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Description of document: National Reconnaissance Office (NRO) records regarding the 1993 BYEMAN Compartmentation Restructure

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Source of document: National Reconnaissance Office  
MS&O/Information Access and Release Team  
14675 Lee Road  
Chantilly, VA 20151-1715  
Fax: (703) 227-9198  
Email: [foia@nro.mil](mailto:foia@nro.mil)  
[Online FOIA Request Form](#)

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## NATIONAL RECONNAISSANCE OFFICE

14675 Lee Road  
Chantilly, VA 20151-1715

29 November 2012

This is in response to your letter dated 19 February 2012, received in the Information Management Services Center of the National Reconnaissance Office (NRO) on 23 February 2012. Pursuant to the Freedom of Information Act (FOIA), you are requesting a copy of "The Report associated with the 1993 Byeman Compartmentation Restructure, Commissioned by the DNRO on November 1993 and completed Feb. 1994, and Conducted by the Joint Government and Industry Review Team at the NRO."

Your request was processed in accordance with the Freedom of Information Act, 5 U.S.C. § 552, as amended. A thorough search of our files and databases located fourteen (14) pages responsive to your request. These pages are being released to you in part.

The material being withheld is denied pursuant to FOIA exemptions:

(b)(1) as properly classified information under Executive Order 13526, Section 1.4(a), (c), (e), and (g);

(b)(3) which applies to information specifically exempt by statutes, specifically 50 U.S.C. § 403-1, which protects intelligence sources and methods from unauthorized disclosure, and the Central Intelligence Act of 1949, 50 U.S.C. § 403-6, which exempts information pertaining to the organization, functions, including those related to the protection of intelligence sources and methods, names, official titles, salaries, and numbers of personnel employed by the Central Intelligence Agency; and

(b)(6) which applies to records which, if released, would constitute a clearly unwarranted invasion of the personal privacy of individuals.

The FOIA authorizes federal agencies to assess fees for record services. Based upon the information provided, you have been placed in the "other" category of requesters, which means

you are responsible for the cost of search time exceeding two hours (\$44.00/hour) and reproduction fees (.15 per page) exceeding 100 pages. In this case, no assessable fees were incurred. Additional information about fees can be found on our website at [www.nro.gov](http://www.nro.gov).

You have the right to appeal this determination by addressing your appeal to the NRO Appeal Authority, 14675 Lee Road, Chantilly, VA 20151-1715 within 60 days of the date of this letter. Should you decide to do so, please explain the basis of your appeal.

If you have any questions, please call the Requester Service Center at (703) 227-9326 and reference case number **F12-0053**.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas J. Davis", written in a cursive style.

Douglas J. Davis  
Chief, Information Access  
and Release Team

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## (S) NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

OFFICE OF THE DEPUTY DIRECTOR

14 OCT 1993

## MEMORANDUM FOR THE DIRECTOR OF CENTRAL INTELLIGENCE

SUBJECT: BYEMAN Compartment Restructure

I have approved a plan for the restructuring of BYEMAN compartmentation and seek your concurrence before proceeding with implementation. The restructure, which was recommended by a joint Government/Industry Task Force established by our Director of Security, reduces the <sup>b1 b3</sup> operational system compartments and <sup>b1 b3</sup> of studies into a single major compartment. This plan also provides "special handling" mechanisms for exceptionally sensitive information, e.g., satellite vulnerability and survivability data. Additionally, existing provisions for foreign release will continue in coordination with the Central Intelligence Agency (CIA) (Collection Requirements and Evaluation Staff) and National Security Agency.

b1 1.4c, b3 50 USC  
403-1

This concept was also presented to senior industry and former government executives, including <sup>b6</sup> of Mitre, <sup>b6</sup> of Aerospace, <sup>b6</sup> of TASC, <sup>b6</sup> and <sup>b6</sup> of Martin Marietta, <sup>b6</sup> and <sup>b6</sup> of Lockheed, <sup>b6</sup> of TRW, and <sup>b6</sup> of Hughes. Their feedback was supportive and each emphasized several efficiencies to be gained by adopting this concept. The CIA Director of Security, <sup>(b)(3) 50 USC 403-E</sup> also supports this compartmentation reduction plan. In addition, we briefed Duane Andrews, J.R. Burnett, Harry Voltz, and selected staff of the Joint Security Commission --they indicated that this reduction concept is consistent with the simplification of the Special Access System.


