was initiated during this period. The purpose of the project is to identify and analyze Soviet Bloc operational Surface-to-Air launch sites. It is a continuation of the efforts reported in a previous ATIC Study,<sup>15</sup> but broadened to include satellites, since possible sites have been reported in such areas as Shanghai, China. The sites are to be studied as single units and in deployed defense systems. The project will be on an extended-time basis with periodic studies to be prepared as warranted. The

14. ATIC History 1 Jul-31 Dec 54, Page 73.

15. ATIC Study 102-AC-54/11-34 "~~(S)~~ Possible Surface-to-Air Guided Missile Launch Sites in the Moscow Area."



assistance of Douglas Aircraft Company, Long Beach, California, on a cost-free basis has been secured and, in addition, a contract<sup>16</sup> has been negotiated with Consolidated-Vultee Aircraft Company, Pomona, California. These firms will furnish operations analyses on missile systems effectiveness. ~~(SECRET)~~ (U)

(Uc1) Air Weapon Trend Studies. The two active Guided Missile projects in this area of research were reduced to a relatively low-priority basis because of the workload imposed by more urgent projects. The study of surface-to-surface missiles dealing with ballistic missiles was nearly completed as the period closed.<sup>17</sup>  
~~(CONFIDENTIAL)~~ (U)

(Uc1) PROPULSION STUDIES:

4 E -3' (Uc1) Rocket Propulsion Programs:

Two ATIC Technical Reports were issued outlining the status of the French and British rocket power plant development programs.

"(Uc1) French Rocket Power Plant Development Program<sup>18</sup> surveyed the development programs supported by the French Armed Services, including the development facilities, the research and development activities, and the design and performance characteristics of the more important rocket power plants. It was noted that negotiations are being contemplated with a U.S. manufacturer, which,

16. Purchase Request Nr. 161203, Contract Nr. AF 33(600)-30230.

17. ATIC History 1 Jul 31 Dec 54, Page 72.

18. TR-AC-45, 1 Feb 55.



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if completed, could provide the French with rocket power plants in the 10,000 pound thrust range comparable with those being developed in the U. S. ~~(CONFIDENTIAL)~~ (u)

"(Uncl) British Rocket Power Plant Development Program<sup>19</sup> was similar in coverage. One of the significant conclusions was that, in view of the limited practical experience with actual hardware and the past program requirements, British developments of conventional turbopump propellant-feed rocket power plants in the thrust range up to 10,000 pounds are at least two years behind the U.S. ~~(CONFIDENTIAL)~~ (u)

This current survey of foreign rocket power plant development programs<sup>20</sup> will be concluded upon publication, scheduled for September 1955, of a third study of Soviet rocket power plant developments. ~~(CONFIDENTIAL)~~ (u)

45-30 (Uncl) Turboprop Engines:

One turboprop engine study was published during this period. "(Uncl) Soviet JUMO-022 Turboprop Engine Development and Production Capabilities", which presented an analysis of the JUMO-022 series turboprop engine development progress, compared Soviet development progress as of late 1953 with that of the U.S. and estimated the JUMO-022 series development capabilities. Design and

19. TR-AC-46, 17 Jan 55.

20. ATIC History 1 Jul-31 Dec 54, Page 75.

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development of the basic JUMO-022 series was begun for the Soviets at RAVOD 2 in the USSR by German Junkers personnel in mid-1947.<sup>21</sup> During the period of 1947 - 1953 the Soviet effort in development of turboprop engines greatly exceeded that of the U.S. and future development will be at a rate at least comparable with that of the U.S. ~~(SECRET)~~ (u)

This study of the JUMO-022 series was considered sufficiently significant to justify the initiation of a project to continue the analysis of the Soviet progress as of late 1954, utilizing the Pratt and Whitney (United Aircraft Corp) facilities on contract<sup>22</sup> to produce a technical report on the subject. ~~(SECRET)~~ (u)

A new project was also initiated to study the estimated turboprop engine in the BEAR aircraft. This was in connection with the special fly-by project discussed under "Aircraft". In this new project an estimate will be made of the turboprop engine in the BEAR aircraft, together with a comparison with significant British and U.S. turboprop power plants. ~~(SECRET)~~ (u)

16-29  
(Uncl) Turbojet Engines:

Two productions were distributed on turbojets engines during the period. An ATIC Study "~~(SECRET)~~ (u) Inspection and Performance Calibration of a Soviet VK-1 Turbojet Engine", released

21. ATIC Study 102-AC-54/8-34, 22 Nov 54.

22. Contract AF-33(600)-29655

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in April 1955, reported the results of a joint ATIC, WADC (Power Plant Lab.) effort.<sup>23</sup> This engine from the MIG-15 BIS, which was landed in South Korea by a North Korean defector, was made the subject of extensive examination to determine its condition with regard to further use, to confirm its reported performance, and to learn something of its operating characteristics. ~~(SECRET)~~ (u)

An ATIC Technical Report "~~(CONFIDENTIAL)~~ Estimated Turbojet Engine in the BISON and BADGER Aircraft", also released in April, presented Soviet developments of high-thrust turbojet engines, and was based on sightings of the BISON and BADGER aircraft in the 1954 May Day Air Show over Moscow.<sup>24</sup> This study estimated the configuration and performance of the 1954 operational turbojet engine; estimated the performance of a 1957 operational version of this power plant, and compared it with significant British and U.S. turbojet power plants. ~~(CONFIDENTIAL)~~ (u)

A new project to investigate and analyze the SSoviet Iykula engine designs was initiated during this period. Reports have been received containing information on the activities and successes of the Soviet engine designer, Iykula, and information available

23. ATIC Study 102-AC-54/9-34, 4 Oct 54, Project 10200, ATIC History 1 Jul 54-31 Dec 54, Page 75.

24. ATIC TR-AC-42, 27 Sep 54, Project 10187, ATIC History 1 Jul-31 Dec 54, Page 74.

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appeared to justify a study of the "turbofan" type engine. Results, if significant, will be presented in an ATIC Study. ~~(CONFIDENTIAL)~~

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A project to revise a previous ATIC Study<sup>25</sup> (now obsolete) on the characteristics of British and U.S. axial flow turbojet engines was initiated in January. This project will result in a technical report containing tabulations of data and performance characteristics of current British and U.S. turbojet engines. The trend curves developed will be of assistance in estimating development capabilities of Soviet turbojet engines. ~~(CONFIDENTIAL)~~ (u)

A companion project to the turboprop engine study of the BEAR aircraft, has been initiated to estimate the turbojet engine in the FLASHLIGHT and FARMER Aircraft. This study will present Soviet developments of nominal-thrust turbojet engines, estimate their configuration and performance in the two aircraft, and compare them with similar British and U.S. turbojet power plants.

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4E-24 (Uncl) Propeller Studies:

The distribution of two ATIC Technical Reports, "(Uncl) Evaluation of the Soviet Propeller Model VISH-107-10"<sup>26</sup> and "(Uncl) Evaluation of the Soviet Propeller Model VISH-111-V-20"<sup>27</sup> completed

25. ATIC Study 102-AC-52/41-31, 1952.

26. ATIC TR-AC-30, 1 Mar 55.

27. ATIC-TR-AC-38, 1 Jul 55.

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the project<sup>28</sup> utilizing the Curtiss-Wright Corporation on contract<sup>29</sup> to analyze and evaluate Soviet Propellers. Both propellers under study were constant-speed type; the VISH-107-10 from a YAK-9P fighter aircraft and the VISH-111-V-20 from a YAK-11 trainer type aircraft. ~~(CONFIDENTIAL)~~ (u)

A new project<sup>30</sup> was initiated in April 1955 to determine the feasibility of obtaining propeller performance and an indication of turbo-prop engine power class by photographic means. This is an exploratory project to test a theory to determine projected blade plan form by means of a series of photographs taken of a propeller blade while in rotation. ~~(SECRET)~~ (u)

(Uncl) AIRCRAFT ARMAMENT:

4 E - 11 (Uncl) Investigation of Foreign Fire Control Equipment:<sup>31</sup>

An ATIC Technical Report "(Uncl) Installation of Guns in Turrets of TU-4"<sup>32</sup> was distributed in January 1955 in connection with a call contract<sup>33</sup> with the Emerson Electric Company, St Louis, Mo. This report, which completes all outstanding calls with Emerson,

28. ATIC History 1 Jul 54-31 Dec 54, Page 77.

29. Contract-AF-33(600)-24034.

30. Project 15501, 18 Apr 55 (Previously reported 10204, ATIC History 1 Jul 54-31 Dec 54, Page 77).

31. Project 30037, ATIC History, 1 Jul-31 Dec 54, Page 86.

32. TR-AE-21, 15 Aug 54.

33. Contract-AF-33(600)-18147.

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determines the design configurations for Soviet TU-4 turrets based on the installation of the Soviet 23-mm NS gun and the 23-mm NR (high-performance) gun. In addition, it compares the relative effectiveness of these two Soviet guns and a 50 Cal. M2 U.S. aircraft machine gun installation in this type of turret. The 50 Cal. M2 is the nearest counterpart of the Soviet 12.7mm aircraft gun. The report also includes a graphic presentation of the cones of fire and the areas of greatest lethality against attacking jet fighter aircraft. ~~(SECRET)~~ (U)

Investigations on Soviet Aircraft fire control systems were continued under a contract<sup>34</sup> with the Crosley Division, AVCO Mfg. Corp., Cincinnati, Ohio. Two work requests have been made on the contract, one on Soviet Air Gunnery Trainer and one on ARO Radar Installation in MIG-15. ~~(SECRET)~~ (U)

4E-12 (Uncl) Evaluation of Foreign Aircraft Gun (French 30mm 30 mm).<sup>35</sup>

This program, to provide a technical evaluation of the French revolver-type aircraft gun, including an evaluation of the physical design and performance characteristics, was broadened in scope during this period to include the test firing of U.S. and British ammunition as a part of the program. The purpose of these added tests was to confirm the interchangeability of the ammunition to be used by NATO countries in their various 30-mm aircraft guns.

34. Contract-AF-33(600)-24502.

35. Project 30082, ATIC History, 1 Jul-31 Dec 54, Pages 97, 98.

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The final report, prepared by the contractor,<sup>36</sup> Armour Research Foundation, Chicago, Illinois, has been reviewed at ATIC preparatory to publication. (~~CONFIDENTIAL~~) (u)

4E-13 (Uncl) Other Armament Projects. New projects were initiated to revise the existing project "(Uncl) Defensive Fire Control Diagrams of Soviet Aircraft", and to assemble and publish a study, "(Uncl) Significant Development and Trends of Soviet Aircraft Armament Systems". This latter project is considered important since it will assemble, in one volume, the significant technical developments and trends in the field of Soviet aircraft armament, utilizing those numerous publications released in the past on individual items. (~~SECRET~~) (u)

(Uncl) AIRCRAFT EQUIPMENT. In addition to the technical reports distributed during this reporting period on the MIG-15 fuel system, electro-mechanical actuators, and hydraulic pumps, basic studies were in progress in several areas. Battelle Memorial Institute was requested to perform research and submit initial reports on Soviet technology in the fields of aircraft instrumentation,<sup>37</sup> aircraft mechanical equipment,<sup>38</sup> aircraft electrical equipment,<sup>39</sup>

36. Contract AF-33(600)-28834.

37. Project 30057, ATIC History, 1 Jul-31 Dec 54, Page 90.

38. Project 30066, ATIC History, 1 Jul-31 Dec 54, Page 92, 93.

39. Project 30069, ATIC History, 1 Jul-31 Dec 54, Page 94.

aerial photographic reconnaissance equipment,<sup>40</sup> and aircrew and  
aero-medical equipment.<sup>41</sup> ATIC Technical Studies will be prepared  
on the basis of these initial reports. (~~CONFIDENTIAL~~) (u)

(Uncl) MANUFACTURING METHODS AND TECHNIQUES:

One project, "(Uncl) Development of Analog Ratios for Analysis  
of Vacuum Tube Production,"<sup>42</sup> was completed upon distribution of an  
ATIC Technical Report on the subject.<sup>43</sup> The purpose of this pro-  
ject was to develop a technique for estimating production rates of  
vacuum tube manufacturing by the use of known factors in U.S. pro-  
duction. It is necessary to develop a technique based on data that  
are measurable, obtainable, minimum in number, and sufficient to  
approximate output with a reasonable degree of accuracy. Although  
this particular study was primarily intended to develop relationship  
for estimating the output of electron tube plants, one of its pur-  
poses was to explore the general feasibility of this kind of ap-  
proach as a basis for development of prediction equations for other  
types of products. (~~CONFIDENTIAL~~) (u)

Work continued on studies in manufacturing methods and tech-  
niques that were active during the last reporting period. Those  
studies were: "(Uncl) Soviet Capabilities in Aircraft Instrument

40. Project 30068, ATIC History, 1 Jul-31 Dec 54, Page 94.

41. Project 9974, ATIC History, 1 Jul-31 Dec 54, Page 103.

42. Project 30062, ATIC History 1 Jul-31 Dec 54, Page 96.

43. TR-AE-66, 1 Mar 55.

Manufacturing,<sup>44</sup> "(Uncl) Status of Soviet and East German Electron Tube Manufacturing Methods",<sup>45</sup> "(Uncl) USSR Heavy Press Capabilities Technology",<sup>46</sup> "(Uncl) Adaptability of the Soviet Aircraft Industry to Heavy Bomber Production".<sup>47</sup> These projects were in various stages of documentation, including coordination within industry and intelligence circles. (~~CONFIDENTIAL~~) (u)

44-222  
(Uncl) Quality Control in the Soviet Aircraft Industry. This new project was initiated to ascertain the status of quality control in the Soviet aircraft industry, and to study its effect on the capability of the Soviets to manufacture current and future air weapons of adequate and consistent quality. Quality control represents one of the factors that can be used to judge the level of industrial technology. (~~CONFIDENTIAL~~) (u)

"(Uncl) Producibility of the BADGER Aircraft". This new project is a study to determine the producibility of the Soviet BADGER airframe through an industrial engineering analysis. The BADGER aircraft is currently one of the most formidable threats to U.S. strategic targets since it is in production and is known to be operationally available in large numbers. Definition of the production factors necessary to build this aircraft in a hypothetical

44. Project 30050, ATIC History 1 Jul-31 Dec 54, Page 88.

45. Project 30093, ATIC History 1 Jul-31 Dec 54, Page 102.

46. Project 30088, ATIC History 1 Jul-31 Dec 54, Page 99.

47. Project 30080, ATIC History 1 Jul-31 Dec 54, Page 97.

plant will enable the Air Targets analysts to fit these conclusions to a particular location in USSR and thus enable an estimate of current rate of production. (~~SECRET~~) (u)

"(Uncl) Film on Soviet Industry".

