Defense—Intelligence Space Integration

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The information presented in this paper is based on research done by the author. Although it was prepared for the Commission in conjunction with its deliberations, the opinions expressed in this paper are those of the author alone and do not represent those of the Commission or any of the Commissioners.

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I. Introduction

The defense and intelligence space programs both evolved from the mid-1950s Air Force Weapon System 117L (Advanced Reconnaissance System). Soon after Sputnik, the Thor-based film return element of 117L was separated from the other programs, renamed "Corona," and accelerated under CIA management to provide an early capability to see inside the Soviet Union without risking the manned U-2 aircraft. Corona succeeded in August 1960, and shortly thereafter, the National Reconnaissance Office (NRO) was formed to manage all US satellite reconnaissance. For several decades the NRO led the nation in developing and exploiting space technology, principally in support of the national intelligence community and the Strategic Air Command for strategic targeting. The DoD space program lagged the NRO in fielding capabilities, but by the 1970s, the DoD was operating first or second generation communications, surveillance, meteorology, and navigation space systems.

As the NRO capabilities matured, especially with the onset of near real time imagery in 1976, the utility of NRO systems to military forces increased dramatically. Using mechanisms like the Tactical Applications of National Space Program Capabilities (TENCAP) program and the Defense Reconnaissance Support Program (DRSP), DoD and NRO worked together to bring the NRO system products to the DoD warfighters in time to affect the fight. Shortly after the end of the Cold War, which for 3 decades had been the *raison d'etre* for the NRO, the Gulf War demonstrated conclusively that the combination of NRO satellite reconnaissance capabilities and DoD precision guided weapons could be critical, perhaps even dominant in future warfare. The DoD appetite for NRO products grew exponentially. As DoD demands for traditional NRO products grew, the NRO focused more and more on providing those products, and the advanced research, technology, and quest for revolutionary capabilities, long the hallmark of the NRO, began to suffer.

Recognizing these trends, during the 1990s, the DCI and SecDef examined NRO management, organization, classification, and architectures, and put it on the path to change. The formerly covert NRO was openly acknowledged; it was reorganized along mission based business lines; its management and oversight changed to mirror that of the DoD; it developed close relationships with its mission partners and customers; and it began to develop entirely new system architectures driven by warfighter requirements. But the fundamental structure of the NRO, set up in 1960 as a joint DoD-Intelligence Community venture,

reporting to both the SecDef and the DCI, and funded as part of the National Foreign Intelligence Program (NFIP), has not changed. Given the Space Commission's vision of space, the fundamental question is whether the basic structure for national security space in general, and for Intelligence, Surveillance, and Reconnaissance (ISR) in particular, designed to address Cold War issues 40 years ago, is still appropriate today. If it is not, then how should the Nation organize and manage its space programs for ISR in this new century?

II. Summary Findings and Recommendations

The DoD and the Intelligence Community have different missions, and each is accountable to the President for execution of those missions. Each is provided a budget to accomplish its mission, and each has elected to use a portion of its budget on space systems to accomplish his missions. But the close relationship of the two missions in providing overall national security, the value each receives from the other's space systems, and the similarity of some of their respective space systems suggest that integration of their space capabilities, over time, may increase overall capability while saving resources. In the near term, some changes should be made to both the DoD and the IC space programs to improve them individually and to position them for potential integration at a later date.

The Nation needs to reenergize the effort to discover revolutionary new space capabilities to solve problems of both the Intelligence Community and the DoD. We need to recreate an organization much like the NRO of the 1960s, empower it to tackle the toughest national security problems, provide it with dollars and with our best and brightest people, protect it from the bureaucracy, challenge it to succeed, but allow it to occasionally fail, and keep its focus on this narrow but critical problem of developing revolutionary new national security space capabilities.

To free up this new organization to focus on critical change, the DCI and SecDef might eventually want to move the bulk of the existing NRO, including all its legacy systems, into the DoD structure for management, acquisition, and operations. Transferring these systems would enable the largest user (the DoD) to play a greater role in their development and operation, create synergy between the intelligence and defense programs, and create a critical mass of space people and programs within DoD to enable a broad range of reorganization alternatives. The DoD elements that inherit these programs should continue to respond to Intelligence

Community requirements and joint SecDef-DCI guidance, but will provide the added benefit of closer integration with weapon systems and warfighters.

Prior to any decision to move legacy NRO systems to DoD, however, the DoD should restructure its existing space activities, management mechanisms, and organization to align DoD space with NRO space to enable effective and efficient combination of these activities in the future. In the future, the merger of legacy NRO systems with DoD could occur simultaneously with a decision to create a Space Corps within the Air Force, if and when such a step is deemed appropriate, or it could occur through a series of steps in the evolution toward a Space Corps or a Space Department. The Commission believes that a series of steps will likely prove to be the most appropriate path.

III. Tasking

The FY 2000 National Defense Authorization Act established the Space Commission and tasked it, inter alia, to "assess the relationship between the intelligence and non-intelligence aspects of national security space…and the potential costs and benefits of a partial or complete merger of the programs, projects, or activities that are differentiated by those two aspects."

IV. Current Situation

Figure 1 summarizes current aspects of the Defense and Intelligence Community space programs. While they differ in many respects, including missions, authorities, funding mechanisms, and oversight, the decisionmaking and other processes of the two communities have become very similar in recent years.

Figure 1. Current Situation

	DoD	IC/NRO
Mission	Deter and Defend	Intelligence
Authority	SECDEF	CIA and SECDEF
Funding	FYDP	NFIP
Oversight	SASC, HASC, SAC, HAC	SSCI, HPSCI, SAC, HAC, SACS, HASC
Processes		
Requirements	JROC IPLs	MRB
Acquisition	5000.1	Directive 7
Programming & Budgeting	PPBS	CPBS
Tasking	Broadcast	Committee + Broadcast
Operations	Separate from Acqn	Cradle-to-Grave
Decision Making		
Body	PRG DRB DAB	IPRG EDRB NAB
Document	PBD PDM ADM	IPBD IPDM ADM

DoD and IC Mission, Authority, Funding, and Oversight are Intentionally Different, but Their Processes and Decision Making have become Very Similar.

A. Mission

Defense space programs support the fundamental DoD mission to deter conflict and, if deterrence fails, to defend the U.S. and its interests: "The mission of the Department of Defense is to provide the military forces needed to deter war and to protect the security of our country" (Defense Almanac).

NRO space programs support the intelligence mission. The Intelligence Community mission includes "collection of information needed by the President, the National Security Council, the Secretaries of State and Defense, and other Executive Branch officials for the performance of their duties and responsibilities." (EO 12333, Dec 4, 1981). The vision of the Intelligence Community is of "A unified Intelligence Community optimized to provide a decisive information advantage to the President, the military, diplomats, the law enforcement community and the Congress." The CIA mission is to "collect, evaluate, and disseminate foreign intelligence to assist the President and senior U.S. policymakers in making decisions relating to the national security." (Factbook on Intelligence) The NRO mission is to "ensure the United States has the technology and overhead assets it needs to acquire superior worldwide intelligence in war and peace. To this end, the NRO is responsible for conducting research and development and for acquiring and operating overhead systems for the collection of intelligence."