This restructure virtually eliminates administrative processing for additional BYEMAN accesses and will allow facility, equipment, technology, development, and personnel sharing across programs. The risks include the potential for a substantially wider range of access by each individual and a

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diminished capability to reconstruct the breadth of individual BYEMAN accesses in cases of espionage. However, this restructure is a managed risk approach that makes security more reliant on individual self-discipline and management oversight. It will require a continuing strong personnel security program, both for initial access as well as for monitoring and assistance when accesses must be revoked. Likewise, we will need a strong community-wide security program to ensure equivalent protection.

I would like to announce the decision to proceed with the restructure of BYEMAN compartmentation on November 1, 1993; the implementation plan is based on a target ninety-day transition period. With your concurrence, we will proceed with the implementation activities.



J. D. HILL

CC:  
D/OS/CIA

COORDINATE:

(b)(3) 50 USC 403-6

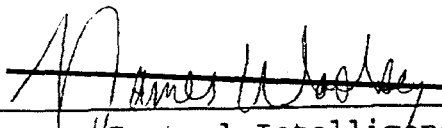


Director, Office of Security, CIA

15 October 1993

Date

CONCUR: ✓ NON-CONCUR:    



Director, Central Intelligence Agency

11/4/93

Date

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**BYEMAN**

**COMPARTMENTATION RESTRUCTURE CONCEPT**

DRAFT

July 14, 1993

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## EXECUTIVE SUMMARY

A number of developments have caused senior U.S. Government policy makers to call for major changes in security policies, procedures and practices. These factors include the dissolution of the former Soviet Union and the subsequent reduced strategic threat to the United States and its interests, as well as the reality of sharply lower budgets for the Department of Defense, Intelligence Community and the National Reconnaissance Office (NRO). At the same time there is a perception that existing compartmentation is a barrier to progress in realizing significant improvement in the management of the Intelligence Community and its relations with consumers.

The Director of Security, NRO, established a government/industry Task Force with security expertise within the IMINT and SIGINT Directorate, Communications Office, NRO Security Policy & Operations Support Staff, the NRO Security Center and elements of the contractor community, was assembled to review NRO security compartmentation.

The Task Force examined the current BYEMAN compartmentation structure and identified necessary changes to reduce overall costs and promote the sharing of technology within the NRO. After analyzing several proposed restructure models, the Task Force determined that NRO program information can be adequately protected under a single BYEMAN access umbrella. This compartmentation restructure concept represents a significant paradigm shift for the NRO and requires a reinvigoration of the must-know principle. The Task Force concluded that the NRO should eliminate existing compartments and adopt the single BYEMAN access umbrella concept.

The Task Force recommends approval of the proposed concept and direction be given to proceed with implementation.

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**1. INTRODUCTION**

A number of developments have caused senior U.S. Government policy makers to call for major changes in security policies, procedures and practices. These factors include the dissolution of the former Soviet Union, and the subsequent reduced strategic threat to the United States and its interests, as well as the reality of sharply lower budgets for the Department of Defense, Intelligence Community and the National Reconnaissance Office (NRO). At the same time there is a perception that existing compartmentation is a significant barrier to progress in realizing significant improvement in the management of the Intelligence Community and its relations with consumers.

The Director of Security, NRO, established a government/industry Task Force with security expertise from the IMINT and SIGINT Directorates, Communications Office, NRO Security Policy & Operations Support, the NRO Security Center as well as elements of the contractor community, was assembled to review NRO security compartmentation.