This project will utilize film from CIA, Army Signal Corps and other agencies in producing a documentary movie on the Soviet industry which will reflect the USSR ability to produce and maintain a modern Air Force. The Air Photographic and Charting Service will assist the ATIC in obtaining pictures of American industry where required, completing the narrative, and producing the film which will be made available to other agencies. (~~SECRET~~) (u)

In addition to the projects already mentioned, two new projects were started to accomplish the evaluation of a Zeiss (E. German) gear-checking gauge, and a Soviet-produced automatic sorting gauge for sorting bearing races. These are to be accomplished by contracting agencies. (~~SECRET~~) (u)

(Uncl) MATERIALS:

(Uncl) SOVIET Bloc Metallurgy:

4E-14  
A total of six metallurgical capabilities studies of the Soviet bloc nations were released during the current reporting period. These studies completed the program for review and revision of Soviet bloc metallurgical capabilities as outlined in the the two active projects in this area,<sup>48</sup> in which ATIC utilized

48. Project 30022 ATIC History 1 July 54 - 31 Dec 54 page 86,  
Project 30065 ATIC History 1 July 54 - 31 Dec 54 page 92.



the services of Battelle Memorial Institute. (~~CONFIDENTIAL~~) (u)

One of these studies,<sup>49</sup> "(Uncl) The Status of Aircraft Metallurgy in USSR (Research and Development)", dealt with the present and future capabilities of the USSR in metallurgical development. On the basis of the study it was concluded that, in general, with respect to quality, USSR metallurgical research is on a par with that of the U.S.; that it is broad in scope, covering all the major aircraft fields; and that the Soviets' metallurgical research is not hampered by their political philosophy.

(~~CONFIDENTIAL~~) (u)

In the study, "(Uncl) The Status of Aircraft Metallurgy in the USSR (Summary and Addendum)",<sup>50</sup> an overall assessment of the present status and future capability of the Soviet Union in aircraft metallurgy was presented. It covered the period of mid-1953 through 1 December 1954. As the title implies, it was a supplement to the previous studies issued on specific fields of Soviet metallurgy. (~~CONFIDENTIAL~~) (u)

The four other studies on metallurgy that were published during the period were: "(Uncl) Status of Welding Technology in the USSR",<sup>51</sup> "(Uncl) The Present Status and Future Capability of Czechoslovakia in Air Weapons Metallurgy",<sup>52</sup> "(Uncl) The Present

49. ATIC Study 102-AE-54/4-34.

50. ATIC Study 102-AE-54/4-34.

51. ATIC Study 102-AE-54/3-34.

52. ATIC Study 102-AE-54/5-16.

Status and Future Capabilities of Hungary in Air Weapons Metallurgy",<sup>53</sup> and "(Uncl) The Present Status and Future Capabilities of East Germany in Air Weapons Metallurgy".<sup>54</sup> (Uncl)

Surveillance of this important aspect of the Soviet bloc industrial complex was continued by the initiation of a new project "(Uncl) Status of Air Weapons Metallurgy in the USSR and Satellites" which will utilize Battelle Memorial Institute in preparing studies on the USSR and on selected satellites with the purpose of confirming or revising present metallurgical estimates on the basis of evidence obtained since the previous studies were published. ~~(Conf)~~

~~(Conf)~~ (u)

(Uncl) Western Europe Metallurgy:

An ATIC Study "(Uncl) Air Weapons Metallurgical Capabilities of Western Europe"<sup>55</sup> was completed and distributed during this period for the purpose of providing a comparison between metallurgical research in West European countries and in the United States, and to show the potential each country has for developing alloys for air weapons. Knowledge of such potential may become important if the political status of such governments should change. This study was produced through the combined efforts of the ATIC

53. ATIC Study 102-AR-54/6-5.

54. ATIC Study 102-AE-54/7-23G.

55. ATIC Study 102-AE-55/3-100, (Previously reported as TR-AE-65; ATIC History 1 July 54 - 31 Dec 54, page 95).

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The results were expected to provide a basis for estimating the impact of the presence of this system upon similar developments being made in the U.S., to permit evaluation for long range navigation and missile guidance applications, and to determine the equipment required to maintain an intelligence scrutiny for future transmissions. Equipment used in this operation was specially constructed by the Spray Corporation under their contract with WADC, who participated on a joint support basis. Under the terms of a separate contract,<sup>68</sup> Farnsworth is to build phase measuring equipment using parts and schematics supplied by the Bell Telephone Laboratories. A new contract has been signed to secure the services of the Stanford Research Institute, Palo Alto, California,<sup>69</sup> for development, production, and field test of intercept equipment in connection with this project. (~~SECRET~~) (u)

Two new projects were initiated: "~~(SECRET)~~ Evaluation of Soviet Neptun Shipboard Radar" was a project conducted jointly with Office of Naval Intelligence to evaluate the Ship Radar Station on the Soviet tanker "TUAPSE," the electronic components of the station, other electronic ship equipment, and documents and literature. This project was completed and a report to be published by the Navy will contain an ATIC contribution. (~~SECRET~~) (u)

68. Contract-AF-33(600)-28363.

69. Contract-AF-33(600)-29654.

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and (b) (6) of New York University who is under consultant contract to ATIC.<sup>56</sup> Other well known U.S. Metallurgists coordinated in the final preparation of the study. (~~CONFIDENTIAL~~) (u)

A new project was initiated to continue this program through the utilization of (b) (6) on contract<sup>57</sup> and will result in the publication of an ATIC study with specific attention to the present and future capabilities of Western European countries with respect to basic metallurgical research and development and the applied metallurgy of air weapons. (~~CONFIDENTIAL~~) (u)

(Uncl) Foreign Production Status of Titanium. This project<sup>58</sup> to ascertain the present and future status of foreign titanium technology on a world-wide basis is in support of Scientific Estimates Committee and Joint Technical Intelligence Sub-Committee requirements. Semi-annual letter reports and special reports, as warranted, will be submitted. During this period, reports transmitting nine articles on foreign titanium technology were forwarded to the JTIS and SEC in accordance with the program. (~~CONFIDENTIAL~~) (u)

(Uncl) Rubber, Plastics, and Ceramics:

An ATIC Study in connection with the project titled "(Uncl) Evaluation of Research and Development in Elastomers in Significant Nations"<sup>59</sup> was received from the contractor, Battelle Memorial

56. Project 30077 - ATIC History 1 July 54 - 31 Dec 54, page 95.

57. Contract-AF-33(600)-28412.

58. Project 30079 - ATIC History 1 July 54 - 31 Dec 54, page 96.

59. Project 30078, ATIC History 1 July - 31 Dec 54, pages 95, 96.

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52

Institute, and was coordinated during this period with competent representatives of industry and ARDC. It was felt that such a coordination would greatly enhance the value of the product to the user. ~~(CONFIDENTIAL)~~ (u)

A similar situation prevailed with regard to the project "(Uncl) Evaluation of Research and Development in Ceramics and Cermets"<sup>60</sup> except that coordination was completed during this period and the study is in production. (Uncl)

A new project, "(Uncl) Foreign Status of the Fields of Ceramics and Cermets," was initiated to continue the White Stork study of Soviet bloc nations previously accomplished under project 30084. The purpose of this project is to compile specific information and derive logical conclusions as to the extent of activity, as well as present and probable future capabilities of the USSR and certain satellites, in ceramics, cermets and related fields. ~~(CONFIDENTIAL)~~ (u)

(Uncl) SPECIAL WEAPONS:

(Uncl) Nuclear Reactors:

This project<sup>61</sup> utilizes Battelle Memorial Institute to collate and integrate information into an abstract file. Abstracts on foreign atomic energy activities are forwarded to ATIC monthly. Bibliographies on prominent Soviet physicists are furnished to ATIC on a continuing basis. (Uncl)

60. Project 30084, ATIC History 1 July - 31 Dec 54, page 98.

61. Project 30051, History of ATIC, 1 July - 31 Dec 54, page 89.

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A new project, "(Uncl) Estimate of USSR Heat Transfer Capabilities", was placed with Battelle Memorial Institute in May 1955. Its purpose is to determine the present and future research, development, and applications capability of the USSR in the field of heat transfer with respect to its influence on the performance characteristics and capabilities of air weapons. Heat transfer is one of several basic sciences that are playing an increasingly significant role in modern air weapons technology. The determination of the Soviet accomplishments, particularly from the applications standpoint in the field of heat transfer, is considered to be mandatory to provide adequate support in the preparation of estimates of current and future Soviet capabilities in air weapons. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Biological and Chemical Warfare.<sup>62</sup> This program is to utilize WHITE STORK to process and integrate into the abstract files on a continuing basis, information on design and performance characteristics of air BW - CW weapons and munitions; aircraft and associated mounts, racks and launchers; and loading or ground-handling equipment and techniques. Status reports were furnished by the contractor during the period. ~~(CONFIDENTIAL)~~ (u)

(Uncl) ELECTRONICS:

(Uncl) Radar and Communications Studies:

Two ATIC Technical Reports were distributed during this period in connection with the project "(Uncl) Air Aspects of Decimeter

62. Project WHITE STORK (9974) ATIC History 1 July - 31 Dec 54, page 102.

Communications Systems". These reports completed the current program. The report, "~~(S)~~ (U) Evaluation of East German RVG 903B Mobile Decimeter Relay Equipment",<sup>63</sup> investigated the characteristics, performance, and general construction of the item of equipment and compared it with the RVG-902 previously examined and reported.<sup>64</sup> "~~(S)~~ (U) East German Carrier Telephone Equipment IAE-8"<sup>65</sup> is a report on an item of equipment designed for either fixed or mobile operation. The purpose of the report was to present all the technical information that is available pertaining to the equipment and to familiarize communications personnel with its operation and maintenance. These two reports were produced through the utilization of Farnsworth Electronics Corp, Ft. Wayne, Indiana, under Contract to ATIC.<sup>66</sup> (~~(S)~~) (U)

In connection with the project for collection and analysis of VLF and LF data, one technical report, "~~(S)~~ (U) Preliminary Analysis of Soviet "MOON" System Signals",<sup>67</sup> was distributed. This publication reported on the intercept and analysis of signals of a Soviet navigation system and was based on the observations of a group of U.S. scientists and engineers during August and September 1954.

63. TR-EL-24, 20 Oct 1954.

64. TR-EL-45-2, 27 Feb 1953.

65. TR-EL-45-6, 30 Sep 1954.

66. Contract-AF-33(600)-8222.

67. TR-EL-29, 25 Mar 1955.

The second project "(Uncl) Technical Aspects of Soviet Air Force Communications" was initiated to produce studies on the technical aspects of communications associated with the defensive, strategic, and tactical air operations of the Soviet bloc air forces. The acquisition phase, to run through August 1955, is to consist of visits, consultation, and coordination with other government agencies. Upon completion of these actions, a contract will be secured for assimilation and compilation of data. ~~(S)~~ (u)

(Uncl) ELECTRONIC SCIENCES:

Two ATIC finished intelligence products were distributed during the current reporting period in the area of Electronic Science. The study, "(Uncl) Soviet Bloc capabilities in Application of Infrared to Aerial Warfare",<sup>70</sup> completed the program<sup>71</sup> for revision of a previous ATIC Study<sup>72</sup> on Soviet Capabilities in that area. The revised study is concerned primarily with those applications feasible for aerial operation. In practice, this means application to equipment and components for the passive detection of infrared radiation. ~~(S)~~ (u)

Another ATIC project, conducted by Battelle Memorial Institute on contract, resulted in the production of an ATIC Technical report,

70. ATIC Study No. 102-EL-54/6-34, 25 Oct 54.

71. Project 20081, ATIC History 1 Jul - 31 Dec 54, page 84.

72. Study No. 102-EL-10/51-34, Aug 51.

"(Uncl) The Status of Research and Development in Dielectrics in the USSR".<sup>73</sup> This product is composed mostly of a literature survey. It deals with dielectric theory in the USSR, dielectric materials, and the applications of dielectrics. (~~CONFIDENTIAL~~) (u)

Other projects which were active in the science area of electronics, but which did not result in finished intelligence production, included studies by Battelle Memorial Institute in electronic component parts, geophysics and astronomy applied to air operations, and solid state research. Work also progressed on projects to determine Soviet capabilities in electronic measuring techniques and test equipment, magnetrons, klystrons and travelling wave tubes, and magnetic amplifier development. (~~CONFIDENTIAL~~) (u)

(Uncl) European Astronomical Capabilities. This project was initiated to ascertain the astronomical capabilities of European countries with emphasis on possible applications to aircraft and guided missile trajectories. This will be accomplished through the authorization of (b) (6), ATIC analyst, to attend the meeting of the International Astronomical Union in Dublin, Ireland, during the period August and September 1955, and visits to leading astronomers in Europe. The countries to be covered include Great Britain, France, West Germany and Italy. (~~CONFIDENTIAL~~) (u)

73. Technical Report TR-EL-28, 28 Feb 55.



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(Uncl) FUELS AND LUBRICANTS:

"(Uncl) Soviet Petroleum Products Analysis Report."<sup>74</sup> A

study on Soviet petroleum products was released in May 1955. It brought up-to-date a compilation of analysis and evaluation data for Soviet petroleum products for the year 1953 and part of 1954, and was based on analyses made by the Phoenix Chemical Laboratory, Inc., Chicago, Illinois, under contract to ATIC.<sup>75</sup> This report supplemented data published in two previous reports<sup>76</sup> and is to be followed by a companion study now in production. (~~CONFIDENTIAL~~) (u)

"(u) (~~CONFIDENTIAL~~) Boron Resources Survey, USSR and Satellite Countries":

This is a new study initiated in May to utilize project WHITE STORK to survey all available literature to determine the resources of boron and boron-bearing ores available to the USSR and satellite countries. Because of the high-energy output of boron when used as a fuel in air-breathing propulsion systems; because it will probably find use as one of the intermediate fuels between the petroleum hydrocarbons and nuclear energy; and because of its applications in the field of atomic energy, boron is a critical area for research. The capability of an unfriendly power to develop an effective high-energy boron fuel will depend in large part on the

74. ATIC Study No. 102-AE-55/3-34, 1 Apr 55.

75. Contract-AF-33(616)-2716.

76. ATIC Study 102-AG-51/45-34, ATIC Study 102-AG-53/14-34, ATIC History 1 Jul 54 - 31 Dec 54, page 76.

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availability of sufficient raw material resources. (~~CONFIDENTIAL~~) (u)

In addition to the above, projects were also active in this area on the subjects of Chemical compounds used as rocket fuels,<sup>77</sup> catalytic cracking processes,<sup>78</sup> and synthetic lubricant developments,<sup>79</sup> (~~CONFIDENTIAL~~) (u)

(Uncl) MISCELLANEOUS PRODUCTS AND CONTRIBUTIONS TO OTHER PUBLICATIONS:

44-11  
(Uncl) National Intelligence Estimates (NIE)<sup>80</sup> and National Intelligence Studies (NIS):<sup>81</sup>

