Intelligence, Surveillance, and Reconnaissance (ISR) Programs: Issues for Congress

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Summary

Intelligence, surveillance, and reconnaissance (ISR) functions which are principal elements of U.S. defense capabilities include a wide variety of systems for acquiring and processing information needed by national security decisionmakers and military commanders. ISR systems range in size from hand-held devices to orbiting satellites. Some collect basic information for a wide range of analytical products; others are designed to acquire data for specific weapons systems. Some are “national” systems intended primarily to collect information of interest to Washington-area agencies; others are “tactical” systems intended to support military commanders on the battlefield. Collectively, they account for a major portion of U.S. intelligence spending that, according to media estimates, amounts to some $40 billion annually. This report provides a description of ISR budgeting and management issues and serves as background for consideration of efforts to reassess current arrangements. It will be updated if circumstances warrant.

Congress has increasingly expressed concern about the costs and management of ISR programs. With minor exceptions, ISR acquisition is coordinated by the Defense Department and the Intelligence Community. Although there are long-existing staff mechanisms for reviewing and coordinating ISR programs in the context of the annual budget submissions, many in Congress believe that existing procedures have not avoided duplication of effort, excessive costs, and gaps in coverage. Examples that some observers cite are separate efforts to acquire a new generation of reconnaissance satellites and a high altitude unmanned aerial vehicle (UAV) known as Global Hawk. Both systems acquire some of the same sorts of information and serve similar customers, but they are acquired in distinctly different ways; moreover, in both cases procurement efforts have been beset by increasing costs and schedule delays.

Reflecting congressional concerns about the efficacy of current procedures, recently enacted statutes mandate better integration of ISR capabilities and require that the Defense Department prepare a roadmap to guide the development and integration of ISR capabilities over the next fifteen years. An effective roadmap, if developed, could potentially ensure more comprehensive coverage of targets and save considerable sums of money. Some critics — including the National Commission on Terrorist Attacks upon the United States (the 9/11 Commission), however, go further, arguing that current ISR problems can only be resolved by a major reorganization of the Intelligence Community. The 9/11 Commission specifically recommends that a new position of Director of National Intelligence be established to manage the national intelligence program (but not joint military and tactical intelligence programs which would managed solely by the Defense Department).
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Intelligence, Surveillance, and Reconnaissance Programs (ISR): Issues for Congress

Introduction

The various systems that collect, process, and disseminate intelligence are encompassed in the budget category known as Intelligence, Surveillance, and Reconnaissance (ISR\(^1\)). ISR covers a multitude of programs ranging from billion-dollar satellites to hand-held cameras. The bulk of funding is for research and development (R&D) and procurement; personnel costs are comparatively low. Some systems are used only by military units; others are national systems operated by Washington-level defense agencies. Most are surrounded in secrecy, but total spending on ISR, while difficult to estimate with unclassified information, undoubtedly runs into the tens of billions of dollars. The ISR programs considered in this report are managed by the Central Intelligence Agency (CIA) and by the large intelligence agencies and components of the Department of Defense (DOD).\(^2\)

ISR acquisition has in recent years come under strong criticism. Reportedly, there are technical problems with the new generation of reconnaissance satellites, along with billion dollar cost-overruns; only a small number of the planned high-altitude UAVs are actually deployed; and there have been difficulties in ensuring that the troops who need intelligence acquire it in a timely manner. There is a widespread awareness that ISR spending, much greater than in past years, could easily absorb even larger portions of defense and intelligence budgets, making the need for tradeoffs even more important. Some observers point to the possibility that satellites and UAVs potentially undertake the same or similar missions, but that the current system gives little opportunity for cost comparisons or trade-offs to be made in the

\(^1\) ISR as used in Defense Department documents refers to the sets of collection and processing systems, and associated operations, involved in acquiring and analyzing information about foreign countries. Intelligence is a more general term; surveillance refers to systematic observation of a targeted area or group, usually over an extended time; reconnaissance refers to an effort or a mission to acquire information about a target and can mean a one-time endeavor. See U.S. Department of Defense, *Department of Defense Dictionary of Military and Associated Terms*, Joint Publication 1-02, 12 April 2001. As used in this Report, the term “intelligence systems” encompasses all ISR systems.