**2. OBJECTIVE**

To examine the current BYEMAN protection and compartmentation structure and identify necessary changes to reduce overall costs, maximize efficiencies and eliminate duplication, and promote the sharing of technology within the NRO. This paper summarizes the rationale for significantly limiting compartmentation and includes a conceptual model designed to protect sensitive NRO unique collection capabilities and techniques.

**3. ASSUMPTIONS**

The following assumptions were made in producing the recommended security structure:

- The unique capabilities, vulnerabilities, and total performance, of overhead reconnaissance systems (spacecraft and ground operations) must be afforded the highest degree of protection.
- The BYEMAN Security architecture must:
  - 1) Protect key, specific fragile details of reconnaissance satellite design and operations.
  - 2) Be flexible enough to accommodate modifications or additions to existing or new programs, technologies, and support to

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military operations.

- 3) Have the utility to support all levels of classification.
- 4) Allow for tailored support to (b)(1)1 4c, (b)(3) 50 U.S.C. 403-1
- 5) Vigorously validate and implement the must-know principle.

- The "BYEMAN versus TK Study" conducted recently under NRO auspices identified information across NRO business lines requiring protection within BYEMAN channels.
- All NRO Program Offices have recently accomplished a classification review and appropriately classified information needing to be protected at the Top Secret level (conducted during the BYEMAN versus TK Study).
- A stronger and more robust security education and awareness program must be developed and instituted jointly by the NRO Security Center's Training Division and the individual Program Headquarters Security Offices to ensure both the must-know requirement and the compartmentation changes are thoroughly understood and promulgated.
- A capability must be retained which allows program managers and program security to determine "who" has access to "what" BYEMAN information under their respective cognizance.

#### 4. DRIVERS TO REVIEW BYEMAN COMPARTMENTATION STRATEGY

##### 4.1 THE CALL FOR CHANGE

A number of developments have caused policy makers to call for change. Some of these are summarized below.

##### 4.2 POST-COLD WAR THREAT TO THE NRO

The demise of the Soviet Union and end of the Cold War has signaled a fundamental change in the nature, probability of occurrence and consequence of the threat to the security of the United States. The attention of U.S. policy makers has shifted away from a preoccupation with the former USSR and the possibility of a global nuclear war to other major issues.

One consequence of these changes is that the threat to our national overhead reconnaissance programs is vastly different in today's world. However, it remains essential that our national intelligence assets are secure, credible and readily available to consumers. A significant unauthorized disclosure of NRO operations, although it


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may no longer be a threat to national survival could:

(b)(1)1.4a, (b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 50 U.S.C. 403-1



#### 4.3 EXTERNAL FORCES

a. The ongoing Joint Security Commission was initially chartered with the following objectives:

- Reduce intelligence compartments by 50-75 percent.
- Reduce SCI classified material by 50 percent.
- Reduce security management costs by 50 percent.
- Reduce contractor security costs by 50 percent.
- Remove from BYEMAN compartmentation all classified information that does not require protection compartments

b. The "Woolsey Report", dated September 1992, reviewed NRO programs for the DCI and made the following points regarding NRO security:

- Current security processes used to support development activities are excessive.
- Current security system should be thoroughly examined and overhauled.
- Some of the current security requirements appear to be based on absolute worst case assumptions and may no longer have logical justification.
- The current security system reduces the availability and use of technology by other agencies.
- Much of the compartmentation between individual programs appear to have a small degree of utility to justify its substantial expense.

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- The Woolsey panel recommends that a generic development security channel is warranted to reduce development overhead and promote efficiency and technology sharing among programs.

C.