In support of the NIE program ATIC submitted a contribution to NIE-11-3-55 in February 1955. This publication is entitled "~~CONFIDENTIAL~~ (u) ~~CONFIDENTIAL~~ Soviet Capabilities and Probable Soviet Courses of Action through 1960". (~~CONFIDENTIAL~~) (u)

Contributions to the NIS program consisted of information on the USSR, Section 72, "Air, Ground and Naval Weapons". In these contributions, ATIC was responsible for integration of Army and Navy portions with those of ATIC into the final format. Contributions were also forwarded on Section 17, "(Uncl) Basic Scientific Capabilities for NIS publications on Norway, Yugoslavia and India". (~~CONFIDENTIAL~~) (u)

77. Project 10172, ATIC History 1 Jul 54-31 Dec 54, Page 78.

78. Project 10184, ATIC History 1 Jul 54-31 Dec 54, Page 78.

79. Project 10197, ATIC History 1 Jul 54-31 Dec 54, Page 78.

80. Project 10194, ATIC History 1 Jul 54-31 Dec 54, Page 80.

81. Project 10175, ATIC History 1 Jul 54-31 Dec 54, Page 80.

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4F-11  
(Uncl) "The Threat of Military Surprise from Soviet Technological Superiority (AIE-11)". In view of favorable reaction by the Air Force Council and other Air Staff Officers to a brief paper presented by ATIC in mid-1954 on "(Uncl) The Threat of Soviet Technological Superiority", ATIC was directed by the Director of Intelligence to prepare a finished study on the subject by the end of February 1955. Accordingly, a Top Secret publication, "Air Intelligence Estimate (AIE-11)", was prepared and given selective distribution. (The estimate, based on ATIC's total knowledge of Soviet technology, presents in concise form the aspects of their technology which appear to present possibilities of technological surprise. ~~(SECRET)~~ (u))

(Uncl) Soviet Bloc Air Defense Systems (FAIS 2-2). The ATIC contribution to the publication, "~~(SECRET)~~ Soviet Bloc Air Defense System", Force Air Intelligence Study 2-2/2 was completed and forwarded to the Director of Intelligence 9 March 1955. ~~(SECRET)~~ (u)

(u) ~~(SECRET)~~ Radar Equipment and Navigational Aid Systems (AIS-2-22). This project is designed to supply the Director of Intelligence with electronic radar, navigation, and communication information. ATIC contributions consisted of artists drawings of equipment, technical specifications, and radar coverage patterns which were forwarded on a periodical basis. Information gathered in connection with this project will also be used in other electronic intelligence publications including Electronics Handbooks.

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x (u) ~~(CONFIDENTIAL)~~ Benefit to USSR of Public Disclosures of U.S. Classified Information. In compliance with a memorandum from the Office of the Secretary of Defense to the Secretary of the Air Force, ATIC was directed to prepare a study on the benefits to the USSR of our disclosures, inadvertent and otherwise, of technical information. An ATIC contribution was prepared and forwarded to the Director of Intelligence 19 May 55. It was based on papers and reports on this subject collected by ATIC in the past, plus information from raw intelligence reports and finished studies which contain examples of how Soviet technology and directional emphasis on weapons development have been furthered in this manner. ~~(CONFIDENTIAL)~~ (u)

~~(CONFIDENTIAL)~~

(Uncl) Estimated Characteristics of Soviet Air Weapons.

The annual ATIC Study "(Uncl) Estimated Characteristics of Soviet Air Weapon"<sup>82</sup> was published on 3 January 1955 and advance distribution made to Hq. USAF, ARDC, and all Major Air Commands with a combat mission. The purpose of this very important study is to provide in convenient tabular form the estimated characteristics of present and future Soviet Air Weapons. ~~(CONFIDENTIAL)~~ (u)

"(Uncl) Characteristics and Performance Handbook, USSR Aircraft"<sup>83</sup> BISON and BADGER handbook sheets were forwarded to the Director of Intelligence in February and data for the FRESCO, HOUND and BEAGLE II-28 handbooks were being assembled as the period closed. ~~(CONFIDENTIAL)~~ (u)

<sup>82</sup>. ATIC Study No. 102-AC-55/1-34, 3 Jan 55.

<sup>83</sup>. Project 10128, ATIC History, 1 Jul-31 Dec 54, Page 107.

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"(Uncl) Handbook on Foreign Aircraft Engines (other than Soviet Bloc)".<sup>84</sup> The basic handbook, containing only the section on France was released in May 1955. Sections on Argentina, Australia, Belgium, Canada, Spain, Sweden, and Switzerland were completed and an order was placed for printing during the same month.

~~(CONFIDENTIAL)~~ (u)

"(Uncl) Handbook on Known Soviet Aircraft Engines".

Engine data and performance sheets were completed and released on 18 May 1955 on eleven Soviet aircraft engines (turbojet and turbo-prop). Of these, seven were new additions to the handbook and the others were revisions. ~~(CONFIDENTIAL)~~ (u)

"(Uncl) Aircraft Armament Handbook". Revision of the Chapters on Soviet Bomb Fuzes was distributed in January 1955. The Chapter on Soviet Aircraft Rockets is being prepared for submission to the Director of Intelligence. A review of the program to date resulted in a change in the project to establish an order of priority for completion of the sections relating to various countries. It is planned to accomplish complete revision of the handbook by 31 December 1955. ~~(CONFIDENTIAL)~~ (u)

(Uncl) MISCELLANEOUS AND SPECIAL ACTIVITIES:

(Uncl) Scientific Consultants Program. A project was initiated in April 1955 to authorize the establishment, through contractual arrangement, of a nucleus of scientific consultants in the broad areas of basic and applied sciences which are related to, and

84. Project 10151, ATIC History, 1 Jul-31 Dec 54, Page 107.



support, research and development of air weapons. These scientists will analyze and evaluate scientific and technical information acquired by ATIC, assist in making long-range estimates, travel overseas to Western European countries on specific projects, and prepare finished scientific intelligence capabilities studies with assistance of ATIC engineers. As of 1 July, one consultant, Dr. (b) (6), (b) (3) (B) of New York University, was under contract covering the area of metallurgy.<sup>85</sup> Contract negotiations are in progress in the fields of heat transfer, gas and fluid dynamics, nuclear reactors, nuclear instrumentation, nucleonics, ceramics, plastics, rubber, aerodynamics, structure, geophysics, electrical systems, and mechanical systems. ~~(CONFIDENTIAL)~~ (u)

44-12  
(Uncl) Air Frame Research and Development Capabilities of the USSR and Satellites. Two projects were initiated during this period to study the state-of-the-art in the field of airframe research and development (aerodynamics and structural mechanics) in the USSR. Information will be compiled on the organizational structure, facilities, personalities, and basic trends. The bulk of the material to be presented in these studies will be derived from information contained in NIS contributions from this Center and from Project White Stork. ~~(CONFIDENTIAL)~~ (u)

✓ (Uncl) Blue Book (Unidentified Flying Objects):

The purpose of this project is to collect, evaluate, and disseminate information concerning unidentified flying objects

<sup>85</sup>. Contract AF 33(600)-28412.



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and aerial phenomena and to determine whether or not they represent a threat to the security of the United States. (~~CONFIDENTIAL~~) (u)

During the six-month reporting period ending 30 June 1955 a total of 177 reports were received and processed in accordance with AFR 200-2. Of these, six (3%) were unknown, and ten (6%) contained insufficient data for evaluation. The cases reviewed produced no new trends or developments. (Uncl)

The cooperative UFO program between the ATIC and the 4602d Air Intelligence Service Squadron (ADC) as established by AFR 200-2, dated 12 August 1954, reached its full effectiveness during this period. A series of conferences between ATIC project Blue Book personnel and personnel of the 4602d AISS produced an evaluation guide and standard operating procedures. This program provides for rapid "on the spot" UFO investigations and as a result, the insufficient data cases have been reduced from 20% in the last period to 6% in this period, and the unknown from 10% to 3%. (Uncl)

Final coordination and completion of the UFO Special Report #14, prepared in cooperation with Battelle Memorial Institute, Columbus, Ohio, under contract, was accomplished as a result of several meetings held during May 1955 between ATIC personnel and the contractor. The study was thoroughly reviewed and appropriate re-editing performed to reduce the classification of the report from Secret to Unclassified. The study is in the process of printing. (~~CONFIDENTIAL~~) (u)

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4D-8  
(Uncl) Methods of Analysis (Engineering Data):

In January 1955 the need for an automatic computer facility was officially recognized. A project was originated in order to handle the various problems associated with obtaining the computer and modifying the room for the computer. A computer maintenance technician was assigned in April and trained for a period of several weeks at the J. B. Rea Company plant in California. In May, a mathematician was added to the staff. Prior to the close of the period, basic problems were considered which either are or will soon be in a form suitable for the computer. These problems include:

- (1) Computation of the thrust required, rate of climb and nautical miles per pound for subsonic and supersonic aircraft.
- (2) The over-all performance of surface-to-surface ballistic missiles.
- (3) The determination of true dimensions from photographs of aircraft.
- (4) The establishing of an automatic file of aircraft and aircraft component weights.
- (5) Engine Performance.
- (6) Signal analysis data reduction.
- (7) Attache trip folder files.
- (8) Special intelligence automatic files, etc.

Although the computer had not arrived as the period closed, these problems are typical of those which will be run on the

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computer to improve the technical reliability of the ATIC operation. During May and June, AMC's Univac was used to compute aircraft performance for the Soviet Air Show reports. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Analysis of ELINT<sup>86</sup> Material:

Analysis of non-communications signal intercepts has been stepped up in the past six months. A new building occupied on 7 February 1955 with almost 9000 square feet of floor space has permitted the installation of new analysis equipment and improved facilities. Four new analysis booths have been designed along broadcast studio lines with a console unit for matching, switching, amplification, filtering, and sound reproduction. Equipment for these booths includes a cart-mounted oscilloscope with camera, a Sonograph sound spectrum analyzer, a Brush recorder, an Ampex magnetic tape recorder-playback equipment and Pierce wire-recording equipment. The operation of these booths is supported by an expanded shop for maintenance, modification, and testing of equipment. Two sound proof rooms have been equipped with special lighting for use as a projection room for standard film-recorded intercepts and as a machine-data handling room with a Benson-Lehner BOSCAR for reduction of APD-4(XA-1) film. ~~(CONFIDENTIAL)~~ (u)

Haller, Raymond and Brown Inc., under contract to ATIC, has completed study and programming of an IBM card storage system for signal intercept data. This program has been inaugurated in

86. ELINT - Electronic Intelligence.

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Air Force ELINT agencies and necessary equipment has been ordered for ATIC participation. Plans were made for the exchange of summary cards with SAC groups concerned and that program is in operation. (Uncl)

Data reduction equipment<sup>87</sup> for crystal video receiving devices has been in the process of redesign and is scheduled for early delivery. This equipment is expected to speed up analysis of intercept data from special missions. As a further aid to processing special mission data and as a useful tool for analysis of regular missions, a letter initiated QRC action to produce a signal separator for automatic reproduction of audio recorded signals on a dual time-base graph.<sup>88</sup> For dense signals a repetitive pattern of illuminations becomes apparent in such a device and signals from different sources can be sorted out. This technique is currently being used with manually-prepared graphs with considerable success. The automatic device, delivery of which is expected momentarily, should effect a desirable reduction in the time necessary for the work. (~~CONFIDENTIAL~~) (U)

In line with a long recognized need for a signal characteristics catalog as an aid to analysis, a project has been initiated and contract negotiations completed for preparation of such a reference file. The actual design and compilation of the file is

87. "Ready" Equipment on Haller, Raymond and Brown Contract-AF 33(600)-15660.

88. QRC - Quick Reaction Capability.

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expected to take approximately two years. The contractor is Electronic Engineering Company in Los Angeles, California. A program for collection of data to be included in the file will be worked out as a joint effort with WADC, SAC, and TAC, with the assistance of other interested agencies such as FCC, USAFSS, CIA, ANEX, and NSA. (Uncl)

40-2 (Uncl) Technical Assistance for ELINT Operations:

An ERB-29 aircraft, for special exploratory missions has been equipped by WADC and manned by SAC personnel. Instrumentation of the aircraft was monitored by ATIC. Preliminary tests of the aircraft were completed and upon conclusion of final tests now in progress at WADC the aircraft is expected to be on operational status. ~~(S)~~ (u)

On the basis of progress made on the ERB-29, a request has been submitted for eight aircraft. Planning for instrumentation of these laboratory-type ferrets is in progress and is expected to be completed within the next two months. ~~(S)~~ (u)

40-3 Among the activities directed toward providing better equipment for signal intercepts is a contract for development of a video recording device on a flying spot scanner principle. This contract has resulted in development of a ground type recorder-reproducer, which is almost perfected and ready for service. An extension of this work to the development of an associated airborne recorder has been planned and necessary papers are ready for the 1 July

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release of fiscal 1956 funds to initiate procurement action. (Uncl)

Data from special ERB-29 flight test missions have been supplied to the Princeton Analytical Research Group for evaluation of accuracy of ferret direction finding operations. Anomalies discovered in the study of the test data have delayed completion of the work but it should yield useful data on parameters and limitations of equipment. (Uncl)

A short term program to survey the analysis methods used by ATIC and to evaluate the overall USAF techniques of signal analysis has been arranged. It is proposed that this survey be handled by the Glenn L. Martin Company. Since that company is doing extensive development work for WADC and others on signal intercept equipment, it is felt that such a contractual arrangement will serve the dual purpose of accomplishing the survey and familiarizing Glenn L. Martin personnel with the problems of analyzing intercept data. (~~CONFIDENTIAL~~) (u)