\(^2\) The intelligence programs of the State, Justice (including the FBI), Energy, and Treasury Departments have far fewer budgetary implications and will not be addressed herein. Many of the efforts of the Coast Guard, now part of the Department of Homeland Security (DHS), have important intelligence implications, but only some are budgeted as intelligence programs.
acquisition process. See Appendix A for a case study of the trade-offs between satellites and unmanned aerial vehicles (UAVs).

Understanding the procedures for acquiring ISR systems is, however, complicated by the fact that different ISR systems are acquired in entirely different ways, by different intelligence agencies or military services, and are designed for different users. In addition, the acquisition processes are overseen by different congressional committees. It is difficult to ensure efficient acquisition in the separate programs which are often based on innovative technologies. It is even more challenging to envision a seamless and comprehensive system of systems and to ensure the acquisition of an optimal mix of specific systems.

Congressional Concerns with ISR: Lack of Coordination

Although procedures for coordinating the budgeting of ISR programs have long been in place, over the last few years it is apparent that some Members of Congress have concluded that the procedures have not been wholly effective. There has been, it is argued, inadequate data to compare systems capabilities and costs across the spectrum of intelligence programs, an imbalance between collection and analysis programs, and an intelligence effort that does not reflect an optimal allocation of extensive resources. Expressions of congressional concern go back a number of years. In 1995, the Senate Select Committee on Intelligence (SSCI) expressed its misgivings about existing cooperation among agencies and recommended a joint review by the Director of Central Intelligence (DCI) and the Deputy Secretary of Defense to ensure that “both Intelligence Community and Defense Department equities are served in the planning, programming, and management of all intelligence activities and programs.”

Some believe that giving the DCI greater management responsibilities would improve the management of ISR programs, including those in the Department of Defense (DOD). Reflecting that view, the FY1997 Intelligence Authorization Act (P.L. 104-293) included provisions that strengthened the ability of the DCI “to manage the Intelligence Community by codifying his authority to participate in the development of the budgets for defense-wide and tactical intelligence....” The Conference Committee stated: “Giving the DCI a database of all intelligence activities and requiring all National Foreign Intelligence Program (NFIP) elements

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5 There are three types of intelligence programs; NFIP includes the national programs that support senior policymakers; the Joint Military Intelligence Program (JMIP) that provides (continued...
to submit periodic budget execution reports should enable the DCI to make better use of his existing authorities — given to him by Congress in 1992 — to approve the budgets of NFIP elements and to transfer funds and personnel with the concurrence of affected agency heads. The conferees in considering the FY1997 legislation urged the DCI to be more assertive in using these authorities.”

In May 2000, the Senate Intelligence Committee reported that, “the budget practices of the [Central Intelligence Agency (CIA)] and the Intelligence Community as a whole are simply inadequate to address current requirements. Upper level program managers lack sufficient insight into the process to make informed and timely decisions regarding the allocation of funds, and to assure Congress, and themselves, that funds are being spent as appropriated and authorized.”

The next year the committee again argued that the Intelligence Community “is handicapped by the lack of comprehensive strategic and performance plans that can be used to articulate program goals, measure program performance, improve program efficiency and aid in resource planning.” Accordingly, the Committee directed the DCI to produce a “comprehensive Intelligence Community strategic plan and performance plan, as well as complementary strategic and performance plans for the intelligence agencies within the National Foreign Intelligence Program aggregation.” The Committee asked that such plans be undertaken annually and made available to congressional committees by March 1 of each year.

In 2002 the Senate Intelligence Committee acknowledged receipt of the “first-ever plans coordinated across the Intelligence Community aimed at establishing performance measures aligned with the stated goals and priorities of the Director of Central Intelligence.” The Committee went on, however, to indicate that further work is needed and suggested that developing new systems merely to acquire a new capability was insufficient; the capability had to meet validated intelligence needs. “A key issue is the development of performance plans and measures that are not focused solely on the attainment of intelligence capabilities but also on the value received from such capabilities in pursuit of Intelligence Community missions.”