(b)(3) 50 USC 403-6



#### 4.4 INTERNAL FORCES

Mr. Jimmie Hill, Deputy Director/NRO, directed a security cost survey of selected NRO contractors in January 1993. His letter opened with the comment that, "The congress has indicated a perception that the cost of security in intelligence and related national security programs is excessive in light of current budget constraints and revised threat estimates. With continued projections for declining budgets in a deficit reduction environment, further cuts are likely across programs and security areas. Consistent with that view, draft congressional language stipulates that mechanisms must be developed and implemented to identify and control security costs."

#### 5. PURPOSE OF THE BYEMAN CONTROL SYSTEM

BYEMAN is a unique DCI Security Control System which protects key, specific and fragile details of reconnaissance satellite design and operation. Generically, information requiring exclusive BYEMAN protection include:

- 1) Development and key design
- 2) Budget & funding
- 3) Command & Control Operations
- 4) System vulnerability and survivability
- 5) Unique technology and engineering applications

##### 5.1 MUST-KNOW

Implicit in BYEMAN security protection is the application of the "must-know" principle. The must-know principle ensures individuals have access only to information which is essential to perform their official duties. This must-know principle will be strictly applied in determining the need for BYEMAN access. Critical to this determination is the requirement to grant access at the lowest classification possible for an individual to fulfill official job requirements. Therefore, prior to requesting a BYEMAN access, a determination must be made that the information essential to perform official duties is not resident in the collateral or any other SCI control system. The D/NRO is the sole

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approval authority for determination of must-know access unless specifically delegated.

A primary method the BYEMAN system currently uses to apply the must-know principle is through separate program compartments. The strategy of employing compartmentation in support of the must-know principle remains sound. However, compartmentation as it exists today has become too extensive, expensive and restrictive. Thus, today, we must re-think the security compartmentation strategy used by the NRO.

Program-specific compartmentation of NRP systems is not essential to provide must-know protection. Effective control of access to information (applying the must-know principle) can be accomplished by determining functional responsibilities, contractual requirements, and security education and awareness. Therefore, essential facts can be protected within the BYEMAN system without extensive compartmentation. However, individual BYEMAN briefed personnel must now play a far greater role in determining must-know decisions.

## 5.2 COMPARTMENTATION AS A MANAGEMENT RESPONSIBILITY

Historically, the NRO compartmented information through specific satellite programs, or through "Study Numbers" for specialized development or payload integration/launch activities. Fundamental to compartmentation is the premise that access to program information is limited to only those people who are essential to develop and operate NRO overhead programs.

There are several reasons the NRO needs to continue some system of compartmentation to be able to carry out certain aspects of its mission:

- The D/NRO, on behalf of the DCI, has the responsibility to protect satellite reconnaissance intelligence "sources and methods".
- The NRO must be able to maintain control of its sensitive information and operations.
- The NRO must be able to protect this fragile, critical national intelligence asset.
- The D/NRO and NRO Program Managers must retain strict accountability for granting access to BYEMAN information.

## 6. RATIONALE FOR COMPARTMENTATION CHANGE

As the NRO has changed its organizational structure to optimize synergism, the BYEMAN security system must also change. The Task Force concluded that a credible BYEMAN protection/ compartmentation strategy should overlay security protection

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commensurate with the current NRO management philosophy. This strategy would take advantage of proven methodologies and processes throughout the entire NRO.

The paradigm shift that must occur within the NRO is to accept the premise that fewer codewords and study numbers is not synonymous with less security protection. True compartmentation is accomplished by appropriately vetted individuals; by the vigorous application of the must-know principle; and an effective security education/awareness program. Program managers and other NRO managers have direct control over the dissemination of BYEMAN material. BYEMAN data can be protected by controlling the flow of information. In the contractor community, this control is routinely exercised through the contracting mechanism with the COTR focusing work as specifically defined contract tasks. The same tools available to make information available can be used to protect access to information. Codewords and study numbers in and of themselves do not provide effective security protection.