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HISTORY OF  
AIR TECHNICAL INTELLIGENCE CENTER

1 July 1955 - 31 December 1955

*1 Jan 56 - 30 June 56*

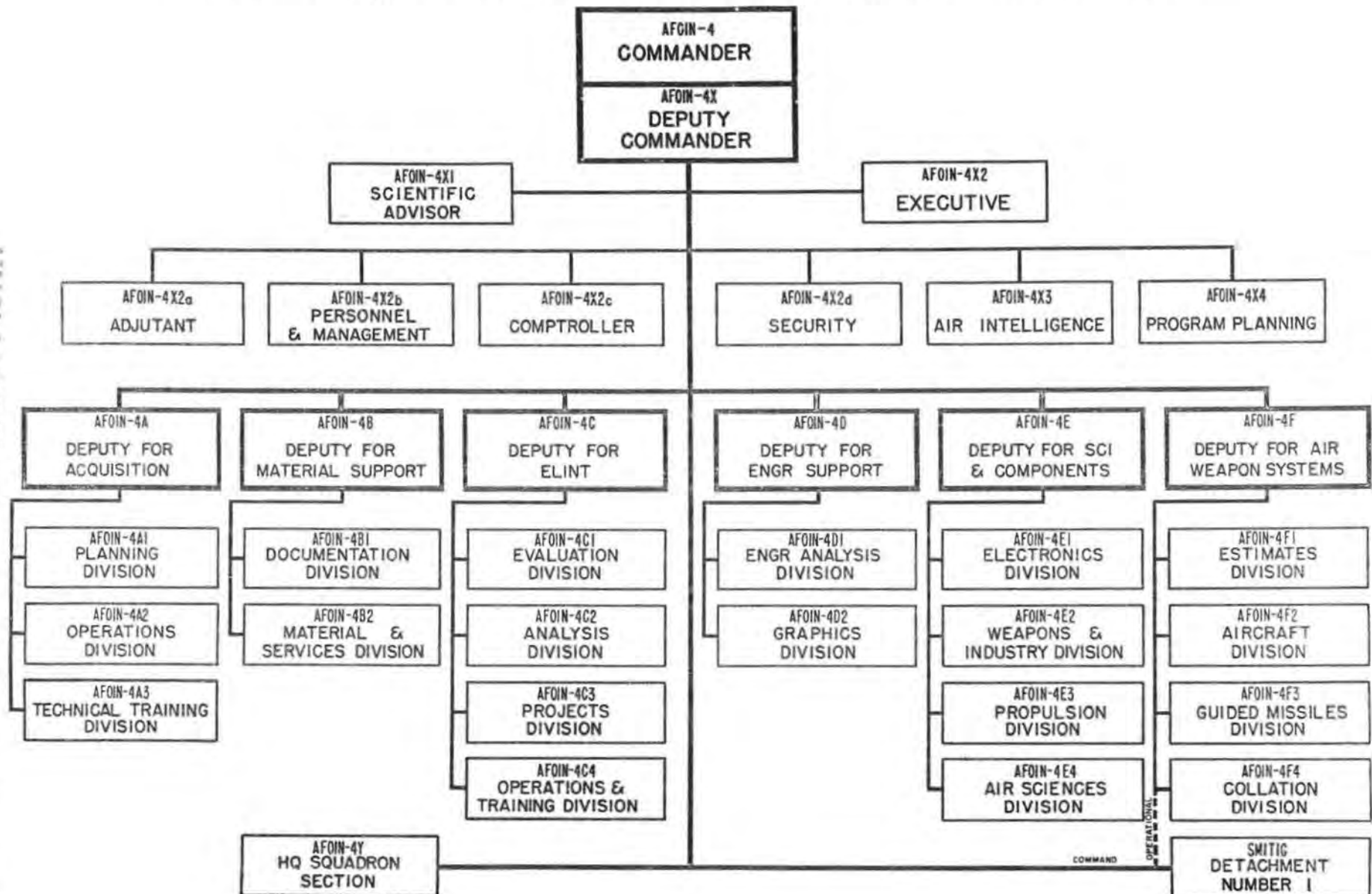
Prepared by  
Air Intelligence Office  
AIR TECHNICAL INTELLIGENCE CENTER  
31 January 1956

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# AIR TECHNICAL INTELLIGENCE CENTER



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## GLOSSARY

A/I	Airborne Interception
AMC	Air Materiel Command
ARDC	Air Research and Development Command
ATTC	Air Technical Intelligence Center
ATTLO	Air Technical Intelligence Liaison Officer
CIA	Central Intelligence Agency
D/I USAF	Director of Intelligence, USAF
ELINT	Electronics Intelligence
FAG	Field Activities Group
ICBM	Intercontinental Ballistic Missile
ICGM	Intelligence Collection Guidance Manual
IFF	Identification Friend or Foe
IGY	International Geophysical Year
ISC	Intelligence Subject Code
JCS	Joint Chiefs of Staff
NACA	National Advisory Committee on Aeronautics
RADC	Rome Air Development Center
REG	Returnee Exploitation Group
R&D	Research and Development
SRI	Specific Request for Information
TDY	Temporary Duty
UFO	Unidentified Flying Objects
USAFSS	United States Air Force Security Service

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FOREWORD  
TO THE HISTORY OF  
THE AIR TECHNICAL INTELLIGENCE CENTER  
For the Period  
1 July 1955 - 31 December 1955

This edition of the History of the Air Technical Intelligence Center reflects the changes made by a major reorganization during the reporting period. Important activities of the Center are chronicled in the order in which they occurred. Operations and activities of the staff and supporting elements are set forth first, followed by the activities of the intelligence production components of the Center.

Footnotes, if any, are listed at the end of each chapter.

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## GLOSSARY

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VHF

Very high frequency

WADC

Wright Air Development Center

WHITE STORK

Battelle Memorial Institute (USAF Contractor)

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## I. ORGANIZATION, MISSION, AND PERSONNEL

ORGANIZATION:

The Air Technical Intelligence Center is the technical intelligence element of the Directorate of Intelligence, Hq USAF. It is located at Wright-Patterson Air Force Base, Ohio. (Uncl)

This edition of the History of the Air Technical Intelligence Center covers the major reorganization, effective 1 August 1955, following designation of the Commander as Deputy Director for Technical Intelligence (AFOIN-4) by the Director of Intelligence, Headquarters, USAF. The revamping of organizational structure resulted in establishment of six special staff offices and designation of six deputies for technical intelligence operations.<sup>1</sup> (Uncl)

The reorganization established a Command group consisting of the Commander and Deputy Commander, the Scientific Advisor, the Executive, and the Deputies for specific functions (Directors). These Directors are staff officers representing the Commander within assigned functional areas. Directors have over-all responsibility, establish objectives and operating instructions, and provide planning direction and staff guidance for their respective directorates. (Uncl)

Chiefs of the Air Intelligence Office and the Program Planning Office are primarily responsible for assistance with command functions. The other staff offices (Adjutant, Personnel and Management, Comptroller, and Security) are primarily service elements that assist directorates with administrative and management matters. (Uncl)



The directorates are operating components responsible to a Director. They operate independently within the framework of policies established by the Director. (Uncl)

Both directorates and staff offices are further subdivided into Branches when workload and span of management necessitates. Branch chiefs are working supervisors who exercise administrative and operational supervision over Branch personnel, in addition to performing technical duties. (Uncl)

Further breakdown into Sections is the exception, and is admissible only when justified by the complexity and diversity of Branch responsibilities. (Uncl)

Functional areas assigned to Staff Offices by the reorganization were as follows:

The ADJUTANT performs the usual duties and functions of a military adjutant. In ATIC these duties include the control and storage of thousands of Top Secret and sensitive documents, and the dispatching of some 22,000 intelligence publications during a six-month period. (Uncl)

The PERSONNEL AND MANAGEMENT OFFICE secures manpower allotments for ATIC and performs personnel services pertaining to the recruitment, requisition, placement, and utilization of military personnel and civilians. A newly established ATIC Civilian Personnel Branch permits the Center to administer its own civilian personnel program. (Uncl)

The COMPTROLLER controls the financing of all ATIC mission requirements and operations. He performs all budgetary and financial planning, appropriation accounting, and cost accounting required by the Center. He provides statistical analysis services. (Uncl)

The SECURITY OFFICE maintains a security indoctrination program to minimize or prevent security violations within the Center. The Security Office controls and surveys the security clearances of personnel assigned to the Center, and advises the Commander of the effectiveness and efficiency of the security program. (Uncl)

The AIR INTELLIGENCE OFFICE keeps the Commander and Staff advised on world-wide social, economic, political, and military developments pertinent to the Center's mission. Performs similar services for Headquarters AMC, WADC, and other Department of Defense agencies located on Wright-Patterson Air Force Base. Exercises Staff supervision over all briefings presented by the Center. Edits the Center's intelligence publications. Compiles, edits, and publishes the Center's intelligence periodicals. Advises on public relations and protocol. Makes administrative arrangements for the visits of important persons. Conducts the Center's internal and public information programs. Prepares the Center's History. (Uncl)

The PROGRAM PLANNING OFFICE advises the Commander on plans and programs for the future development of ATIC and accomplishment of the air technical intelligence mission. Monitors special contracts set up by ATIC with civilian agencies. (Uncl)

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Functional areas assigned to Deputies under the reorganization were as follows:

The DEPUTY FOR ACQUISITION generates and establishes ATIC acquisition requirements, plans and implements the ATIC intelligence acquisition program, supports the USAF scientific and technical intelligence-collection effort, and conducts special collection activities as required. (Uncl)

The DEPUTY FOR MATERIAL SUPPORT receives incoming raw intelligence data, excepting electronic intelligence information, and prepares it for use in the production of air technical intelligence; provides equipment and supplies for all phases of the Center's operations, and provides building maintenance services. (Uncl)

The DEPUTY FOR ELINT serves as the focal point within ATIC for USAF electronic intelligence operations; receives, analyzes, and evaluates all intelligence information that is acquired by the USAF through electronic intelligence operations; makes distribution of this information to appropriate agencies, and provides technical guidance and assistance to all USAF Commands in the development and implementation of the electronic intelligence program. (Uncl)

The DEPUTY FOR ENGINEERING SUPPORT provides the intelligence-producing components of ATIC with engineering-data analysis and photo-interpretation services; and provides reproduction and graphic services to support both the technical and administrative phases of the Center's operations. (Uncl)

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The DEPUTY FOR SCIENCE AND COMPONENTS produces air technical intelligence estimates and studies on air weapon components, sciences, and technologies. Specifically, this includes determining the state-of-the-art in air technology, trends of research and development; estimates of performance, characteristics, and capabilities of foreign air weapon components; and the status of related technologies. (Uncl)

The DEPUTY FOR AIR WEAPON SYSTEMS produces air technical intelligence estimates and studies on air weapons and air weapon systems; and provides integrated air technical intelligence needed at national and Hq USAF levels, by major Air Commands, and by other branches of the Armed Services. (Uncl)

The new organization has effected segregation of administrative work from technical work, better alignment of operational elements, more clearly defined responsibilities, and general improvement of management for increased productivity of the Center. Effective span of management was accomplished through directorate organization by major area of specialization. (Uncl)

The organization of Detachment 1 (ATD), assigned to the 1125th Field Activities Group, remained unchanged.<sup>2</sup> (Uncl)

#### MISSION:

The mission and objectives of the Center remained unchanged during the period covered by this report.<sup>3</sup> (Uncl)

A new civilian personnel function of significance was acquired in the closing months of 1955. Authority was granted to establish a separate Civilian Personnel Office for the Air Technical Intelligence Center.<sup>4</sup>



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This necessitated redefined relationships of the Center with the Air Materiel Command and Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. Firm agreement was reached on future relationships, and the formal agreement was signed on 28 November 1955.<sup>5</sup> The separate Civilian Personnel Office was officially established on 1 December 1955. (Uncl)

PERSONNEL:

Brigadier (b) (6), Deputy Director of Technical Intelligence, continued as Commander of the Air Technical Intelligence Center during this reporting period.

Colonel (b) (6) reported to the Center on 22 July 1955 and was assigned as Deputy Commander on 25 July 1955.<sup>6</sup>

Colonel (b) (6) who had been serving in the capacity of Special Advisor to the Scientific Advisor, was appointed the Comptroller effective 1 August 1955.<sup>7</sup>

Colonel (b) (6) was assigned Acting Chief, Program Planning Office, effective 1 August 1955.<sup>8</sup> Colonel (b) (6) was transferred overseas effective 26 September 1955.<sup>9</sup>

Colonel (b) (6) was assigned duty with the Center from the 6002d Air Intelligence Service Group.<sup>10</sup> He was appointed Chief, Program Planning Office, effective 6 December 1955.<sup>11</sup>

Key personnel of the Center, as of 31 December 1955, were:

Brigadier General (b) (6)	Commander
Colonel (b) (6)	Deputy Commander
(b) (6)	Scientific Advisor

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7 Colonel (b) (6)	Executive
Major (b) (6)	Adjutant ✓
7 Major (b) (6)	Chief, Personnel and Management Office
Colonel (b) (6)	Comptroller ✓
Captain (b) (6) Major	Chief, Security Office ✓
Mr. (b) (6)	Chief, Air Intelligence Office ✓
Colonel (b) (6)	Chief, Program Planning Office ✓
Colonel (b) (6) 12	Director, Deputy for Acquisition
Colonel (b) (6) 13	Deputy Director, Deputy for Acquisition
Colonel (b) (6) 14	Director, Deputy for Material Support
Lt Col (b) (6) 15	Director, Deputy for ELINT
Mr. (b) (6)	Director, Deputy for Engineering Support ✓
Mr. (b) (6)	Acting Director, Deputy for Science and Components ✓
NC 7 Colonel (b) (6)	Actg. Director, Deputy for Air Weapon Systems
Colonel (b) (6)	OIC, Detachment 1
	(Uncl)

Manpower Authorizations: At the beginning of the period, the Air Technical Intelligence Center was authorized 196 officers, 105 airmen, and 374 civilians, a total of 675. At the end of the period 197 officers, 110 airmen, and 374 civilians, a total of 681 were authorized. (Uncl)

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Personnel Strength: At the beginning of the period, there were 314 civilians, 194 officers and 118 airmen, a total of 626, assigned to the Air Technical Intelligence Center. At the end of the period, 365 civilians, 212 officers, and 125 airmen were assigned, a total of 702. (Uncl)

ATTC Personnel: Of the personnel authorized for the Air Technical Intelligence Center, a total of 108 were assigned to the overseas Air Technical Intelligence Liaison Officer Program - 25 civilians, 58 officers, and 25 airmen. (~~CONFIDENTIAL~~) (u)

- 
1. Page 1, History of ATTC, 1 Jan 55 - 30 Jun 55.
  2. Page 2, History of ATTC, 1 Jan 55 - 30 Jun 55.
  3. ATTC History 1 Jan - 30 Jun 55, Page 2-3.
  4. Ltr, Hq USAF, dtd 26 Oct 55, "Authority for ATTC Civilian Personnel Office".
  5. Agreement (Air Technical Intelligence Center, Air Materiel Command, and Wright Air Development Center), dtd 28 Nov 55.
  6. 1125th FAG (HEDCOM USAF) GO # 47, 25 Jul 55.
  7. 1125th FAG (HEDCOM USAF) GO # 53, 15 Aug 55.
  8. Ibid.
  9. Hq 1125th USAF FAG SO 111, 7 Sep 55.
  10. Hq 1125th USAF FAG PERAM Nr. 69, 12 Dec 55
  11. 1125th FAG (HEDCOM USAF) GO # 67, 8 Dec 55.
  12. See footnote 7.
  13. Ibid.
  14. Ibid.
  15. Ibid.
  16. Ibid.