Despite this admonition, the next year the Committee called attention to the absence of a 2003 performance plan submission, even though the deadline had passed

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5 (...continued) support to officials throughout DOD; and Tactical Intelligence and Related Programs (TIARA) that are designed to support a single military service. For further background, see below, pp. 11-14.

6 Ibid., p. 39.

7 S.Rept. 106-279, p. 33.

8 S.Rept. 107-63, p. 17.

9 U.S. Congress, 107th Congress, 2d session, Senate, Select Committee on Intelligence, To Authorize Appropriations for Fiscal Year 2003 for Intelligence and Intelligence-Related Activities of the United States Government, the Community Management Account, and the Central Intelligence Agency Retirement and Disability System, S.Rept. 107-149, May 9, 2002, p. 28.
with no request for an extension. More significantly, the Committee noted that it is aware

of no capability within DoD or the Intelligence Community for objectively, independently, and comprehensively evaluating alternative sensor and platform architecture and capabilities. There are some capabilities within different agencies and departments, but none that are available, independent of the program offices, to model and assess cross-program trades without regard to the location of the sensor or platform (air, space, land, or sea) or the level of compartmentation. Consequently, although DoD and Intelligence Community officials expend substantial effort and time evaluating programs trades, they do so without the benefit of the rigorous quantitative modeling necessary to optimize collection capabilities and architectures. Given the vast sums involved in these programs, even modest increases in the efficiency of resources allocation could lead to substantial benefits. Further, the Committee notes that the national military strategy, as well as the Defense Planning Guidance, have been developed in recent years without the participation of the Director of Central Intelligence or his staff, notwithstanding the growing importance of intelligence to military operations and the need to build forces commensurate to validated threats.

Section 355 of the FY2004 Intelligence Authorization Act (P.L. 108-177) requires a report from the DCI and the Secretary of Defense assessing progress in the development of “a comprehensive and uniform analytical capability to assess the utility and advisability of various sensor and platform architectures and capabilities for the collection of intelligence ... [and] the improvement of coordination between the Department [of Defense] and the intelligence community on strategic and budgetary planning.”

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10 S.Rept. 108-44, p. 12

11 Furthermore, the Committee complained that the National Security Agency (NSA), a major intelligence agency, had been unable to provide basic information about its acquisition efforts:

It is very difficult for the Committee to understand what needs to be done to modernize NSA when NSA cannot provide an adequate baseline of ongoing development and acquisition programs, projects, and activities....

The Committee has fenced funds over the past two fiscal years to try to bring command attention to this problem. Submission to date have shown progress, but are not comprehensive in identifying known projects and programs that are being funded in the CCP.... Future funding requests will be balanced against the NSA acquisition baseline so it is in the agency’s best interest to get this done right, and soon. U.S. Congress, 108th Congress, 1st session, Senate, Select Committee on Intelligence, Authorizing Appropriations for Fiscal Year 2004 for Intelligence and Intelligence-Related Activities of the United States Government, the Community Management Account, and the Central Intelligence Agency Retirement and Disability System, S.Rept. 108-44, May 8, 2003, p. 13.

12 Ibid., p. 7.
In separate legislation, Congress has also urged that DOD take a greater role in managing ISR; in section 923 of the FY2004 Defense Authorization Act (P.L. 108-136) Congress found that:

... there is not currently a well-defined forum through which the integrators of intelligence, surveillance, and reconnaissance capabilities for each of the Armed Forces can routinely interact with each other and with senior representatives of Department of Defense intelligence agencies, as well as with other members of the intelligence community, to ensure unity of effort and to preclude unnecessary duplication of effort.\(^\text{13}\)

P.L. 108-136 further stated that the existing structure of intelligence programming may not be the best approach for supporting the development of an intelligence, surveillance, and reconnaissance structure that is integrated to meet the national security requirements of the United States in the 21st century.

Accordingly, the FY2004 Defense Authorization Act directed the Under Secretary of Defense for Intelligence to establish an “ISR Integration Council” to provide a permanent forum for assessing ISR capabilities. The council is to consist of senior intelligence officers of the services, the Special Operations Command, the Joint Staff, and the directors of DOD intelligence agencies. The DCI would be “invited” to participate. The council would be charged with developing a comprehensive roadmap “to guide the development and integration” of DOD ISR capabilities for 15 years.\(^\text{14}\)

In addition to its general concerns about ISR programs, some Members of Congress have specifically focused on two issues related to budget processes that they argued undermine their abilities to conduct oversight of ISR efforts. They argue that congressional budget justification books have been inadequate, and that there has been an over-reliance on supplemental appropriations to fund continuing ISR programs.