## 7. COMPARTMENTATION RESTRUCTURE CONCEPT

The Task Force has developed a model (Figure 1) with the following characteristics:

a. The capability for Program Managers to protect "Eyes Only" (b)(1), 4c,  
(b)(3), 50  
U.S.C. Material that:

- 1) is defined by Program Managers and approved by the D/NRO or the DD/NRO with notification to the DOS/NRO;
- 2) is managed & controlled by cognizant program management and security;
- 3) protects exceptionally sensitive information, i.e., advanced technology, highly sensitive operations, critical survivability & vulnerability data, etc;
- 4) rigidly applies must-know as determined by program management.

b. A single BYEMAN access that:

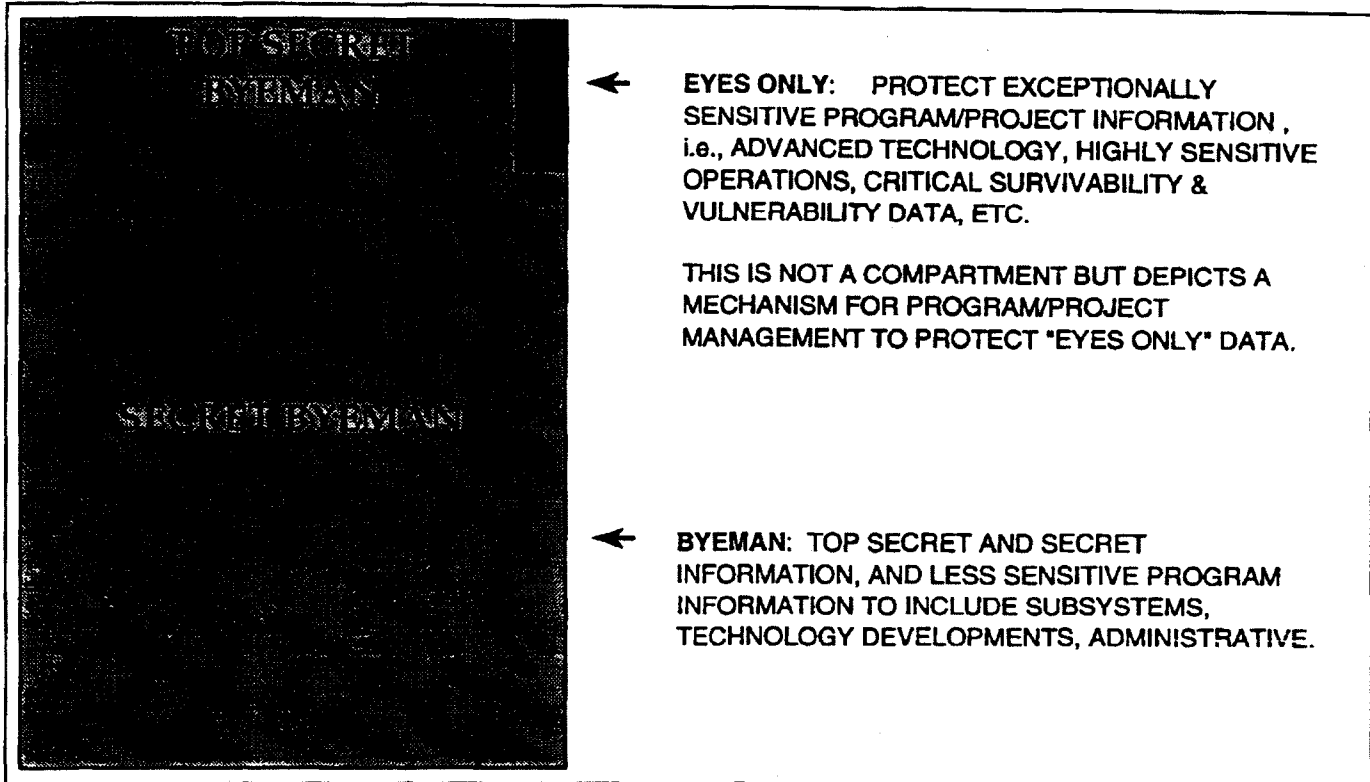
- 1) incorporates TOP SECRET and SECRET classification levels;
- 2) allows technology sharing across program lines;
- 3) rigidly applies the must-know principle as determined by program management;
- 4) incorporates approved BYEMAN technology development activities at any level.