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## II STAFF ACTIVITIES

### TECHNICAL INTELLIGENCE BRIEFINGS AND NOTEWORTHY VISITS:

Complete implementation was accomplished of the program undertaken early in 1955 to acquaint major users of air technical intelligence with the facilities, capabilities, and projects of the Air Technical Intelligence Center. Briefings were presented at many places throughout the United States as well as at the Center itself. Numerous oral and graphic presentations were made to military and civilian officials who visited the Center. Many special briefings were given by Center personnel visiting other commands and agencies to promote wide dissemination of technical intelligence by use of authorized briefing texts on technical studies and estimates of the Center. In order to encourage the widest possible use of the Center's products, briefing texts of estimates and studies were prepared by the Air Intelligence Office and distributed, with visual aids as appropriate, to intelligence briefing officers of using agencies. (Uncl)

### (Uncl) Significant Briefings by the Commander and Personnel of the Center:

A Joint AMC-ARDC-ATIC Engine Industry Meeting was held in Baltimore, Maryland on 8 July 1955. ATIC opened the meeting by presenting the Soviet air power threat for the benefit of the top officials of the aircraft engine industry. (~~CONFIDENTIAL~~) (u)

On 22 July 1955 a Briefing on Soviet Air Power was presented in Washington to the staff of the Assistant Secretary of the Air Force for Research and Development. (~~CONFIDENTIAL~~) (u)

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On 26 July 1955 the Commander and Staff of the Tactical Air Command, Langley Air Force Base, were given a briefing on Soviet Air Power and Guided Missiles. This briefing was presented at the request of Honorable Roger Lewis. (~~CONFIDENTIAL~~) (u)

Five consultants and two staff members of the Technical Advisory Panel on Electronics, Office of Assistant Secretary of Defense (R&D), visited ATIC 29 August 1955 and were given a thorough briefing on electronic intelligence operations. The briefing was supplemental to, and an enlargement upon, the briefing presented to the Technical Advisory Panel on 28 June 1955 in Washington by General Watson. The visit included a tour of the electronic intelligence facilities of ATIC. The visiting group was headed by Dr. (b) (6) Chairman of the consultant group of the Panel. (~~CONFIDENTIAL~~) (u)

An agreement, known as the Black Crane project, was made between ATIC and Major Air Force contractors for the exchange of intelligence of mutual benefit to all parties. The purpose of the agreement is to correlate contractors' need for air technical intelligence with ATIC need for intimate knowledge of critical factors in air weapons systems development. This arrangement should provide guidance for the contractor in his air weapon design effort and furnish valuable assistance to ATIC in producing comprehensive estimates on foreign air weapons. Implementation of the agreement was effected by the establishment of an intelligence cell by each of the major contractors. Liaison is maintained between personnel of these cells and the Program Planning Office of ATIC. In furtherance of this agreement, the Commander conferred,

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in August and October 1955, with officials at the Convair, Northrup, Lockheed, and other plants on the subject of release of applicable air intelligence information to Air Force contractors. (~~SECRET~~) (u)

Major General (b) (6), Assistant Chief of Staff, G-2 Intelligence, US Army, visited the Center in July 1955 and was given a special briefing by General (b) (6) on Soviet Air Power. (~~CONFIDENTIAL~~) (u)

Twenty members of the staff of the Air Proving Ground Command visited ATIC 12-13 July 1955 and were briefed on the Center's Mission, functions, and facilities. The briefing was followed by an open discussion of current Soviet air technological developments. (~~CONFIDENTIAL~~) (u)

A briefing on Soviet aircraft was presented in August 1955 to Honorable (b) (6), Secretary of the Air Force, and his staff in Washington, D. C. (~~CONFIDENTIAL~~) (u)

Soviet helicopters was the subject of a briefing presented on 18 August 1955 to personnel from WADC, AMC, the Army Transportation Corps, Army Aviation Coordinating Office, and US Navy Bureau of Aeronautics Office. (~~CONFIDENTIAL~~) (u)

The NACA Subcommittee on Heat Resistant Materials was given a briefing in September 1955. The briefing was based on an ATIC Technical Report, and included latest estimates of Soviet activities in high-temperature alloy development. (~~CONFIDENTIAL~~) (u)

Upon request of the Commander of Rome Air Development Center, a briefing was presented to contractors of the RADC Intelligence Laboratory. These contractors are collaborating with RADC on the Advanced

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Reconnaissance System Project. The briefing was held at the Center and lasted two days. The second day was devoted to a discussion by a panel composed of several analysts from ATIC. (~~CONFIDENTIAL~~) (u)

During October and November 1955, briefings on the technical aspects of the Soviet air defense system were presented to contractors and members of the 110A and 125A Weapon Systems (chemical and nuclear-powered strategic bombers) Project Offices at WADC. (~~CONFIDENTIAL~~) (u)

A comprehensive briefing was given in November 1955 to the Commander and Technical Staff of the Air Force Armament Center at Eglin Air Force Base. The briefing included foreign aircraft armament information that possibly could be integrated into development and test programs conducted by the Armament Center. (~~CONFIDENTIAL~~) (u)

General (b) (6) presented a significant technical intelligence briefing on 16 December 1955 to approximately 300 top officials of the US aircraft industry. The briefing covered Soviet air power and Soviet air development. The meeting was sponsored by the Air Research and Development Command and was held at Baltimore. (~~CONFIDENTIAL~~) (u)

Many other briefings, too numerous to mention, were given to groups and agencies on a need-to-know basis. In each of these briefings the primary effort was to portray the threat of Soviet air power that is posed by the technical advances of the Soviet Union, and to emphasize our awareness of the need for air technical intelligence. (~~CONFIDENTIAL~~) (u)

In accordance with ATIC policy of endeavoring to keep abreast of current thinking in the technological sciences, the Center sponsored a visit of an outstanding European authority on applied mathematics and

electronic computers. Professor Doctor (b) (6) Director of the Institute for Practical Mathematics, Darmstadt, Germany, visited the Center in September 1955. Leading scientists and technicians from all services and agencies concerned with national defense were invited to participate in a three-day meeting with Doctor (b) (6). The first day was devoted to lectures by the visitor, and open discussions were held on the second and third days. Doctor (b) (6) explained the state of development of electronic computers in his own country and in most of the other countries of Europe. His lectures were well received and the participants expressed appreciation for the opportunity to exchange ideas with (b) (6). (Uncl)

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### III ACQUISITION OPERATIONS

#### GENERAL:

Acquisition operations in support of intelligence production included all operations, excepting ELINT operations, related to the collection of air technical intelligence information. These operations were performed in meeting an assigned responsibility for implementation and operational support of approved collection plans, the generation of requirements for scientific and technical information and placement of requirements on collection activities, the maintenance of liaison with other intelligence agencies for effective exploitation of active and potential sources, the administration of the Air Technical Intelligence Liaison Officer Program, and direction of intelligence training programs for selected personnel. (Uncl)

Major activities, programs, and projects concerning acquisition of air technical intelligence information included the following during this reporting period:

(Uncl) Melpar. This project involves acoustics collection by which identification of aircraft and guided missile propulsion-unit characteristics is accomplished by fine-line analysis of sound recordings. Significant intelligence was produced during the past six months as a result of acoustic recordings of Soviet aircraft in flight. Plans were crystallized for an intensified effort to apply technology, as currently developed, to guided missile recordings. ~~(SECRET)~~ (U)

(U) ~~(CONFIDENTIAL)~~ Jadegreen. This project concerns the development of specialized receiving systems to cover the low and very low frequency

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spectrum in radio transmission. This system is designed to discover, by interception of signals, the location of Soviet long range navigation sites, and to assess the capabilities of the Soviet air navigation system. The site for one facility at Wakkanai, Japan, was selected and necessary facility construction was completed so that operations can begin early in 1956. A second site at King Salmon AFB, Alaska, was also rehabilitated and operationally activated in November. Action to select sites for temporary operation in Germany and Turkey was initiated and a second Far East site on Okinawa was tentatively selected. A policy agreement was reached with USAFSS, subject to D/I USAF approval, determining the precise responsibility of project operation which devolved upon USAFSS and ATIC, respectively. ~~(SECRET)~~ (u)

(Unc1) Exploitation of Israeli-Egypt Situation. This project was initiated exploring ways and means to exploit the present tense situation which has resulted from the Soviets shipping arms to Egypt, the first time arms in this magnitude have ever been provided to a country outside the Soviet Bloc. It will also provide a method through "people-paper-hardware" sources to obtain valuable air technical intelligence. Considerable coordination is required, and much information on capabilities must be gathered in the area before this plan can be implemented. ~~(SECRET)~~ (u)

(Unc1) International Geophysical Year (IGY):

This project prepares and implements an air technical intelligence collection program to insure that the 1957-58 International Geophysical Year will be fully exploited within the concepts of Air Technical Intelligence Center requirements and NSCID #7.<sup>1</sup> ~~(CONFIDENTIAL)~~ (u)

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The IGY is a scientific program wherein thirty-six participating nations will conduct joint and coordinated observations and experiments in meteorology, geomagnetism, aurora and airglow, ionospheric physics, solar activity, cosmic rays, latitude and longitude, glaciology, oceanography, rocket exploitation of the upper atmosphere, gravity measurements, seismology, and Arctic studies. (Uncl)

The aim of the project during 1955 was directed toward establishing a working arrangement with the US National Chairman of the IGY, Dr. (b) (6). Through Dr. (b) (6) and ATILIO, Germany, considerable influence was brought to bear on delegates at the Brussels IGY meeting in September, and in previous meetings of the International Geophysical Union, to invite the participation of the USSR. This move was successful, and the Soviet government has agreed to participate to the fullest extent. Over 100 Soviet scientific institutions are taking part in the IGY program. ~~(CONFIDENTIAL)~~ (u)

The project also promoted the exchange of scientific personnel of the experimental and observation groups of the United States, USSR, and other countries. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Scientist Program:

The scientist program supports and assists the ATILIO program through the use of selected scientific and technical personnel, and involves selecting and obtaining the services of a group of scientists and technicians whose specialties will provide complete coverage of all basic and applied scientific and technical fields related to air technical intelligence. ~~(CONFIDENTIAL)~~ (u)

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During the reporting period, five persons were active in this program: Dr. (b) (6), New York University, visited the United Kingdom, Belgium, Holland, France, Germany, Switzerland, Italy, Yugoslavia and Austria, and furnished a report to ATIC on aircraft metallurgy and accessories in those countries. (b) (6)

(b) (6) of General Electric Company visited France, Sweden, United Kingdom, Germany, in connection with aircraft accessories. A report of these visits was furnished to ATIC. ~~(CONFIDENTIAL)~~ (u)

Dr. (b) (6), Battelle Memorial Institute, attended the Atomic Energy Conference at Geneva, Switzerland, and reported on nuclear physics and nucleonics. Dr. (b) (6), UCLA, visited the United Kingdom, Belgium, France, Germany and Italy in connection with geophysics and the International Geophysical Year. ATIC received a report of his observations. ~~(CONFIDENTIAL)~~ (u)

International scientific and technical meetings were reported on from the air technical intelligence standpoint, as well as International Industrial Fairs. Dr. (b) (6), Wright Air Development Center scientist, attended a computer conference in West Germany which was attended by Soviet satellite computer experts. He also covered the Indian Industries Fair in New Delhi during which time he contacted important Indian scientists who had recently been to the USSR. ~~(CONFIDENTIAL)~~ (u)

(Ural) High Power Long Range Radar:

This project is designed to track, by electronic means, the movement of guided missiles at test sites. General Electric Company

furnished equipment and modifications for the present overseas Site #9. Additional equipment was programmed for a second overseas site, which General Electric can furnish in December 1956. (~~SECRET~~) (u)

A second high power site is to provide greater coverage and accuracy to permit sightings over different routes when the enemy changes direction for greater range. The "Beneficial Occupancy Date" of the second site is planned for July 1957. (~~SECRET~~) (u)

(Uncl) Project Early Harvest:

Under the provisions of this project, ATIC is seeking an airborne means of acquiring information on enemy ground-to-air and air-to-air rockets fired at our aircraft. (~~SECRET~~) (u)

Preliminary coordination with Wright Air Development Center, Air Materiel Command, Air Research and Development Command, Rome Air Development Center, Air Force Director of Operations, and Air Force Director of Intelligence, resulted in several possible approaches, of which the following appeared most feasible:

- a. Use of an instrumented drone to pick-up and relay certain information by radio to the control aircraft.
- b. The control aircraft would record this information and also pick-up directly by infrared and other means, additional information about missiles. (~~SECRET~~) (u)

(Uncl) Infrared:

A study was made of ATIC collection requirements which may be solved through utilization of infrared techniques, with plans drawn up



for implementation as funds become available. Purchase Requests to be initiated for procurement included equipments such as:

a. An automatic, unattended radiometer which can make infrared radiation measurements against active ICBM rocket motors from above the horizon to the end of their active phase at distances of fifty miles or more.

b. Portable, unattended infrared radiometer which can be used in a fixed position against test stands of rocket and jet motors as well as in warm-up positions of new types of aircraft prior to the Moscow showings.

c. Airborne infrared detection and tracking equipment for use against ICBM with ranging to be provided by radar techniques. (S) (u)

Contract effort was initiated with Aerojet General Corporation to provide infrared radiation measurement instrumentation (known as radiometers under Project WATCH DOG) for the Moscow Air Show and collection purposes.<sup>2</sup> The contract is running ahead of the original schedule, with delivery of the equipments promised 6 February 1956. Steps are being taken to route this equipment via the United Kingdom to obtain infrared radiation pattern measurements against by-pass engines, such as the Conway. (S) (u)

Infrared consultation services were provided by Dr. (b) (6), Physicist, upon request to the Office of the Assistant Secretary of Defense and to various USAF Research and Development Headquarters Groups. Dr. Ovrebo has been serving as a member of the Working Group for Fuzing and Homing under the Ad Hoc Committee for Anti-ICBM under sponsorship

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of the Scientific Advisory Group formed by Dr. (b) (6) Chief Scientist, Headquarters, USAF. ~~(SECRET)~~ (u)

(Uml) Intelligence Collection Guidance:

During this reporting period, 254 Specific Requests for Information (SRI) were initiated. (Uml)

Ten trip briefs were completed and forwarded to air attaches and officials who were planning to travel in areas of intelligence interest. These trip briefs are designed to furnish collection guidance for the individual traveller in a specific area. ~~(CONFIDENTIAL)~~ (u)

Intelligence Collection Guidance Manuals (ICGM) on Industrial Recognition and Industrial Methods were produced during this reporting period. These manuals are designed to assist collectors in the recognition and collection of significant information relative to the field of aircraft and component manufacturing. (Uml)

(Uml) Returnee Exploitation Group (REG). The REG Program was established to fully exploit the intelligence potential of prisoners and refugees returned from Russia and other countries of the Soviet orbit. Activity in the program has gradually diminished but several important sources were exploited during the past six months. They included persons knowledgeable on communications, biological and chemical warfare, and atomic energy. ~~(CONFIDENTIAL)~~ (u)

(Uml) Air Technical Intelligence Liaison Officer (ATIL) Program:

The purposes and designs of the ATIL program did not change during this period.<sup>3</sup> The ATIL organization in Salzburg, Austria, was deactivated 14 July 1955 as a result of the signing of the peace treaty with

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Austria. While in the process of deactivation, Capt. (b) (6) and Lt. (b) (6), of the Salzburg office, were killed while participating in a training flight. With the suspension of intelligence collection in the Salzburg area, much technical intelligence information will be lost. Resumption of this collection effort may be effected when an Air Attache Office is established in Austria. (Uncl)

The Egypt-Israeli arms situation resulted in Headquarters USAF placing a requirement on ATIC for an ATIIO in that area. On 6 December 1955 Major (b) (6) departed this station for Cairo after proper briefing and instructions. An aeronautical engineer ATIIO from Germany was also assigned TDY to Cairo to provide any necessary support. These officers are expected to fully exploit the opportunity to observe Soviet materiel that is being sent to the West for the first time.