**Congressional Budget Justification Books (CBJBs)**

Effective congressional oversight depends on accurate, consistent information over a multi-year period; the House Permanent Select Committee on Intelligence (HPSCI), in particular, has criticized the inadequacy of intelligence budget justification materials and asked for more complete budgetary submissions in the form of congressional budget justification books. Proposals for ISR programs are

\(^{13}\) The accompanying committee report noted that the U.S. has “the most capable ISR system in the world” but “as good as this system is, however, it is often plagued by gaps, competition for assets, unavailability at the required level, and parallel systems (so-called ‘stovepipes’) that do not fully complement one another.... the Department has continued to develop some capabilities without regard to their place within an overarching ISR architecture.” U.S. Congress, 108th Congress, 1st session, Senate, Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2004*, S.Rept. 108-46, May 13, 2003, p. 355.

\(^{14}\) Section 923, P.L. 108-136.
Classified budget justification books, provided by the Administration to Congress, are the primary ways, in addition to oral testimony, by which Congress obtains information about intelligence programs. In 1997 HPSCI criticized justification books for lacking “several critical components necessary for the Committee to ensure proper alignment of funding within the funding appropriations categories. Clear identification of each project; its specific budget request numbers; the appropriation category (e.g., Other Procurement, Defense-wide; RDT&E, Navy, etc.); the budget request line number, and if a research and development project, the Program Element number [are] essential to this task. Therefore, the Committee directs the CMS [Community Management Staff] and the Defense Department to provide this specific data in all future budget justification documents.”

In 2000, HPSCI expressed its continued frustration with a perceived lack of detail provided in justification books (which are classified) and strongly criticized financial management practices at some NFIP agencies. HPSCI stated that:

... the NFIP agencies need greater insight into their financial obligations and the capabilities that they are developing. NSA’s baseline activity, for example, identified many areas of duplicative development, as well as lack of investment in key strategic areas. Yet, due to the lack of detail, the CBJB did not provide...

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15 U.S. Congress, 105th Congress, 1st session, House of Representatives, Permanent Select Committee on Intelligence, *Intelligence Authorization Act for Fiscal Year 1998*, H.Rept. 105-135, Part 1, June 18, 1997, p. 64. The subsequent Conference Report noted that the CMS was then in the process of revising the structure of the CBJBs and deferred the provision pending the outcome of CMS efforts; see U.S. Congress, 105th Congress, 1st session, Committee of Conference, *Intelligence Authorization Act for Fiscal Year 1998*, H.Rept. 105-350, October 28, 1997, p. 30. In the same year, House Committee on National Security, also concerned that all costs of all aspects of programs were not being identified, directed that future CBJBs show “all direct and associated costs, in each budget category (e.g. procurement, research and development, operations and maintenance, military construction, etc.)....” U.S. Congress, 105th Congress, 1st session, House of Representatives, Committee on National Security, *National Defense Authorization Act for Fiscal Year 1998*, H.Rept. 105-132, June 16, 1997, p. 304. A year later, HPSCI noted good progress by the IC in preparing submissions for FY1999, but asked for additional data. H.Rept. 105-508, p. 16.
this information. The Committee notes that, at least at some agencies, internal financial management practices seriously complicate this process...  

In 2003, HPSCI again called attention to limitations in the data included in CBJBs which is often less extensive than that routinely provided in DOD budget materials:

The Committee believes, for example, that acquisition program details in the CBJBs should include major milestones and deliverables for contracted projects for the entire length of a contract and contain more specificity for the budget year of the request. Many of the project milestones in the CBJBs are, however, at such a high level that the Committee is unable to determine the stage of the development activity or what will be accomplished in the coming year. The project descriptions are often so vague that the Committee is unable to determine the value of, or even what is being developed.  