B. Authorities

With respect to use of contracting authority, the NRO uses authorities of both the DCI and the DoD. Most of the routine NRO acquisition is accomplished under authority delegated to the DNRO from the SecDef. NRO "special authorities" are derived only from DCI, and are used only in cases where necessary or appropriate due to the nature of the acquisition. Those special authorities are delegated to the NRO Chief of Contracts and include the following:

- The NRO is not required to report to DoD in accordance with the Federal Acquisition Regulations (FAR). The NRO has waivers to certain aspects of the FAR, and in place of the FAR, uses an NRO Directive 7 addendum to the FAR. For example, the NRO does not have to include consideration of the Small Business Administration in system acquisition.

- The NRO has a waiver from "free and open competition." The NRO competes its classified activities only among the contractors cleared for those activities. They continually seek to expand the set of cleared contractors available to bid on their classified activities, but those without clearances are excluded. The NRO does not advertise in the Commerce Business Daily or DoD Quarterly, and only competes "to the maximum extent practicable" vice "the maximum extent feasible."

- The NRO does not need to go outside the NRO for any acquisition approval or decision. Sometimes the NRO spends much effort in involving mission partners, users, and external staffs as they did during the Future Imagery Architecture (FIA) requirements and acquisition process, but the authority remains within the NRO for acquisition decisions.

- The NRO has the ability to award classified contracts that disguise the identification of the customer. This is new to the NRO and is used for only a very small percentage of its work.

- For leasing, the NRO does not have to go through the GSA.

- For facilities, the NRO does not have to go through a DoD construction organization such as the Army Corps of Engineers.

For system acquisition, the SecDef has the same special acquisition authorities as the DCI, including all those special authorities used by the NRO to acquire its satellite systems. For programs of high enough priority in the DoD, the SecDef can and does use those same special authorities to empower programs for streamlined acquisition. If the SecDef determined that space was of sufficient importance, the military Services could use special SecDef authorities for more effective and efficient system acquisition. Applying these authorities to programs in an existing organization can be difficult, but creation of a new organization such as a Space Corps or a Department of Space provides an opportunity to align special authorities of the DCI and SecDef to a new organization in a common fashion.

It would not be appropriate or even legal for the NRO to acquire DoD systems using DCI authorities. NRO can only use DCI authorities for acquisition of systems for which there is a legitimate DCI national intelligence interest.

C. Funding

Defense funding is provided in response to the Future-Years Defense Program (FYDP) submitted annually by the Secretary of Defense (U.S. Code, Title 10, Sec 221).

National intelligence funding is provided in response to the National Foreign Intelligence Program (NFIP) submitted annually by the DCI. For purposes of security, many components of the NFIP, including the NRP, CCP, NIMAP, GDIP, and CIAP, are contained in the FYDP, sometimes generating confusion regarding the authorities of the DCI and the SecDef regarding the NFIP. Regarding the NFIP, the law states that the DCI "shall provide guidance to elements of the intelligence community for the preparation of their annual budgets and shall approve such budgets before their incorporation in the NFIP." It further states "no funds made available under the NFIP may be reprogrammed by any element of the intelligence community without the prior approval of the DCI except in accordance with procedures issued by the Director," and that the DCI "may transfer funds appropriated for a program within the NFIP to another such program" (U.S. Code, Title 50, Sec 403-4).

SecDef responsibilities pertaining to the NFIP relate to implementation of the programs contained in the NFIP. In this regard, the law states that "the SecDef, in consultation with the DCI, shall: (1) ensure that the budgets of the elements of the intelligence community within the DoD are adequate to satisfy the overall needs of the DoD…; [and](2) ensure appropriate implementation of the policies and resource decisions of the DCI by elements of the DoD within the NFIP…." The SecDef also "shall ensure…through the NRO (except as otherwise directed by the President or the National Security Council) the continued operation of an effective unified organization for the research and development, acquisition, and operation of overhead reconnaissance systems necessary to satisfy the requirements of all elements of the intelligence community…" (U.S. Code, Title 50, Sec 403-5). Thus, while both the DCI and the SecDef have a role in the NFIP, their roles are otherwise quite different, with the DCI providing budget guidance, integrating, and submitting the NFIP for approval, and the SecDef responsible for implementation on the par of those elements of the intelligence community within the DoD.

D. Oversight

Congressional oversight of Defense and Intelligence space programs differs principally in that, whereas only the Senate and House Armed Services and Appropriations Committees play major roles for Defense, two additional committees, the Senate Select Committee on Intelligence and the House Permanent Select Committee on Intelligence, are involved in overseeing intelligence space activities.

E. Processes

Over time, the processes used by the DoD and the Intelligence Community in some areas have become very similar, with the IC generally adopting the processes of the DoD. For requirements, the IC is in the process of implementing a Mission Requirements Board (MRB) modeled after the DoD requirements process. In addition, as in the case of the FIA, major NRO programs can and do go through the DoD Joint Requirements Oversight Council. Similarly, for system acquisition, the NRO process documented in NRO Directive 7 is consistent with DoD Regulation 5000.1, and recently 5000.1 has been rewritten to be closer to the NRO Directive 7 process. For programming and budgeting, the IC Community Programming and Budgeting System (CPBS) has evolved to be almost identical to and on the same timeline with the DoD Planning, Programming, and Budgeting System (PPBS).

Other processes of the DoD and intelligence space programs remain quite different. For tasking, DoD systems are to some degree “task free.” GPS, for example, provides its signal in a broadcast mode such that any user may receive it for the price of a hand held receiver. The system need not be tasked to support any individual user. Most NRO systems are quite different in that they provide a limited capability to collect information, that the requirements levied on the systems most often exceed the collection capability, and therefore that the competing requirements must be prioritized and the system tasked to support only the most important requirements. Therefore, the systems must be tasked and the tasking is done through committees chaired normally by NSA for SIGINT and NIMA for IMINT and which include representatives from all interested parties.

In the case of system operations, again, the DoD and NRO processes are somewhat different. The DoD organizationally separates system acquisition from operations, while the NRO has to some degree maintained a "cradle-to-grave" approach. In the Air Force, for example, Air Force Material Command's Space and Missile Systems Center is responsible for space acquisition while Air Force Space Command provides the forces for space operations under CINCSPACE. In the NRO, the IMINT Directorate and SIGINT Directorate, respectively, have full responsibility for imagery and signals intelligence research, development, acquisition, and operations.

F. Decisionmaking

In making decisions regarding programs and budgets, the decision bodies and decision documents of the DoD and IC have become very similar. For programming and budgeting, whereas the DoD uses the Program Review Group (PRG) and Defense Resources Board (DRB), intelligence program decisions are made in similar bodies, called the Intelligence Program Review Group (IPRG) and the Expanded Defense Resources Board (EDRB), which are essentially the same bodies used in DoD augmented by appropriate IC membership. For system acquisition decisions, DoD uses the Defense Acquisition Board (DAB) and the NRO uses a similar NRO Acquisition Board (NAB). DoD decision documents are the Program Budget Decision (PBD), Program Decision Memorandum (PDM), and Acquisition Decision Memorandum (ADM). For NRO decisions, the documents are the Intelligence PBD, Intelligence PDM, and the identical ADM.