(summary) (u)

A specialized intelligence photography course was given to 19 Air Attache Officers during the reporting period. Four airmen assigned to attache offices also attended the course. (Uncl)

More than 5000 photographic negatives and prints were made during the past six months. Most of these negatives and prints were of highly classified material from overseas sources.

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1. National Security Council Intelligence Directive #7.
  2. USAF Contract AF 33 (600) 31696).
  3. See page 16, History of ATIC, 1 Jan 55 - 30 Jun 55.

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GENERAL:

Document services included screening, extracting, coding, cataloging, researching, locating, and processing ATI documents; translating, evaluating, and identifying foreign language documents; and storing, circulating, and retiring ATI documents. Major programs and projects during this reporting period included: (Uoal)

(Uncl) TRANSLATION CONTRACT FOR FISCAL YEAR 1956.<sup>1</sup> A contract for translation services was let to O. W. Leibiger Research Laboratories, Inc., on 14 November 1955. As agreed upon, the stipulated amount may be increased during Fiscal Year 1956 as required. At the present rate, it is anticipated that the Fiscal Year 1955 contractors will not complete all outstanding translations in less than one year. The contractor selected was considered the best qualified of 47 considered. Recommendation has been made that a sole-source award be given to this agency upon satisfactory performance of the FY 56 translation contract. This would enable ATU to develop a contractor facility to service translation requirements on a continuing basis. ~~(CONFIDENTIAL)~~ (24)

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(Uml) CENTRAL INTELLIGENCE AGENCY INTELLIGENCE SUBJECT CODE (ISC).

Coordination on changes in the ISC was continued in a meeting held at AFIC on 13 September 1955 with representatives of CIA, D/I USAF, and AFIC. This meeting was held primarily to discuss recommended changes to the 600 Series of the ISC, but it became apparent that changes would also be required in the 400, 500, and 700 Series of the code. AFIC had found the CIA Country Code difficult to apply to the air technical intelligence mission. As a result of this meeting, suggested revisions have been forwarded to CIA for possible inclusion in the 400, 500, 600, and 700 Series. One revision to the 600 Series, Atomic Energy and BW-CW portions, has been accepted by CIA. Revisions to the Industrial Engineering Section of the 700 Series are in process of coordination with the Deputy Director for Targets, D/I before submission to CIA.

~~(CONFIDENTIAL)~~ (u)

(Uml) FOREIGN EQUIPMENT:

Material and equipment services included provision of facilities and services pertinent to the handling and processing of all foreign equipment received by the Air Force for analytical purposes, including responsibility for extraction of nameplate and marking data. This activity includes the transportation and delivery of foreign equipment items of intelligence interest that are acquired by various means. The items may range from a nut or bolt to a complete aircraft. Facilities include those required for identification, warehousing, shipping, and display; and services include maintenance of records associated with foreign material and equipment. During this reporting period,

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413 items of foreign equipment were received and processed. Total weight of these items was 76,275 pounds. Approximately 2300 photo frames of nameplate and marking data were made. ~~(SECRET)~~ (u)

On 17 August 1955 a Soviet YAK-18 was transported to ATIC from Korea. This aircraft had been made available to us by a North Korean pilot who defected. It was turned over to WADC for flight test and maintenance. Logistic support throughout the flight test program will be furnished by ATIC. ~~(SECRET)~~ (u)

A display of foreign equipment was set up by ATIC in the Air Room of Headquarters, US Air Force in Europe in August 1955. The items were on exhibit until the end of the year and were a source of considerable interest. (Uncl)

(Uncl) MAINTENANCE. The major activity in the building maintenance and services area during this reporting period was the completion of a remodeling program. An extensive program was initiated which included the building of ten-foot ceilinged areas, seven-foot partitions, acoustic-tiled areas, paneling of all newly constructed areas and painting of Building 263, Wright-Patterson AFB. This renovation provided more privacy to each office group and eliminated the distractions that occur when a large number of persons must work in an unpartitioned area. (Uncl)

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1. See page 28, History of ATIC, 1 Jan 55 - 30 Jun 55.

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## V ELECTRONICS INTELLIGENCE OPERATIONS

### GENERAL:

ELINT operations during the reporting period consisted of the acquisition of electronic intelligence information (signal analysis) through the interception of foreign radar, radiation, and radio signals, and the development of devices to improve our capability in the ELINT collection effort. (~~SECRET~~) (u)

Much effort was expended on developing and improving recorders, analyzers, and computers to meet the needs of our ELINT collection program. (~~CONFIDENTIAL~~) (u)

### (Uncl) Project Activities:

Evaluation of the AN/APD-4 airborne instantaneous direction-finder system for electronic reconnaissance, as installed in the RB-47H aircraft, was undertaken. Techniques for use in the reduction of data from AN/APD-4 are still under study. (~~CONFIDENTIAL~~) (u)

A pulse-measuring device was designed, built, and tested. This device is capable of determining instantaneously and conclusively whether intercepted radar beams are being pulsed from the same source. Analysis was conducted to prove the adequacy of the intercept equipment and the techniques employed, as well as of the material collected. The air crew of the ERB-29, a special ferret aircraft, was briefed on this equipment. The ERB-29 is due to be phased out of service in the Fall of 1956 because of obsolescence. (~~SECRET~~) (u)

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The project to obtain new laboratory type ferret aircraft succeeded in establishing the configuration for two scheduled ERB-47's. Negotiations are being conducted for an advance aircraft with the expectation that at least one can be equipped on a "Quick Reaction Capability" basis before the ERB-29 is phased out of service. ~~(SECRET)~~ (u)

ELINT devised a mock-up of a ferret aircraft intercept position with receivers, pulse analyzers, recorders, and accessories used by ferret operators. It is being used for developing and testing new intercept techniques and equipment. ~~(CONFIDENTIAL)~~ (u)

Several projects have been initiated to attain greater recording capabilities for intercepted signals. A flying spot scanner video recording technique is being procured from Telechrome Corporation. Three standard model Davies 7-channel airborne tape recorders will be installed and tested in the laboratory ferret mock-up for eventual installation in laboratory ferrets. A dual-channel airborne tape recorder is being developed as a replacement for the wire recorders now in use.

~~(SECRET)~~ (u)

ATTC is collaborating with the Aero Reconnaissance Laboratory, WADC, in arranging a flight test of the QRC-16, a device which, in conjunction with an AN/APR-9 receiver, is expected to record lobe and field strength data on intercepted radar beams. ~~(CONFIDENTIAL)~~ (u)

Studies were made of the TOKEN radio-frequency spectrum signal density and related characteristics data to aid in the USAF project for development of a countermeasures capability against the TOKEN radar. The TOKEN is a Soviet radar installation used throughout the Soviet Bloc. ~~(CONFIDENTIAL)~~ (u)

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The "Ready", second prototype machine data reduction device designed to process data, was delivered in July. Its unique feature is its ability to give an instantaneous reading of pulse repetition frequency. From this reading, radars may be speedily identified without processing excessive, redundant data. (~~SECRET~~) (u)

A facsimile-type signal separator, QRC-26, was placed in use in July to satisfy our requirements to simplify the problem of identification of individual signals from audio tapes containing many signals. (~~CONFIDENTIAL~~) (u)

The first of a new series of ELINT Progress Reports was published in October 1955. The purpose of these reports was to improve the USAF ELINT capability by providing timely and comprehensive reporting of current ELINT intelligence and technology. Material for these reports was solicited from all organizations engaged in the ELINT effort. Reports published during this reporting period were:

TR-DE-55-1	"(Uncl) Developments in Signal Intercept and Analysis". Annual progress report for fiscal year 1955. (Report SECRET)
TR-DE-55-2	"(u) ( <del>SECRET</del> ) Analysis of Reported 'Sixth Frequency' Radiation from TOKEN Radars" (Report SECRET)
TR-DE-55-3	"(Uncl) Developments in Signal Intercept and Analysis" (Report SECRET)
TR-DE-55-3A	"(Uncl) ELINT Progress Report Supplement" (Report TOP SECRET)
TR-DE-55-4	"(u) ( <del>SECRET</del> ) Report on ERB-29 Ferret Configuration" (Report SECRET)
TR-DE-55-5	"(Uncl) ELINT Progress Report" (Report SECRET) November issue.
TR-DE-55-6	"(Uncl) ELINT Progress Report" (Report SECRET) December issue.

## VI ENGINEERING SUPPORT OPERATIONS

GENERAL. Engineering Support operations were established for engineering-data analysis and photo-interpretation services in support of ATIC intelligence-producing elements, and for reproduction and graphic services to support both the technical and administrative phases of the Center's operation. Engineering services included responsibility for determining weight and balance, design layout, and structural characteristics of foreign aircraft and missiles; for making performance estimates on all types of aircraft and monitoring flight test programs on foreign aircraft and equipment; and for developing methodology by which to arrive at solutions. Graphic services were extended to include increased administrative functions and scope of operations, and facilities were added for repro-typing and proofreading all ATIC publications. (Uncl)

(Uncl) Engineering Support Activities:

In July 1955 weight estimates of the Soviet helicopters, HORSE and HOUND, were prepared, and previous weight estimates of Soviet aircraft BEAR, FARMER, and FLASHLIGHT were defended in a joint Anglo-American conference. ~~(SECRET)~~ (u)

Preliminary design work was accomplished, including design layout and weight and balance calculations, for an estimated 1961 Soviet supersonic medium bomber and a 1959 Soviet supersonic fighter-bomber. ~~(SECRET)~~ (u)

An analysis of the Soviet FARMER aircraft, a new day fighter, was begun after the 1955 May Day Show, and was continued through the last six months of 1955. The drag analysis on the aircraft was computed by the analysts. The calculations of thrust required, rate of climb, and

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other performance parameters required in general performance analysis were computed on UNIVAC. In addition to doing a general performance analysis on FARMER, calculations were made on use of the aircraft in ground attack missions. Work was also accomplished on a 1957 version of the FARMER, using more powerful engines. ~~(SECRET)~~ (u)

The performance analysis of the Soviet FLASHLIGHT aircraft, a new all-weather interceptor, was completed in July 1955. The last part of the analysis on this aircraft was the turn-radius capability at altitudes from sea level through 45,000 feet. ~~(SECRET)~~ (u)

A performance analysis was completed on the Soviet FRESCO aircraft (MIG-17). This analysis concerned the C and D types of the FRESCO. Capabilities estimates for ground attack missions also were completed for both types. ~~(SECRET)~~ (u)

Performance estimates were calculated for a 1961 Soviet supersonic bomber to be powered by two turbofan engines. When the first estimate was completed it was indicated that this particular aircraft would not meet the requirements set for it. A second estimate was initiated and was in process at the close of this reporting period. ~~(SECRET)~~ (u)

Analysis work was initiated and continued on the Soviet BEAR, a new turboprop aircraft; the Soviet BISON, a heavy jet bomber comparable to the US B-52; the Soviet HOUND (type 36) helicopter; the Soviet HORSE, a new twin-rotor helicopter; and the Soviet FAGOT (MIG-15). Some of this work was completed and other phases of it are in the finishing stage. ~~(SECRET)~~ (u)

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Engineering and analysis data were prepared on flight tests of the Soviet YAK-18 and the MIG-15. The MIG-15 test was to evaluate the Soviet aircraft against the Air Force F-86K in actual flight. ATIC monitored both of these flight tests. (~~CONFIDENTIAL~~) (u)

Photo interpretation was accomplished and drawings were originated or revised on the following aircraft:<sup>1</sup>

BADGER	CRATE	MASCOT
BEAGLE	FARMER	MIDGET
BEAR	FLASHLIGHT	HORSE
BISON	FRESCO-	HOUND
COACH	A, B, C, and D	( <del>CONFIDENTIAL</del> ) (u)

In August, a READIX digital computer was delivered by the contractor for installation at ATIC. From August through the end of this period, personnel were engaged in developing the necessary computing routines and in learning the mechanical operation of the electronic design of the computer. Unfortunately, many delays in the installation were encountered because of breakdown on the machine. Late in September, the drum was ruined, and many troubles with the power line were encountered, causing a delay of approximately six weeks. The drum was resurfaced by the contractor and the necessary design changes were made in the logic. In the middle of November, the computer made its first satisfactory arithmetic operations. From that time on, encouraging results have been obtained. At present the computer has not passed any of its acceptance tests. It is anticipated that the operation will be up to expected quality by January or February 1956. (Uncl)

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1. BADGER - Soviet two-engine turbojet medium bomber.  
BEAGLE - Soviet two-engine turbojet light bomber.  
BEAR - Soviet four-engine turboprop heavy bomber.  
BISON - Soviet four-engine turbojet heavy bomber.  
COACH - Soviet two-engine conventional transport.  
CRATE - Soviet two-engine conventional transport.  
FARMER - Soviet day fighter.  
FLASHLIGHT - Soviet all-weather interceptor.  
FRESCO - Soviet fighter, four types.  
MASCOT - Trainer version of Soviet BEAGLE.  
MIDGET - Soviet trainer version of FAGOT (MIG-15).  
HORSE - Soviet twin-rotor helicopter.  
HOUND - Soviet single-rotor helicopter.



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## VII SCIENTIFIC INTELLIGENCE OPERATIONS

GENERAL. Scientific intelligence estimates, studies, and technical reports are some of the end products of ATIC. Areas covered by these estimates, studies and technical reports include air weapon components such as armament, electronics, instrumentation, and propulsion; technologies such as the composition and manufacture of metal, ceramics, plastics, and rubber; and capabilities of foreign nations to conduct air warfare. Other subjects covered include basic and applied sciences such as heat transfer, fluid mechanics, astrophysics, geophysics, celestial mechanics, and all other sciences related to air power. The impact of a technological break-through in any of these supporting sciences and technologies may well result in a potentially serious threat to the United States.