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Figure 1



## 7.1. EFFECTS OF A SINGLE BYEMAN ACCESS

The recommended model dramatically simplifies the current security system and reduces security costs through a dramatic reduction of compartments. It addresses the concerns expressed by senior policy leaders by pushing activities to the lowest classification level possible and by providing NRO management a single access strategy that reduces development overhead and promotes efficiency and technology sharing among programs. It requires rigid adherence to the must-know philosophy. Additionally, this model represents a significant paradigm shift which will require emphasis on security education and awareness. Technology will be easier to share; but managing personnel accessibility to data will become more sophisticated. And finally, more responsibility is placed on Program Management and all BYEMAN briefed individuals.

Since more stringent safeguarding requirements apply to Top Secret

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information, restrained use of the highest level of classification results in lower costs. Holding the line on the use of Top Secret enhances the credibility of the BYEMAN control system. It is envisioned that the use of the recommended model would produce no more than approximately 5% of material in the TOP SECRET classification level, and "Eyes Only" would hold approximately 1% or less. A conscious effort to keep information classified at the lowest possible level is a constant.

## **7.2 TECHNOLOGY DEVELOPMENT**

The expressed intent of the D/NRO is to handle technology development activities at the minimum security level consistent with the overall security and classification policies of the NRO. Therefore, NRO technology activities will not be afforded BYEMAN protection unless there is a direct BYEMAN application and is consistent with NRO classification guides and policies.

Once it is determined that a technology development activity requires BYEMAN protection, this technology can then be protected at any appropriate level. The "eyes only" level will accommodate the most sensitive, program specific technologies, while less sensitive technology development is accommodated within BYEMAN. Each NRO Program Manager then has direct management responsibility over any level of technology development that falls under his/her cognizance, and is responsible for providing individuals working an effort the minimum amount of BYEMAN level material essential to accomplish their tasks.

## **7.3 FOREIGN NATIONAL ACCESS**

In addition to strictly applying the must-know principle, the use of releasability caveats (i.e., Releasable to UK, AUS, etc) and tailored briefings for foreign nationals requiring access to BYEMAN information is strongly recommended. The determination on what BYEMAN information is releasable to foreign nationals should be in accordance with DCI guidelines and the responsibility of the specific program office.

## **8. IMPLEMENTATION CONSIDERATIONS**

Security implementation, which will be managed under the direction of NRO Security Policy & Operational Support Staff with assistance from the NRO Security Center and the program security offices, poses the greatest challenge. Some of the actions required to implement the proposed model are:

- a. Validate the protection measures for consistency by all NRO Security and Management elements.
- b. Disestablish existing compartments and reinvigorate the must-know principle within the BYEMAN community.
- c. Retain current program names as platform identifiers through transition.

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- d. Evolve into consistently using TK identifiers (i.e., (b)(1)1 4c. (b)(3) 50 U.S.C. 403-1).
- e. Redefine in specific, easily understood terminology the criteria for determining what is Top Secret and what is Secret.
- f. Conduct a follow-up study to validate the classification of data within program offices.
- g. Generate and promulgate a NRO "model" Security Classification Guide (SCG).
- h. Program offices should generate an implementation message for transition and further disseminate new security classification guidelines.
- i. Conduct a zero-based review for determining what is "eyes-only".
- j. Accommodate the current BYEMAN (b)(1)1 4c. (b)(3) 50 U.S.C. 403-1).

## 9. SUMMARY

The Task Force concluded that NRO program information can be adequately protected using a dramatically simplified NRO security control strategy. The Task Force recommends that NRO management approve this concept and provide direction for implementation.

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