G. Needs and Requirements

Figure 2 describes national security needs for space ISR. It is sometimes said that DoD and the IC have very different needs for space ISR, with the DoD needing more information of lesser resolution and in near real-time, while the IC needing less information, less urgently, but of higher resolution. But upon closer inspection, that conclusion seems to be based on comparing DoD Operational Support needs to IC Policy, Planning, and S&T needs (the first vs. the fourth column on Figure 2). In fact, both the DoD and the IC have real time needs for information to

support current ops, and both have longer term needs for more detailed information to support policy, planning, and S&T needs. So the DoD and IC needs for space ISR are more similar than they are different.

Figure 2. Needs

	DoD		Intel Community	
	Ops Support to Warfighters	Policy, Planning and S&T Support	Ops Support to "DO"	Policy, Planning, and S&T Support to "DI"
What They Need	Information	Information	Information	Information
What They Call It	Operations Surveillance Communications	Tech Intel MC&G	Ops Support Communications	Intelligence Reconnaissance
What They Do w/ It	Prepare Battlefield	Analyze Enemy Capabilities & Intent	Prepare for Covert Ops Target Enemy Transmit Info	Analyze Enemy Capabilities & Intent
How Much They Need	Wartime – Lots! Peacetime – Almost as Much as War	Moderate	During Ops – Some Not During Ops – Enough to Practice	Lots
When They Need It	RT	NRT to Weeks – Months	RT	NRT to Weeks – Months

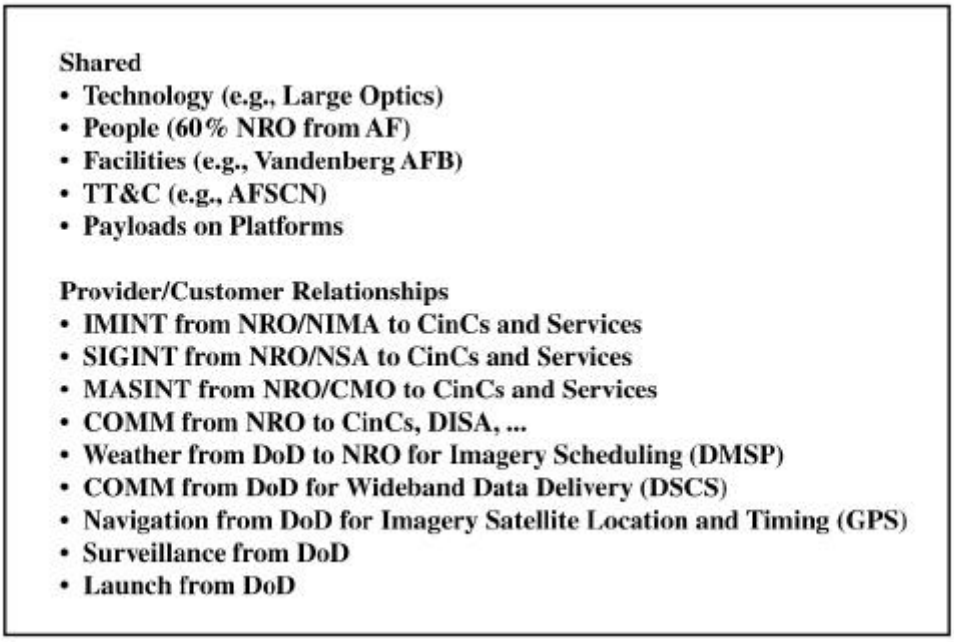
DoD and Intelligence Needs for Space are More Alike than They are Different

H. Mutual Support & Interaction

The DoD and the IC (the NRO) have cooperated and shared capabilities and services since the beginning of the space program. As depicted in Figure 3, they have always shared technology, personnel, facilities, and satellite control. For example, throughout the entire history of the NRO's Corona program (over 100 launches spanning more than a decade), the AF provided every launch on Thor/Agena out of Vandenberg AFB, all the satellite TT&C through the AFSCF, all of the payload recovery out of the Recovery Squadron at Hickam AFB, facilities to house the program office in LA, and most of the program office personnel. The DoD and the IC have also acted as provider and customer in both directions, with each supporting the other in several ways. DoD is the IC's biggest customer of finished intelligence product, and the NRO could not

do its mission without the support provided by weather satellites, DSCS, GPS, and the launch service from the DoD. The two programs have worked together successfully for four decades.

Figure 3. DoD and IC Space Activities Are Already Closely Coupled and Mutually Supporting



V. Space ISR History and Vision

This matrix shown as Figure 4 lists 11 attributes of space ISR vertically down the far left column, and across the horizontal axis breaks the space age into 3 eras (1960-1975, 1976-1990, and 1991-2000) separated by key events (first Corona launch, first real-time imagery, Cold War end/Gulf War, and today by the Space Commission). It also posits two visions for space beyond 2001—the "Instrumental Vision" wherein space is integrated into all DoD and IC functional areas, and the "Fundamental Vision" wherein space becomes a center of gravity and arena of independent operations in its own right. The matrix shows how each attribute has evolved and may continue to evolve throughout this period. There has been a substantial evolution from an era of covert, strategically focused, rudimentary capabilities focused behind the Iron Curtain to a modern era of more open, extremely capable, worldwide capabilities supporting tactical as well as strategic needs. The future may well evolve

through an “Instrumental” stage where Force Enhancement capabilities are functionally deployed, to a “Fundamental” era where space is a decisive arena of operations in its own right.

Figure 4. Space ISR History and Vision

	Corona 60-75	RT Imagery 76-90	Cold War Ends / Gulf War 91-00	Space Commission	Instrumental 01 →	Fundamental 01 →
Focus	Strategic USSR	Strategic & Tactical USSR & Theater	Strategic & Tactical Worldwide		Strategic & Tactical Worldwide	Space & Terrestrial
User Requirements	Point Targets Limited Area	Gradual Monotonic Growth	Explosive Mil Growth w/o Control Mechanism		Continued Growth	Space as an AOR
System Capability	Strong Growth	Modest Growth	Modest Growth		Modest Growth	Strong Growth
Timeliness	Weeks	NRT	NRT		RT Integrated	RT
Technology Leadership	NRO	NRO & DoD	NRO & DOD & Commercial		Commercial	DOD (Weapons) & Commercial
Users	Few High Level Strategic	More Mid to High Strategic & Tactical	More Mid to High Strategic & Tactical		Many All Levels Integrated	Plus New Space Users
DOD Use	Long Term Strategic Targeting	Augment National w/DRSP and TENCAP	Tactical Targeting & BDA		Integrated w/Terrestrial Weapons	Direct Warfighting
IC Use	Long Term Threat Assessment	Shorter Timelines	RT Intelligence Support		Integrated All Source	Support Space Warfare
Terminology	Surveillance vs. Reconnaissance	Surveillance vs. Reconnaissance	Information		Information	Space Mastery
Constraint	Technology	Technology & Budget	Budget		Budget	Technology & Budget
Classification	Covert	"Fact of" NTM	Acknowledged & Downgraded		Bi-modal	More Open for Deterrence

A. First Era (1960-1975)—Establishing Basic Mission Capabilities

During the first era of space ISR, the U.S. went from having no capability to full operational capabilities for Imagery, SIGINT, and missile warning from space in first and second generation systems in robust constellations. The programs were driven by a relatively narrow set of Cold War strategic requirements focused on the former Soviet Union, and were of such high priority that the pace of development was limited by what technology could provide rather than by funding. Classification was very high, with most programs covert, and the user community was small in number but high in stature. For many programs, particularly for imagery that required film recovery and processing, timeliness was not sufficient to support tactical use. Throughout this era, the NRO was the world leader in space ISR technology development.