### (Uncl) ELECTRONICS STUDIES AND ESTIMATES:

(u)(~~CONFIDENTIAL~~) Soviet Capabilities in Electronic Measurements. An ATIC study, based for the most part on Soviet text and instruction books, was made on the technical aspects of Soviet electronic measurement techniques and test equipment. This study generally concluded that the USSR was in good position to satisfy its requirements in this field. This study was distributed in December 1955.<sup>1</sup> ~~(CONFIDENTIAL)~~ (u)

### (Uncl) Analysis of Foreign Radio Device:

In October 1955, ATIC analyzed a transmitter listening device which was discovered embedded in a plaster wall in a USAF officers home. A preliminary examination of this equipment resulted in the publication

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of a Preliminary Report on Foreign Equipment. The analysis revealed that the unit was capable of detecting normal voice conversation at a distance of approximately 75 feet.<sup>2</sup> ~~(SECRET)~~ (u)

In addition to the Preliminary Report, an ATIC Technical Report, was published following an analysis of the equipment by the Farnsworth Electronics Company under contract. This latter report was given special dissemination, particularly to Air Attaches in foreign countries.<sup>3</sup> ~~(SECRET)~~ (u)

(Uncl) WEAPONS AND INDUSTRY STUDIES:

(Uncl) Investigation of Soviet Gunnery Training. Aided by a contract with the Crosley Division of the AVCO Manufacturing Corporation, armament specialists of the Center completed an ATIC Study "(U) Study of Soviet A-1 Air Gunnery Trainer". This study furnishes an insight to the gunnery training technique and the resultant proficiency of Soviet fighter pilots. It also contains a valuable contribution by the Rheem Manufacturing Company on the principle of fighter aircraft gunnery trainers and the latest US developments for the purpose of comparison.<sup>4</sup>

~~(CONFIDENTIAL)~~ (u)

(Uncl) Evaluation of Foreign Aircraft Gun. With the aid of a contract with the Armour Research Foundation, ATIC completed the evaluation of the French 30-mm DEFA 541 Automatic Aircraft Gun and published the results in a Technical Report. Conclusions were reached as to the potential this basic German design offers to the Soviets for exploitation to obtain improved aircraft guns.<sup>5</sup> ~~(CONFIDENTIAL)~~ (u)

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(Uncl) Soviet High Explosives for Aerial Munitions. ATIC completed a study of Soviet high explosives for aerial munitions which was distributed in November 1955. This study is the only known compilation of information on this subject and should serve as a useful research aid in evaluating future Soviet capabilities to damage or destroy targets by aerial attack.<sup>6</sup> (CONFIDENTIAL)

(Uncl) Metallurgy. A significant ATIC Study of Soviet metallurgical research capability was released during this period. This study set forth the implications of the Soviet metallurgical capability with respect to high-temperature alloys, a field important to air-weapons development. The study was designed particularly for the utilization of top-level defense planners in the United States and was not widely disseminated to other agencies.<sup>7</sup> (CONFIDENTIAL)

(Uncl) Vacuum Melting. Subsequent to the release of the study on metallurgy mentioned above, ATIC confirmed, by examination of Soviet turbine buckets, that the Soviets are doing vacuum melting of high-temperature alloys on production scale, which means they are four years advanced in production technology in this particular field over the US. The US industry is now in pilot-plant production stage. This was an important discovery. The advantages of vacuum melting are, (1) stronger alloys, (2) conservation of critical materials, (3) better fabrication and machining processes, such as were found in the Soviet buckets examined. (SECRET)

(Uncl) Non-Metallic Materials:

The program for investigating the status of Soviet-bloc nations in rubber and plastics was completed upon publication of two ATIC studies.

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One of these studies, concerned with selected satellite nations, was released in September;<sup>8</sup> the other, with reference to the USSR, was released in November.<sup>9</sup> (~~CONFIDENTIAL~~) (u)

One of the more significant intelligence items for this period was the reporting of Teflon in the USSR. This was the first indication ATIC had received that the Soviets have Teflon, a highly important plastic material. (~~CONFIDENTIAL~~) (u)

In the area of Ceramics and Germets, an ATIC study was published on the status of development in these fields by selected Soviet-bloc nations.<sup>10</sup> (~~CONFIDENTIAL~~) (u)

(Uncl) Producibility Studies on Aircraft:

A producibility study on the Soviet BADGER aircraft was published 8 November 1955 under the title, "Manufacturing Analysis of BADGER". In this study it was concluded that the Soviets can, and probably do, produce this bomber in series production, and that the design of the aircraft permits high producibility and quick acceleration to peak production.<sup>11</sup> (~~SECRET~~) (u)

Producibility studies were also made, but not published, on the BISON and BEAR bombers, and on the FARMER fighter and FLASHLIGHT interceptor. These studies will be released early in 1956. (~~CONFIDENTIAL~~) (u)

(Uncl) Soviet East German Tube Manufacturing. An analysis of Soviet and East German electronic tube manufacturing technology was completed and the study was released in October 1955. This study compares the efficiency of the Soviet and East German tube production processes, in terms of labor, area, and machines, with equivalent US requirements.

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The comparison indicates low efficiencies on the part of the Soviets.<sup>13</sup>

(CONFIDENTIAL) (u)

(Unc1) Soviet Aeronautical Instrument Industry Study. Investigation of the level of technology of the Soviet aeronautical instrument industry was completed in December 1955. A technical study entitled "~~(CONFIDENTIAL)~~ (u) The Status of USSR Production Technology in the Manufacture of Aircraft Instruments" was released during the same month. This study was produced with the aid of a contractor, Project WHITE STORK (Battelle Memorial Institute), and the assistance of several US instrument manufacturers. The study indicates that the Soviet instruments examined meet US performance specifications and are much cheaper in manhours, materials, and machine time than their US counterparts. It appears that the Soviet instruments would be more difficult to adjust and maintain than equivalent US instruments. Reductions in cost are obtained by simplification of design.<sup>13</sup> ~~(CONFIDENTIAL)~~ (u)

(Unc1) Supersonic Fighter Production Capabilities. A study was initiated in September 1955 to assess the capability of the Soviet aircraft industry to produce supersonic fighters. This project is set up to examine the production characteristics of supersonic fighters in order to determine the penalties upon performance and production output that might result if production difficulties are not satisfactorily solved. The objective of the project is to prepare for producibility estimates on future Soviet aircraft. ~~(CONFIDENTIAL)~~ (u)

(Unc1) Aerial Photographic Capabilities. An ATIC Study, "(U) Aerial Photographic Capabilities of Selected Soviet-Bloc Nations",

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was released 16 November 1955.<sup>14</sup> This completed the project with WHITE STORK in this area. This was the second of two studies dealing with the subject of aerial photography in the Soviet bloc. The first study dealt primarily with descriptions of equipment.<sup>15</sup> The present study represents and effort to evaluate data on the potential of selected Soviet-Bloc nations for future progress. ~~(CONFIDENTIAL)~~ (u)

(Uncl) PROPULSION STUDIES AND ESTIMATES:

(Uncl) Program for the Study of Soviet Personnel and Facilities

Associated With Propulsion Systems R&D in the USSR. A new program was initiated to conduct a survey to determine the personalities, facilities and activities that are most likely to contribute to the capability of the USSR in propulsion systems research and development, and the application of the related basic sciences to the design and performance of the various propulsion system components. This program will assure a more complete coverage of the intelligence available in the unclassified literature on the subject. A companion work request was placed on Project WHITE STORK that will cover the areas of gas turbine power plants, nuclear energy application to propulsion, propellers, rocket power plants, and reciprocating engines. This is a long term program and will result, initially, in the preparation of three loose-leaf handbooks on personalities, facilities, and activities. The handbooks are to be used by ATI Specialists and contractor personnel as background material in the study of specific areas of propulsion. ~~(CONFIDENTIAL)~~ (u)

(Uncl) Estimate of Engine in FLASHLIGHT and FARMER:

A major product of ATIC during this period was a study on the

estimated turbojet engine in the FLASHLIGHT-FARMER aircraft. The study presented Soviet developments of low-thrust turbojet engines, configuration and performance of the turbojet engine in the FLASHLIGHT-FARMER aircraft, and compared this engine with significant engines of the US, UK, and France.<sup>16</sup> (~~SECRET~~)

Intelligence reports and data supplied insight into the Soviet design philosophy for aircraft gas turbine engines, but did not provide specific data for analysis of engines in FLASHLIGHT and FARMER aircraft. The dimensions of these aircraft, and dimensions affecting engine installations were obtained by photo interpretation. (~~SECRET~~)

The basic engine estimated for the FLASHLIGHT and FARMER aircraft is considered to be a single-rotor, axial-flow compressor type with no unusual design features or radical design innovations which might offer super-performance. The version of the engine installed in FARMER is estimated to be equipped with afterburner. The configuration of the afterburner incorporated in the engine for FARMER is expected to be of the rather simple type in which complicated flameholder rigs are eliminated. (~~SECRET~~)

Both the FLASHLIGHT and FARMER are powered by twin-engine installations; FLASHLIGHT engines are installed in wing-mounted nacelles, while those in FARMER are buried in the fuselage. Engines are of the same basic configuration and performance, and compare favorably with contemporary British and US engine designs of the same pressure-ratio class. The appearance of turbojet engines with axial-flow compressors in the FLASHLIGHT and FARMER aircraft has demonstrated that Soviet designers

are capable of developing engines of reasonably advanced design. These engines are the latest ones in the 6,000 to 7,000 thrust category to be observed by intelligence sources. (~~SECRET~~) (u)

(Uncl) Rocket Propulsion Programs. The programmed survey of foreign rocket power plant technologies was completed and an ATIC study prepared. This study evaluated the effects of the German exploitation program on the Soviet rocket power plant developments, and presented an estimate of the Soviet development capabilities.<sup>17</sup> (~~SECRET~~) (u)

(Uncl) Fuel Technology:

During the current reporting period projects were initiated in the fields of solid rocket propellants and crude oils. (Uncl)

The solid rocket propellant study was initiated in response to a request from the Joint Technical Intelligence Sub-Committee, JCS. It represents an ATIC effort that will serve Army and Navy interests as well as Air Force. The project has a two-fold purpose: First, to provide a technical report of the solid propellant state-of-the-art in the Soviet-bloc nations based on open literature; and Second, to combine that data with classified information available, to produce an ATIC estimate of the solid propellant capability of the Soviet bloc.

(~~SECRET~~) (u)

The project "(U) Aircraft Fuels from Soviet Crude Oils" was initiated to compile and tabulate those chemical compositions and physical characteristics of crude oils originating in the Soviet bloc and Austria which definitely determine the quality and performance of the aircraft fuels they produce. In addition, this work will provide data for the appraisal



of Soviet technological capability in conversion processing for the manufacture of aircraft fuels. Soviet design data for a petroleum refinery, recently offered to Finland, contained modern Soviet equipment. This design data will be used in this study. ~~(SECRET)~~ (u)

Activity on the high energy fuels project was broadened in the latter months of 1955 to include hydrogen, ozone, fluorine and other fuels as well as boron. Magnitude of the work on the synthetic lubricants project has indicated that assistance will be required from a contractor in searching available Soviet literature. For that purpose a contract negotiation was commenced to secure help from the Monsanto Chemical Company. ~~(CONFIDENTIAL)~~ (u)

An extensive survey and evaluation of Soviet liquid rocket propellant developments was concluded upon the publication of a study entitled "<sup>(u)</sup>~~(S)~~ Basic Soviet Liquid Rocket Propellants Investigation". This study was designed to determine the USSR capability in this area; to provide evaluated liquid rocket propellant information with which a better over-all evaluation of Soviet weapons systems can be made; and to provide significant information to domestic R&D facilities.<sup>18</sup>

~~(SECRET)~~ (u)

(Uncl) AIR SCIENCE STUDIES:

(Uncl) Astronomy and Astrophysics. A study, "<sup>(u)</sup>~~(S)~~ Initial Report on the Capability of the USSR in Astronomy and Astrophysics", was prepared with the assistance of Project WHITE STORK and was released 15 August 1955. This report covered a survey of 1849 research contributions made by the Soviets in recent years. The only phases of astronomy



considered were those which might contribute to progress in the operation or development of air weapon systems.<sup>19</sup> ~~(SECRET)~~ (u)

(Uncl) Unidentified Flying Objects (BLUE BOOK):<sup>20</sup>

The purpose of this project is to collect, evaluate, and disseminate information concerning unidentified flying objects and aerial phenomena and to determine whether or not they constitute a threat to US security.

~~(CONFIDENTIAL)~~ (u)

During the period 1 January 1955 to 31 December 1955, a total of 427 Unidentified Flying Object Reports were received and processed in accordance with AFR 200-2. Analysis of these reports resulted in identifications being established in 97 per cent of those cases for which there was sufficient information for evaluation. In addition to formal reports, 198 letters from the public were also received and processed. (Uncl)

UFO Special Report No. 14 was completed, printed and distributed in this period. This report was downgraded from Secret to Unclassified for the purpose of release to the public.<sup>21</sup> (Uncl)

On 25 October 1955, this report was made the subject of a press release by the Secretary of the Air Force, (b) (6). This report and the subsequent release have done much to lift the aura of mystery which, in the minds of the public, has surrounded the program since its inception.<sup>22</sup> (Uncl)

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1. ATIC Study 102-EL-55/1-24, 15 Apr 55.

2. ATIC Report FE-6032-EL, 8 Nov 55.

3. ATIC Report TIR-EL-55-1, 30 Nov 55.
4. ATIC Study 102-AE-55/7-34, 22 July 55.
5. ATIC Report TIR-WI-55-1, 11 Oct 55.
6. ATIC Study 102-AE-55/9-34, 20 Oct 55.
7. ATIC Study 102-AE-55/6-34, 6 June 55.
8. ATIC Study 102-AE-54/8-34, 1 July 55.
9. ATIC Study 102-AE-55/2-34, 1 Aug 55.
10. ATIC Study 102-AE-54/9-34, 11 Apr 55.
11. ATIC Study 102-AE-55/10-34, 9 Sep 55.
12. ATIC Study 102-AE-55/4-34, 16 Aug 55.
13. ATIC Study 102-AE-55/8-34, 22 Sep 55.
14. ATIC Study 102-AE-55/1-34, 14 Sep 55.
15. See Page 94, ATIC History 1 Jul 54-31 Dec 54.
16. ATIC Study 102-AC-55/9-34, 7 Oct 55.
17. ATIC Study TIS-PR-55-1, 20 Sep 55.
18. ATIC Study 102-AC-55/7-34, 1 Jun 55.
19. ATIC Study 102-EL-54/5-34, 30 Mar 55.
20. See Page 64, ATIC History, 1 Jan 55-30 Jun 55.
21. Analysis of Reports of Unidentified Aerial Objects, 5 May 55.
22. Dept. of Defense News Release NR. 1053-55, 25 Oct 55.

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## VIII AIR WEAPON SYSTEMS INTELLIGENCE OPERATIONS

### GENERAL:

Some of the major products of ATIU are the studies and estimates which result from the evaluation of foreign air weapons and air weapon systems. These products contain finished, integrated air technical intelligence on foreign aircraft and missiles, and on facilities and equipments that support foreign air weapon systems. Information contained in these studies and estimates is used as a basis for national defense planning, and furnishes guidance for our own research and development effort.