B. Second Era (1976-1990)—Connecting to More Users

The advent of real-time imagery in 1976 ushered in the second era of space ISR when space evolved from supporting a narrow set of strategic users to real-time support to a wide range of strategic and tactical users. As NRO classification began to be reduced and more potential users became aware of the real time capabilities available, the military quickly saw the value in getting ISR information to the battlefield. Rather than duplicating the capabilities in the NRO constellations, the DoD leveraged the NRO capabilities for warfighter support through programs such as DRSP and the Service TENCAP programs. DRSP and TENCAP applied DoD funds to enhance the NRO capabilities and bring the products to the warfigter in time to affect the fight. System capability growth slowed, however, from the dramatic pace of the first era to a pace more in keeping with the maturity of the now operational systems. As the programs settled into normalcy, they no longer enjoyed fiscally unconstrained funding and began to be limited as much by funding as they were by technology.

C. Third Era (1991-2000)—Out of the Closet and onto the Battlefield

The end of the Cold War and the success of space in support of the Gulf War mark the transition from the second era of space ISR to the third era. During the 1990s, the NRO was declassified, reorganized, and restructured many of its programs to support an ever broader set of user requirements. DoD's missile warning surveillance satellite system, the Defense Support Program, provided near-real-time warning of Scud missile launches directly to theater during the war. NRO systems provided the targeting and damage assessment to enable precision guided weapons to strike with devastating effect. As the military saw the impact of space ISR on the Gulf War battlefield, the requirements for future capabilities continued to rise. Today, at the beginning of a new century, the Space Commission wrestles with the question of whether we are at the beginning of a fourth space era where it might move from being instrumental to future land, sea, and air operations in a direct, but supportive way, or whether in this new era space becomes fundamental in its own right, directly influencing and perhaps even dominating future conflict through independent military operations using space weapons to achieve space dominance and project power to, in, and from space.

VI. Divergent Views of NRO

Key to the discussion of the Defense/Intelligence space issue is the view of the NRO as held by the DoD in comparison to the view held by the IC.

A. DoD View

Figure 5 depicts the DoD view that NRO satellites are an integral element of U.S. military capability and are critical to warfighting. Some go so far as to describe NRO satellites as "off-board sensors" as an integral element of a DoD weapon system. From the DoD perspective, this view is correct.

Figure 5. Role of the NRO—DoD View

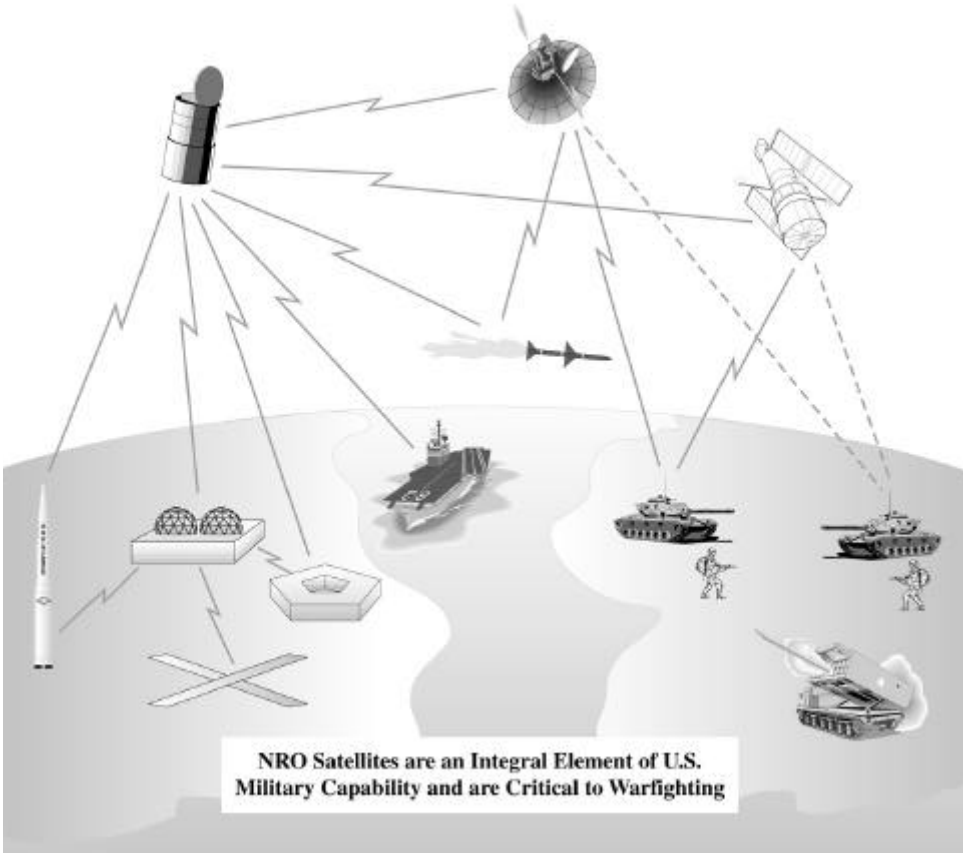
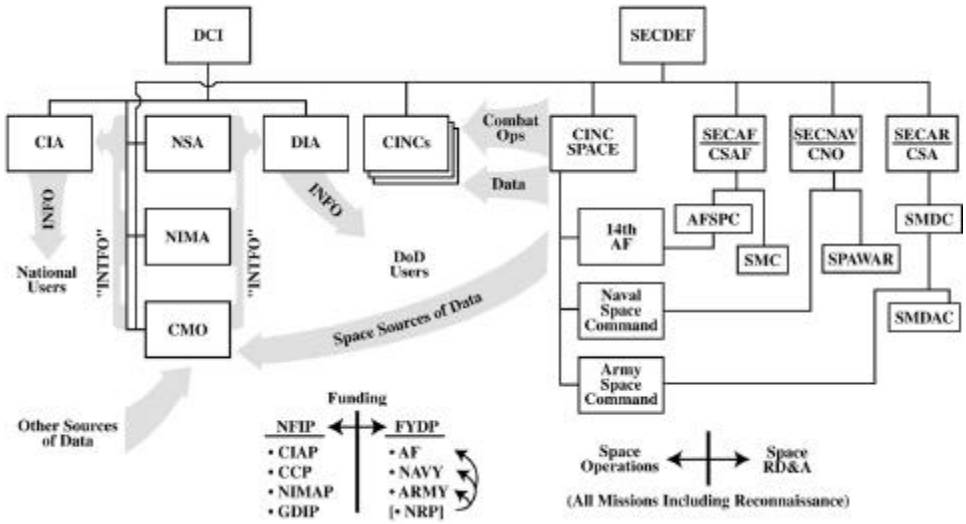


Figure 6 shows an organization to implement the DoD view wherein the NRO has been dissolved with its programs and mission distributed into the Air Force, Navy, and Army components of US Space Command. Under this construct, the NRO funding contained in the NRP would move to the service budgets, and US Space Command would be responsible to provide intelligence data collected by space systems to NSA, NIMA, and CMO as inputs to the intelligence cycle. In addition, information for warfighters would move directly from US Space Command to the regional CINCs to support military operations without first passing through the elements of the IC. Under this construct, requirements for space collection would come from many sources including:

- Regional CINC requirements through CINCSPACE
- Service Major Command requirements through Service headquarters
- National agency (e.g., CIA) and Department (e.g., State Department) requirements through intelligence managers (NSA, NIMA, CMO)

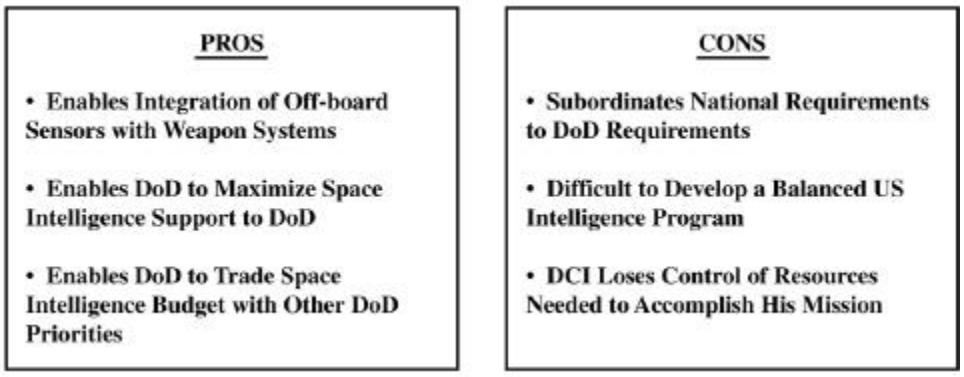
Arguments for this organizational construct include that the DoD is the biggest user of intelligence information collected from space, that the skills required for space research, development, acquisition, launch, and operations are identical across NRO and DoD and resident in DoD, and that consolidation will achieve economies of scale.

Figure 6. Organization to Implement the DoD Instrumental View



Pros and Cons of the DoD view are shown in Figure 7.

Figure 7. Pros and Cons of the DoD View



B. IC View

The IC view shown in Figure 8 describes the US Intelligence Community as an entity managed by the DCI, funded through the NFIP, overseen by the Congressional Intelligence Committees, and focused on the Intelligence mission of providing integrated, all-source intelligence information to a large group of customers, including DoD as the largest customer. It describes the IC as a multi-dimensional entity including land, sea, air, and space platforms; collection, processing, exploitation, and dissemination elements; and IMINT, SIGINT, MASINT, HUMINT, and Open Source disciplines. In this construct, the NRO is just one very important element of an integrated Intelligence Community, collecting data essential to development of all source intelligence information for all users. This view is also correct, and therein lies the dilemma. How can the NRO

simultaneously be part of both views? The options for partial or complete merger of NRO and DoD space described later attempt to simultaneously accommodate both of these legitimate views.

Figure 8. Role of the NRO—IC View

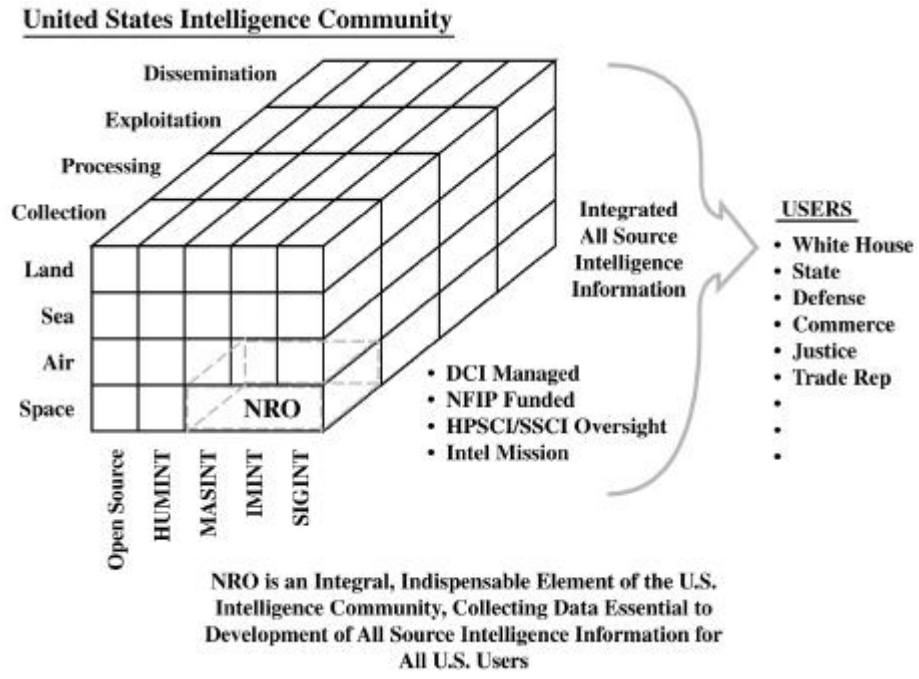
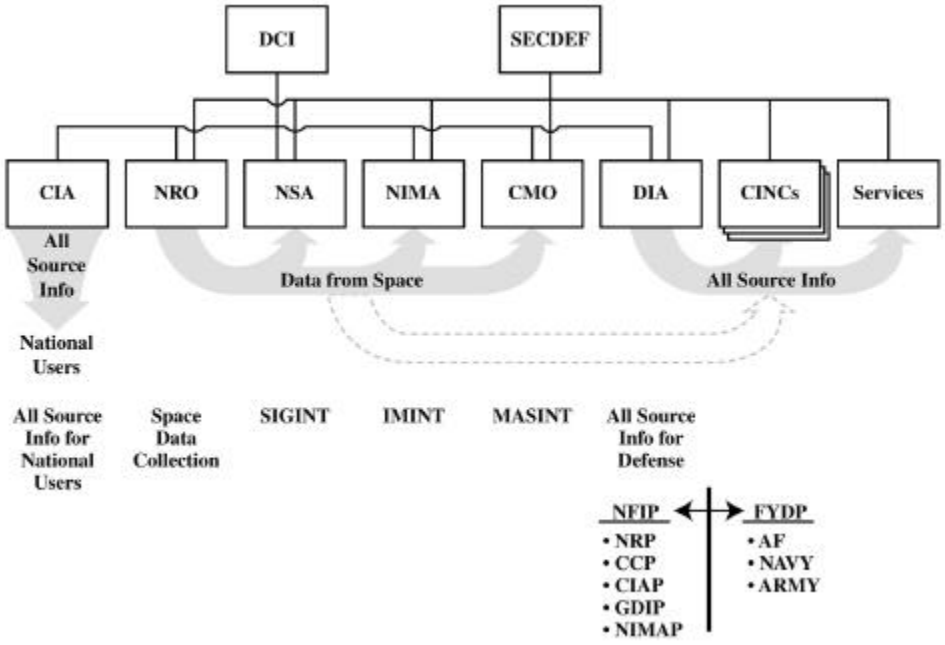


Figure 9 shows an organization to implement the IC view wherein the NRO continues as the Nation's space intelligence collection organization, funded through the NRP within the NFIP, reporting jointly to the DCI and SecDef, and supporting all users. It is essentially the status quo organization. Arguments for this construct are that the IC is responsible to support many customers including, but not limited to the DoD, that the IC should be managed as an entity, with balance among platform location (land, sea, air, space), intelligence discipline (IMINT, SIGINT, MASINT, HUMINT, and OSINT), and end-to-end (tasking, collection, processing, exploitation, and dissemination), and that the IC must be able to make trades across NFIP programs to achieve a balanced intelligence capability for the nation. With respect to budget trades, the key argument is that budget trades should be made within functional areas (e.g.,

communications, research, logistics, intelligence) and mission areas (e.g., strategic offense, sea control, air superiority), not within regimes of operations (land, sea, air, space).