(Uncl)

Five new types of Soviet aircraft were observed in 1955 during rehearsals for the May Day Show in Moscow and for the Soviet Aviation Day Show at Tushino, and again during the Tushino Air Show itself on 3 July 1955. These new aircraft consisted of a twin-rotor helicopter, a jet transport, a jet day fighter, an all-weather interceptor, and a turboprop heavy bomber. They were designated HORSE, CAMEL, FARMER, FLASHLIGHT, and BEAR respectively. The development of these types of aircraft had been previously predicted by ATIU, but their appearance and the acquisition of photographs and observer descriptions was the first go-ahead signal for the production of performance and characteristics estimates. Studies were completed on the FARMER, FLASHLIGHT, and BEAR. ~~(CONFIDENTIAL)~~ (u)

### (Uncl) ESTIMATES AND STUDIES:

#### (Uncl) Analysis of FARMER:

A study of the FARMER was made for the purpose of estimating the characteristics, performance, effectiveness, producibility, and develop-

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ment potential of this new Soviet fighter.<sup>1</sup> ~~(SECRET)~~ (u)

The FARMER is the latest of the Soviet fighter-type aircraft. It is a swept-wing, high-altitude, high-speed, day interceptor, powered by two turbojet engines mounted in the fuselage. The FARMER is believed to be the latest effort of the MIG designers. ~~(SECRET)~~ (u)

First sighted in April 1955, FARMERS were observed in various numbers during the ensuing months. Sixty FARMERS were observed at one time on the 7th of June 1955. Prior to the first sighting of the FARMER, ATIC had estimated that the Soviets would have a fighter aircraft superior to the FRESCO (MIG-17) by mid-1955. The sighting of April and May confirmed that estimate. Performance estimates of this study are in line with those made prior to the sightings. ~~(SECRET)~~ (u)

The FARMER resembles the FAGOT (MIG-15) and FRESCO (MIG-17), but is larger than either of them. The power plant for this aircraft is estimated to be two axial-flow turbojet engines, and they are probably fitted with afterburners. Static thrust of each engine at sea level is estimated to be 6,700 pounds without afterburning, and 8,050 pounds with afterburning. ~~(SECRET)~~ (u)

No positive identification can be made of the armament installation on the FARMER. It is estimated to be four fixed, forward-firing, 23-mm guns. It may even have some new higher-performance type of gun. ~~(SECRET)~~ (u)

The combat radius of the FARMER is 220 nautical miles, the combat ceiling is 58,000 feet. It has a maximum speed at sea level of 645 knots; at 35,000 feet, 630 knots. ~~(SECRET)~~ (u)

On the basis of photographic evidence, it appears that the FARMER



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should not be difficult to produce. The Soviets could probably make good use of existing production facilities with few changes. ~~(SECRET)~~ (u)

The performance of FARMER is superior to any previously known Soviet fighter. The estimated fire power used in conjunction with a range radar should make the FARMER an effective weapon of defense against all current operational US bombers. The apparent lack of aircraft-intercept radar on the FARMER, however, limits its over-all effectiveness. ~~(SECRET)~~ (u)

Major conclusions reached in this analysis included the following:

The estimate of 200 FARMERS in operational units in the Soviet Air Force by mid-1955, plus the estimated excellent interceptor performance of the design, poses a serious threat to US strategic bombers during day operations. This threat is not as serious under bad-weather conditions or night operations. ~~(SECRET)~~ (u)

FARMER probably will be used as an air-superiority fighter and as a ground-support fighter. With major modification to the nose section, A/I gear could be added to FARMER, giving it an all-weather capability. ~~(SECRET)~~ (u)

FARMER is estimated to have a good performance growth potential. It has excellent climb and altitude performance; with improvements in engine thrust and aerodynamic cleanliness, it is possible for FARMER to become a true supersonic fighter by 1957. ~~(SECRET)~~ (u)

(Unc1) Analysis of FLASHLIGHT:

An ATIC study, "Analysis of FLASHLIGHT", was completed in October 1955. This analysis presented an estimate of the operational capabilities and development potential of FLASHLIGHT, the new Soviet twin-jet, all-weather interceptor.<sup>2</sup> ~~(SECRET)~~ (u)

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The sighting of the FLASHLIGHT in April 1955 provided the first firm evidence that the Soviets have an operational all-weather interceptor with an Airborne Interception (A/I) radar fire-control system. FLASHLIGHT apparently has sufficient speed to be capable of intercepting current high-speed jet bombers, although some speed performance has been sacrificed to permit installation of the long-range A/I radar. ~~(SECRET)~~ (U)

The engine is estimated to compare favorably with contemporary British and US engine designs. Some form of automatic flight-control system may be provided on FLASHLIGHT. It is considered that ground-control-approach (GCA) equipment is available for use in landing. The Soviets are known to have developed and produced flight and engine instruments that would meet the requirements of FLASHLIGHT. ~~(SECRET)~~ (U)

The very-high-frequency (VHF) communications equipment is similar to, and believed to be a modified copy of, the US SCR-522 set. The automatic radio compass, marker-beacon receiver, and IFF transponder equipment is patterned after US and British equipment of World War II. ~~(SECRET)~~ (U)

The fire-control system of FLASHLIGHT is considered to compare favorably with the all-weather systems of the United States. The radar capability is estimated to be 30 nautical miles search and 20 nautical miles track against a B-47-type aircraft. Mechanical equipment is estimated to be similar to that of the FAGOT (MIG-15). The electrical power requirements can be met by standard generators of the USSR. ~~(SECRET)~~ (U)

The aircraft has great development potential in the fields of weapons and fire control. The fire-control system can be further developed as a system for lead-pursuit attacks in all-weather conditions.

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Rapid production of FLASHLIGHT is facilitated by the design of the aircraft. (~~SECRET~~) (u)

From analysis of available data, several conclusions were reached in the study, including these:

First, in FLASHLIGHT, the Soviets have in operational units, an all-weather interceptor with an A/I radar fire-control system capable of long-range detection and continuous automatic fire-control solution for unlimited pursuit attacks with a fixed gun-weapon installation. (~~SECRET~~) (u)

Second, FLASHLIGHT is armed with two large-caliber weapons of a new type, or possibly armed with rockets. If the armament consists of large-caliber guns, the aircraft will be capable only of lead-pursuit attacks in all-weather conditions. (~~SECRET~~) (u)

Third, FLASHLIGHT is estimated to be effective as an all-weather area interceptor against current high-speed jet bombers. (~~SECRET~~) (u)

Fourth, the large fuselage of FLASHLIGHT provides a good development potential for this aircraft, since guided or unguided missiles could be carried in the basic airframe. (~~SECRET~~) (u)

(Uncl) Analysis of BEAR:

A study of the new Soviet turboprop bomber, BEAR, was completed in December 1955, and release of the study is scheduled for February 1956. The study contains an estimate of the operational capabilities and development potential of this Soviet turboprop, swept-wing, four-engine heavy bomber. BEAR is in the weight class intermediate between that of BADGER and BISON. BEAR is the result of one of three known Soviet design

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and development programs for strategic air weapons, the other two having produced BADGER and BISON. The analysis presented in the study of the BEAR was based on interpretation of photographs, and supplementary intelligence, particularly on the engine.<sup>3</sup> ~~(SECRET)~~ (U)

BEAR is estimated to have a combat radius of 3,900 nautical miles with a 10,000-pound bomb load, a target altitude of 40,000 feet, and a target speed of 435 knots. These values may be increased for an optimum mission, at cruise ceiling for maximum range, to a combat radius of 4,250 nautical miles. With a 3,000-pound bomb load, the optimum mission combat radius can be extended to 4,500 nautical miles. The target altitude in the optimum mission is increased to 42,100 - 42,500 feet, but the target speed is reduced to 410 knots. Mission times for BEAR are estimated to range from 19 to 22 hours. The combat radius of BEAR is outstanding and points to use of BEAR for extreme-radius, strategic bombing missions. ~~(SECRET)~~ (U)

BEAR probably carries a crew of 10, and it is estimated that the crew is provided with bullet-resistant glass in the tail compartment and with armor plate for the pilots and gunners. ~~(SECRET)~~ (U)

The appearance of up to seven BEARs through July 1955 indicates the successful development of a turboprop heavy bomber estimated to have become operational in 1955. ~~(SECRET)~~ (U)

The use of existing Soviet electronic and armament equipments may have simplified and speeded the BEAR development program. Improvement in performance could be made by eliminating numerous fuselage protrusions. ~~(SECRET)~~ (U)



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The power plants installed in the BEAR are four engines known as the K engines, which have severe altitude performance limitations. It is estimated that the Soviets will continue to develop these engines in an effort to overcome these limitations. (~~SECRET~~) (u)

The BEAR is estimated to be capable of carrying special weapons, a load of 10 metric tons of conventional bombs, or a short-range air-to-ground guided missile, thereby permitting mission accomplishment without entering heavily defended target areas. The defensive armament of the BEAR includes only tail and lower aft defenses, indicating a relaxation of the all-direction defense concept of BADGER and BISON. BEAR is vulnerable to attack by a rocket-armed interceptor, since rockets could be released outside the lethal gun-range of the BEAR. (~~SECRET~~) (u)

The bombing and navigation systems of the BEAR are considered to be operationally adequate for high-altitude missions under both visual and blind conditions. BEAR is considered suitable for a reconnaissance role. (~~SECRET~~) (u)

Existing Soviet manufacturing materials and methods are considered satisfactory for the production of the BEAR. The K power plants can probably be produced by existing Soviet methods. Performance growth for the BEAR hinges on the development of turboprop engines with greater power available at altitude and development of an improved propeller. The BEAR is presently fitted with four pairs of 4-blade, contra-rotating propellers. (~~SECRET~~) (u)

(Uncl) Analysis of the HOUND Helicopter. On the project which provides for producing a study on the HOUND helicopter, enough information

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has been collected to complete a study for release about March 1956. The HOUND first appeared in the Tushino Air Show in July 1953. It resembles the USAF H-19 helicopter and is powered by one ASh-82FN reciprocating engine. The HOUND is a 1½ ton payload transport-cargo helicopter. It has demonstrated its ability to carry a variety of equipment such as a jeep, a field gun, and an 8-place light truck. Unloading is accomplished through clamshell doors, at the rear of the fuselage, by means of a portable ramp carried internally. During this reporting period, performance sheets were completed and forwarded to D/I USAF for inclusion in the Aircraft Characteristics Handbook of Soviet and Satellite Nations. ~~(SECRET)~~

~~(SECRET)~~ (u)

(Uncl) CONTRIBUTIONS TO NATIONAL INTELLIGENCE PUBLICATIONS:

During the reporting period, the following contributions for the National Intelligence Survey Program were prepared and forwarded to the Deputy Director for Estimates D/I USAF: Section 17 on the USSR and Czechoslovakia containing a brief summary on basic air weapons research and development capabilities and trends; Section 70 on Finland, Austria, and Turkey describing the aeronautical aspects of the scientific structure of each country; Section 71 on Finland, Austria, and Turkey describing electronic research and development activities, capabilities and trends; Section 72 on Finland and Austria presenting basic data reflecting on air weapons research and development capabilities and trends in aircraft design. ~~(SECRET)~~ (u)

Contributions for the National Intelligence Estimates Program were also forwarded to the Deputy Director for Estimates on the NIE 41-55,

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"Probable Developments in Japan Through the Next Decade"; NIE 11-10-55, "Soviet Gross Capabilities for Attack on the US in 1965; NIE 12-55, "Probable Developments in the Satellites As They Affect Sino-Soviet Bloc Capabilities Through 1956-1960"; and NIE 11-5-55, "Air Defense of the Sino-Soviet Bloc, 1955-1960". ~~(SECRET)~~ (u)

(Unc1) REVISION OF AIE-11. A revision of AIE-11 (Air Intelligence Estimate) was released in December 1955. This estimate is designed to identify areas of Air Force interest where the possibility of Soviet technological superiority exists, and to determine the nature and degree of possible Soviet technological superiority as a basis for action to prevent technological surprise. This is one of the Center's most important recurring products. Through this publication, the National Defense Planners are given narrative and graphic explanations of the technical fields where the threat of Soviet superiority or capability would place the United States in a dangerous position. ~~(CONFIDENTIAL)~~ (u)

(Unc1) GUIDED MISSILES PROJECTS:

A "Guided Missiles Handbook of Foreign Nations other than the USSR and Satellites" was completed and sent to reproduction facilities. It is scheduled for release in January 1956. (Unc1)

Several projects were initiated during the reporting period to study the various aspects of Soviet capabilities in the guided missile field. Work continued on Soviet activity in the development of air-to-surface guided missiles, surface-to-surface guided missiles, and guided missile launching sites of the Soviet bloc. Reports on all of these activities are due for release during the first half of 1956. ~~(SECRET)~~ (u)

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(Uncl) HANDBOOKS:

(Uncl) Characteristics Aircraft Handbook of Soviet and Satellite Nations. The title of a joint USAF-US Navy handbook was changed from "Characteristics and Performance Handbooks, USSR Aircraft" to, "Characteristics Aircraft Handbook of Soviet and Satellite Nations" with contents assigned an over-all security classification of CONFIDENTIAL, and a new companion publication having the same title but assigned an over-all security classification of SECRET was created. The latter, also a joint USAF-US Navy publication, contains the newest Soviet and Satellite aircraft presented in USAF Green-Book type format with performance calculated using USAF MIL-C-5011A.<sup>4</sup> Included in the initial publication are the FARMER and FLASHLIGHT fighters, and the BADGER, BEAR and BISON bombers. During December, photostatic copies of the SECRET portion of the Handbook were forwarded to Headquarters, USAF, for coordination with the US Navy. At the same time, a comprehensive revision to the CONFIDENTIAL handbook was forwarded for publication. The revision, which makes this publication current, consists of a new index, data for the introductory pages for Albania, Bulgaria, Communist China, Czechoslovakia, East Germany, Hungary, Poland and Rumania, and new format sheets for the FARMER, FLASHLIGHT, MIG-17 (FRESCO), and YAK-23 (FLORA) fighters; the BEAR and IL-28 (BEAGLE) bombers; the CAMEL and CRATE transports; and the HORSE and MI-4 (HOUND) Helicopters. ~~(SECRET)~~ (u)

(Uncl) Handbook on Foreign Aircraft Other Than Soviet. A final draft of a comprehensive aircraft handbook entitled, "Characteristics and Performance Handbook of Aircraft of Foreign Countries (Other Than Soviet)", was forwarded for reproduction in December, with release

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scheduled for January 1956. The original plan for this project envisioned ultimate production of four volumes comprising Europe, Africa, Asia, Latin America, and the British Commonwealth of Nations. This was changed to include all the "Friendly Nations" of the world in one volume. All previously published aircraft handbooks for this project will be rescinded with the publication of the aforementioned handbook which is scheduled for early 1956. ~~(CONFIDENTIAL)~~ (u)

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1. ATIC Study 102-AC-55/15-34, 23 Sep 55.
  2. ATIC Study 102-AC-55/16-34, 13 Oct 55.
  3. ATIC Study 102-AC-55/17-34, 9 Aug 55, "Analysis of BEAR".
  4. Specifications that are used as a basis for comparison of performance of aircraft.

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