Figure 9. Organization to Implement the IC View



Pros and Cons of the IC view are shown in Figure 10.

Figure 10. Pros and Cons of the IC View

PROS

- **Enables US Intelligence Program to be Balanced from Collection Through TPED, Across INTs, and Across Platforms**
- **Maximizes Satisfaction of All Customers of US Intelligence, Including DoD**
- **Continues USG's Best Engineering and Acquisition Organization (the NRO)**
- **Makes Decisions within Functional (Intelligence) Trade Space, Not Medium of Operations (Space) Trade Space**

CONS

- **DoD, Including Warfighters, Remains Dependent on Intelligence Community for Support**
- **No Single Organization Responsible for All National Security Space**
- **Continues Difficulty in Creating an Integrated National Security Space Architecture**

VII. Alternatives for a Partial or Complete Merger

The Commission staff developed several alternatives for a partial or complete merger of defense and intelligence space activities, but only the following four received serious review and discussion by the Commission.

A. "Back to Black" and Transfer Legacy Systems to DoD

Under "Back to Black," the NRO would return to its earlier years as a smaller, more covert organization focused on the higher end technology to address the DCI's most difficult intelligence problems. Legacy NRO systems (e.g., FIA), and their budgets, would be transferred to the DoD for acquisition and operations. DoD would build and operate those legacy systems to accommodate all users' needs, including those of the IC. If the IC needed products from those systems beyond what DoD could afford or had prioritized, the IC could augment the funding for those systems

through mechanisms like “National Exploitation of Tactical Space Capabilities” (NETCAP) and “Intelligence Community Reconnaissance Support Program” (ICRSP), akin to TENCAP and DRSP.

Figure 11. Back to Black

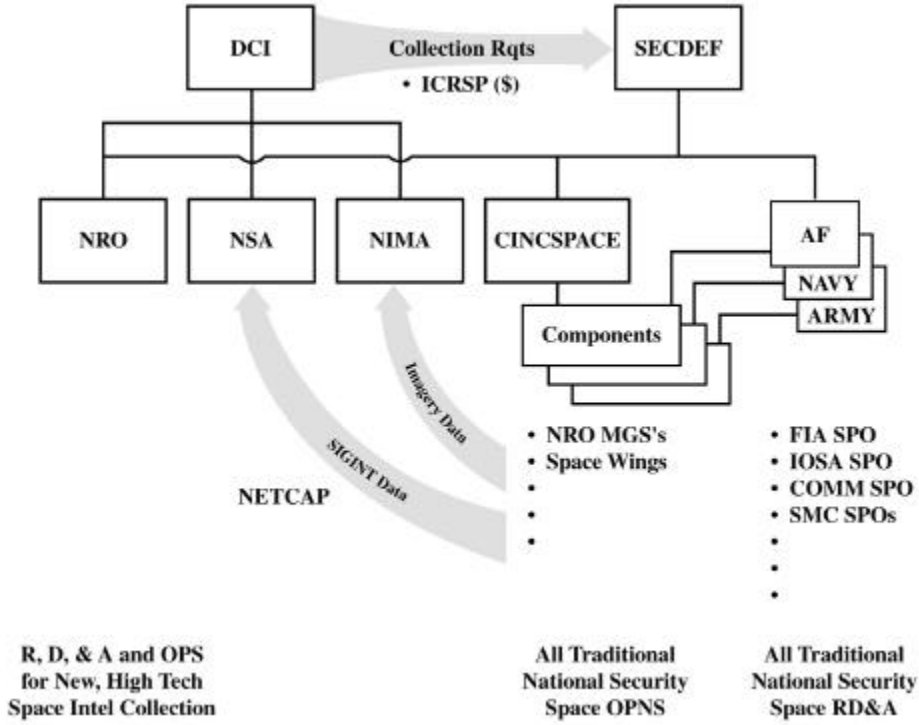


Figure 11 provides an organizational graphic of this alternative. Note that all the legacy systems are in the DoD for R,D,&A and operations. IC requirements for collection go to the DoD for satisfaction, and when DoD cannot satisfy those requirements, the IC may augment the DoD collection

programs through the ICRSP as described earlier. Within NSA and NIMA, "NETCAP" provides funds to exploit the "tactical capabilities." Pros and Cons of this alternative are shown in Figure 12.

Figure 12. Back to Black—Pros and Cons

PROS	CONS
• NRO Unburdened with Legacy Systems Enables Total Focus on Revolutionary Systems for Hard Targets • Maximizes Direct Support of Legacy NRO Systems to DoD	• More Difficult to Develop Balanced End-to-end Intelligence Program for SIGINT, IMINT, and All-source • National Needs for Legacy System Support may be Prioritized Below DoD Needs

B. Restructure Air Force, Align with NRO

This alternative realigns the Air Force space activities to be similar to the NRO approach to space management and organization and anticipates a future partial or complete merger of Defense and Intelligence space could readily be accomplished by virtue of this alignment. Under this construct, the position of the DNRO in the Air Force is raised to that of Under Secretary of the Air Force instead of Assistant Secretary. The Under Secretary would be charged with management of the Air Force space program, and by virtue of his position, would have purview over the entire Air Force. He would also be delegated responsibility from the Defense Acquisition Executive as the Service Acquisition Executive for Space Programs. Acquisition authority for space programs, currently exercised by the Assistant Secretary of the Air Force (Acquisition) as the AF SAE, would transfer to the Under Secretary, as would acquisition authority for any major space programs executed by the Army or Navy.

As part of this alternative, the National Security Space Architect would report to the Under Secretary of the AF / DNRO and continue to develop the plans and architectures for both defense and intelligence space programs.

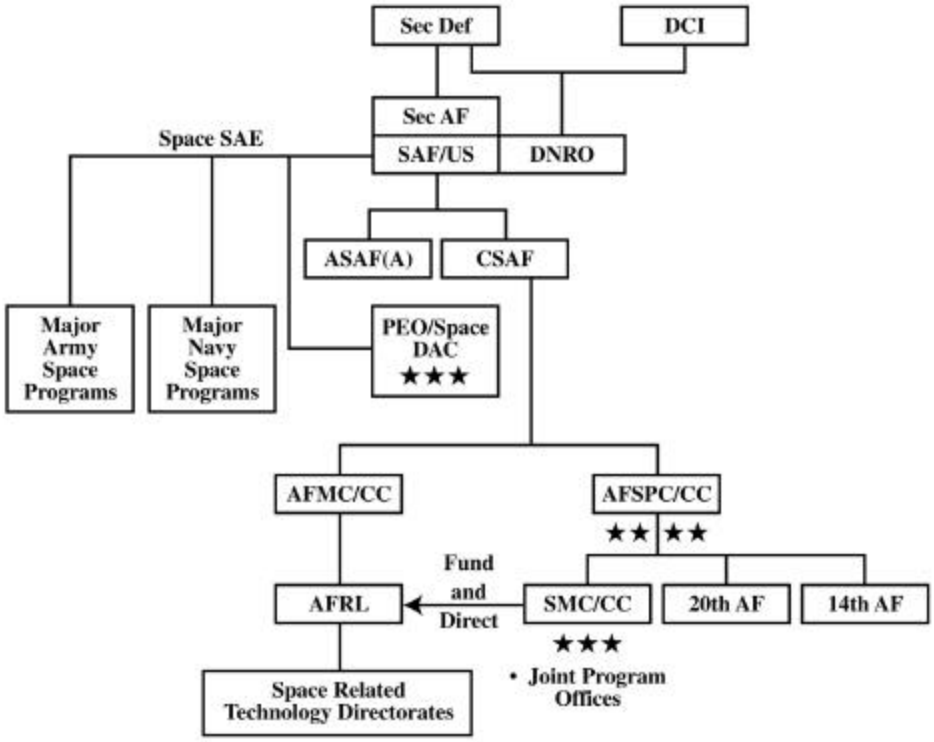
Another element of this alternative is to reorganize the space activities of the Air Force major commands to bring research, development, acquisition, and operations together under one command led by a four star

officer dedicated to space. The Space and Missile Systems Center and the space elements of the AF Research Lab would be moved from AF Material Command to AF Space Command, thus putting "cradle-to-grave" responsibility for Air Force space programs under a single field command. Also as part of this restructure, the four-star commander of AF Space Command would be a separate person from the four-star CINCSPACE. CINCSPACE, dual hated as CINCNORAD, and with the additional mission of computer network attack and computer network defense, cannot also spend adequate time on the space missions. This alternative provides a four-star in the field dedicated to the "organize, train, and equip" functions for military space programs from "cradle-to-grave."

In addition, this alternative allows the Air Force and the NRO to continue to align their processes, using the best practices of each, to enable easier and more coherent integration of the programs as they move through the planning, programming, and budgeting process.

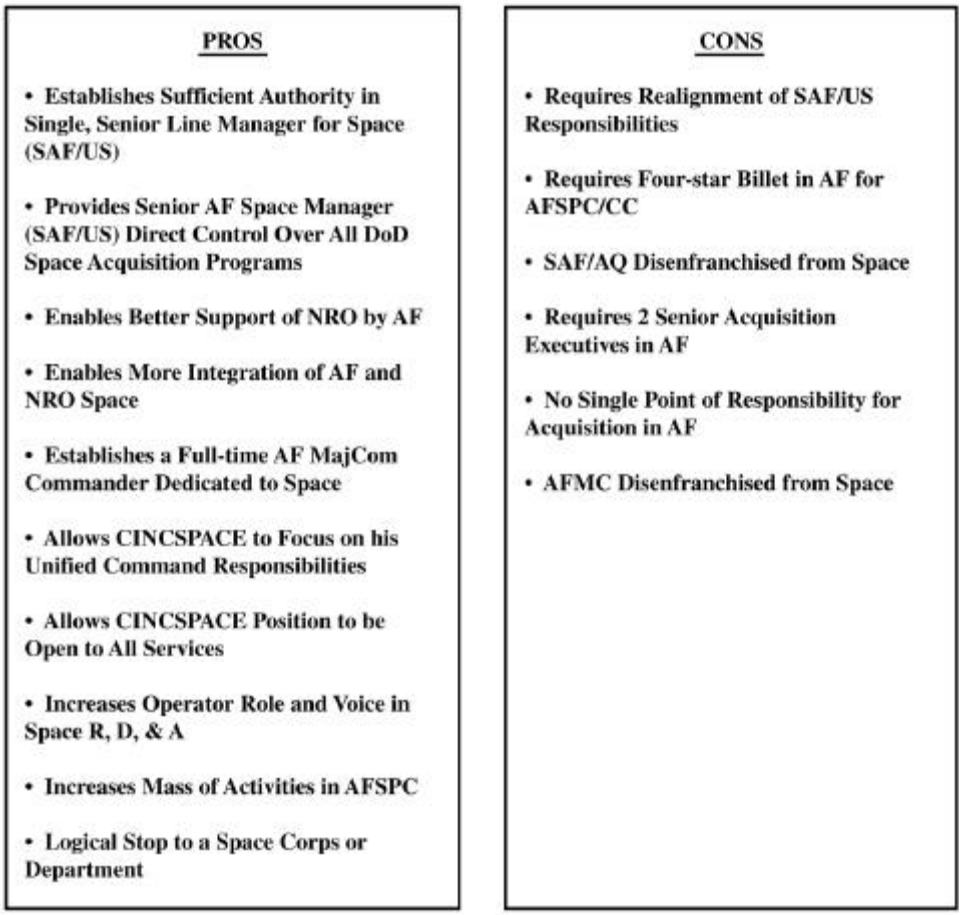
Figure 13 provides an organizational chart for this alternative. Note that the funding for the NRO through the NRP in the NFIP, as well as the organization of the NRO, is not affected by this alternative.

Figure 13. Restructure AF Space Activities to Align with NRO



Pros and Cons of this alternative are shown in Figure 14.

Figure 14. Restructure AF Space Activities to Align with NRO Pros and Cons



C. Transfer NRO Space Communications System Acquisition

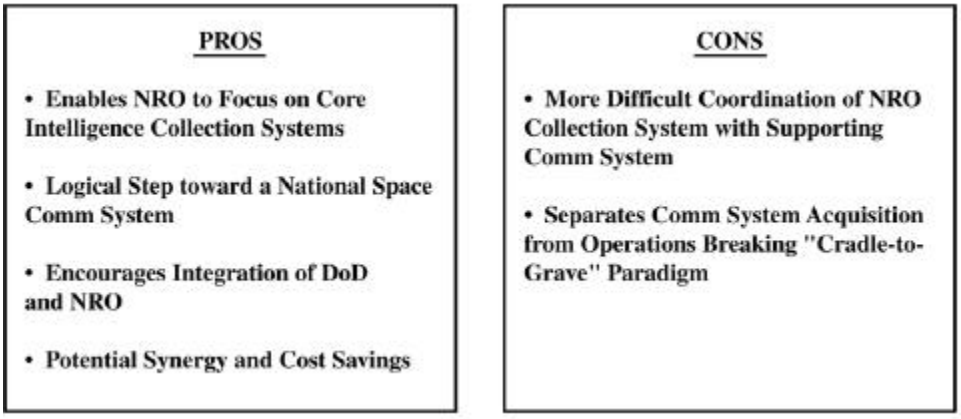
The NRO currently builds and operates three basic types of space systems—IMINT systems, SIGINT systems, and Communications (COMM) systems. Of the three, the first two are dedicated to the mainline intelligence mission of the NRO, but the Comm systems provide a support capability similar to capabilities needed and used by DoD and NASA. One alternative for the early transfer of some NRO systems to DoD is to transfer the NRO's space Comm system, both acquisition and operations. Several years ago, the NRO, DoD, and NASA tried to establish a joint space communications system for the future, called the National Space

Communications Program one year and the Future Communications Architecture the next. Near term funding needs and misalignment of various agency requirements resulted in cancellation of the program, although it seemed clear to all that in the long term such a national capability was not only desirable but perhaps even inevitable.

Transfer of acquisition of NRO space Comm programs, presumably to the Air Force SMC MILSATCOM Program Office, would be straightforward, and would encourage eventual merger of it with DoD Comm systems into a national capability. The issue of whether to also transfer operations of the NRO Comm system to DoD is more complex. The NRO “cradle-to-grave” philosophy, and the Commission recommendation to restructure the Air Force to assemble space activities cradle-to-grave within a MAJCOM, would argue that operations of the space NRO Comm system be transferred along with system acquisition. On the other hand, operations of the system are intimately linked with operations of the intelligence collection systems they support, and separating the operations would prove difficult and increase system risk. On balance, transfer of acquisition only, with operations remaining in the NRO, seems to be the best approach.

Pros and Cons of this alternative are shown in Figure 15.

Figure 15. Transfer NRO Space Communications System Acquisition

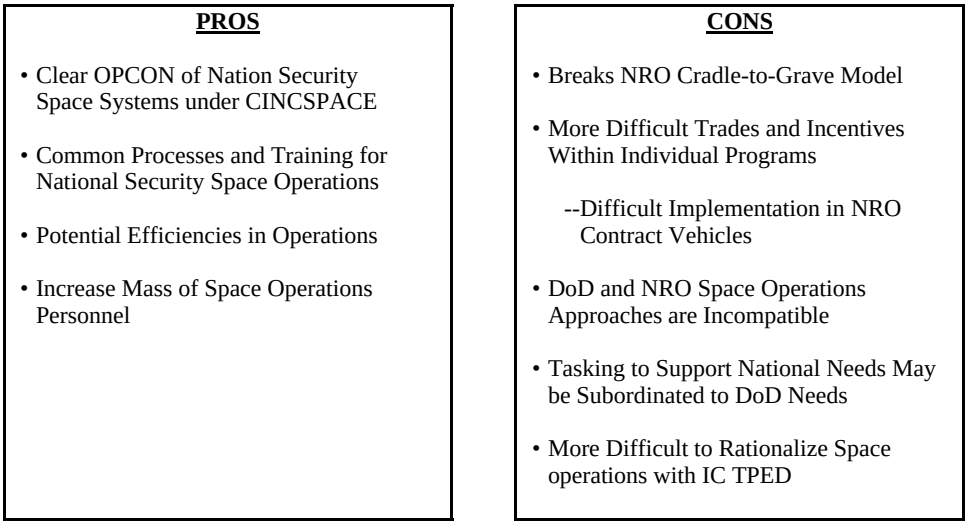


D. Transfer NRO Operations

Under this alternative, operation of legacy NRO systems would be transferred to DoD to be operated under CINCSPACE COCOM by the Air Force, Army, and/or Navy components of US Space Command. Many believe that the NRO remains the world's best large scale systems engineering and acquisition organization, and that it should continue to acquire space intelligence systems, but that the operations could be transferred. The NRO Commission Report addressed this issue and recommended against transferring operations of NRO legacy systems until after the Air Force had demonstrated that it could successfully operate systems of the complexity of NRO systems. The Space Commission felt that the Air Force MILSTAR system is already as complex as NRO systems and has been successfully operated for many years, that SBIRS will be equally complex, and that most NRO operations are actually accomplished by contractors under supervision of few government personnel on-site at the satellite ground station. On the other hand, transferring operations to DoD while retaining acquisition in the NRO would break the "cradle-to-grave" management of the programs just as the Air Force was bringing the resources to execute acquisition and operations together under a single MAJCOM.

Pros and Cons of this alternative are shown in Figure 16.

Figure 16. Transfer NRO Operations—Pros and Cons



VIII. Recommendations

The Commission saw merit in certain aspects of each alternative and crafted a set of recommendations that affect Defense/Intelligence space integration as described below. Note that some of the following recommendations are not part of any specific alternative described earlier. They are recommendations resulting from other aspects of the Commission deliberations, but because they affect the topic of Defense Intelligence space integration, they are included here for completeness.

A. Strategic Reconnaissance Office

The DCI and the SecDef should establish a Strategic Reconnaissance Office (SRO) to develop innovative, revolutionary new capabilities to address and resolve the hardest collection problems of the Intelligence Community. The NRO Commission made a similar recommendation and called the new organization the Office of Space Reconnaissance (OSR). Regardless of its name, SRO should report to the DCI for requirements, guidance, priorities, and for program execution by CIA elements of SRO, and to the SecDef for program execution by DoD elements of SRO. Its budget should be contained in the NFIP as a separate element, distinct from the NRP. It should be a small, agile organization with ample funding to pursue simultaneous new initiatives, as independent from the existing bureaucracy as possible.

B. Dual Assignment of DNRO as SAF/US

The SecDef and the DCI should elevate the position of the DNRO within DoD to that of Under Secretary of the Air Force (SAF/US), should designate SAF/US as the DoD Senior Acquisition Executive for space, and should charge SAF/US with aligning the processes of the NRO and DoD for space system acquisition and operations using the best practices of each organization.

C. Reorganize Air Force Aligned with NRO

The Secretary of the Air Force should realign Air Force resources for execution of space development, acquisition, and operations under Air Force Space Command, under the command of a four-star general separate

from CINCSPACE/CINCNORAD. Such a "cradle-to-grave" organization would align the resources supporting the Air Force space program with those of the NRO, thus enabling a subsequent merger of the two programs with less difficulty. Space research and technology would remain under the AF Research Lab within AF Materiel Command, but would respond to and support requirements from Air Force Space Command.

D. Strengthen SecDef/DCI Relationship

The SecDef and DCI should meet regularly to address and resolve national security space issues of mutual concern. When these principals do not meet regarding space issues, lower level staff fills the void and sometimes act in organizationally defensive, bureaucratic ways that can harden rather than resolve differences.

E. Establish USD/SII for Oversight of DoD and Intelligence Space

The SecDef should establish a position of Under Secretary of Defense for Space, Intelligence, and Information (USD/SII) to provide policy guidance for DoD space programs and to monitor implementation of DoD and NRO space programs. USD/SII would be the principal DoD interface with the Intelligence Community and, as such, would work with the DDCI/CM to align the processes of the DoD and the IC to enable effective and efficient program coordination and rationalization.

F. Strengthen CMS Oversight of Intelligence Space

The DCI should increase the size of the Community Management Staff (CMS), especially with respect to space and acquisition oversight and analytic capability, to enable the IC to better develop and rationalize an integrated intelligence program, and to be able to better coordinate and defend the NFIP as an element of the FYDP. As the IC moves closer to using DoD processes and decision bodies, it must also have the capability to deal with the large and powerful OSD staff.

G. Align Processes of DoD and Intelligence for Space

The Commission recommends that DoD reorganize its space activities in anticipation of a potential future evolution to a Space Corps or a Department of Space at which time NRO legacy systems might have migrated to DoD for execution. The SecDef and DCI should continue to align the processes of DoD and the IC to enable better rationalization and coordination of the NFIP and FYDP in the near term, and to enable a series of steps to merge elements of the NRO into DoD in the mid to far term.

H. Protect the Option to Move to a Corps or Service

In implementing any other recommendations of the Commission, the SecDef should protect the option to evolve to an Air Force Space Corps or a Department of Space at a future day.