**Supplemental Appropriations**

While procedures for annual budget submissions have long been followed, there has been an increasing practice in recent years, and especially since the September 11, 2001 attacks, to provide intelligence funding in supplemental appropriations acts. Of the $165.6 billion in supplemental appropriations that the Defense Department has received since September 2001, a significant, but not publicly identified, portion of these sums — at least $16 billion (not counting funds received in the FY2004 Iraq supplemental) — was directed at intelligence and intelligence-related activities.  

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17 H.Rept. 108-163, p. 25.
18 Section 504(a)(1) of the National Security Act requires that funds for intelligence activities be “specifically authorized by the Congress.” Intelligence authorization acts (including their classified annexes) provide specific authorization, although appropriations acts also usually have generalized language providing specific authorization to meet the 504(a)(1) requirement. (The inclusion of such provisions in appropriations acts serves as authorization until authorization bills are enacted or in the absence of authorization bills as often occurs when supplemental appropriations bills are enacted.) Even when authorization legislation is under consideration the two appropriations committees also review intelligence budget submissions and intelligence funds for most intelligence activities are included in annual defense appropriation bills. Supplemental appropriations that fund intelligence activities include an authorizing provision to comply with section 504 of the National Security Act, but they are not reported by the two intelligence committees.
19 During floor consideration of the FY2004 intelligence authorization bill, Representative Hastings, a member of HPSCI, stated: “it is important to note that this bill authorizes only part of the operating funds for the intelligence community. A huge portion of intelligence funds were provided in the $87 billion Iraqi counterterrorism supplemental and in the supplementals that proceeded it.”  Congress Record, November 20, 2003, p. H11674.
Arguably, there is less opportunity for consideration of proposed supplemental intelligence spending within the context of established programs. The HPSCI noted in July 2002:

The “advantage” of the supplemental process to the Intelligence Community is that pressing budgetary demands can be met in a shorter time (and with fewer bureaucratic hurdles) than the regular yearly process. However, by continuing to rely on supplemental appropriations year after year, the Intelligence Community risks fostering a budget process that is ripe for abuse and long-term funding gaps.

The House Committee also argued that the Defense Emergency Response Fund (DERF) (a funding initiative that permits DOD to shift funds from a central fund to specific appropriations accounts after enactment as required for counterterrorist operations) “has turned into just another vehicle to fund items that the Intelligence Community did not get through the regular budget and planning process.” In particular, it is argued, supplemental legislation can undercut established budgeting and congressional oversight procedures making it more difficult to weigh trade-offs and adjust overall priorities. It can, in some situations, lead to the launching of programs that are unlikely to be sustained in the regular authorization and appropriation process.

Some question the propriety of funding “core” programs in emergency supplemental legislation which are intended to provide for additional unforeseen needs resulting from combat and occupation duties. In June 2003, HPSCI reiterated its concerns, regretting that “core mission and core mission support programs have also been funded in supplemental appropriations.” It argued that, “The repeated reliance on supplemental appropriations has an erosive negative effect on planning, and impedes long-term, strategic planning. The Committee hopes that the IC has finally reached a plateau of resources and capabilities on which long-term strategic planning can now begin.”

Further, HPSCI concluded:

The Committee cannot help but note that budgeting by supplemental consequentially limits congressional oversight. The Committee strongly believes that the health of the IC is directly related to the oversight from Congress it receives. Certainly, the confidence of the American people, activities, and programs of the IC is increased significantly as a result of the transparency that exists between the IC and its congressional overseers.

Concern in not limited to the House Committee. In its report on a FY2005 Intelligence Authorization bill (S. 2386) the Senate Intelligence Committee argued,

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21 H.Rept. 108-163, p. 22.
“While the practice of funding baseline expenditures using supplemental vehicles has become more prevalent in the past 10 years, ... it is time to rein in this practice.”\textsuperscript{22}

\textbf{Reprogramming Issues}

A concern for some observers of the Intelligence Community are the current procedures for reprogramming of previously appropriated funds. Reprogrammings are intended to permit shifting funds to meet unanticipated new requirements that arise during the course of the year. The National Security Act permits the DCI to transfer funds appropriated for one program within NFIP to another program within NFIP. Such transfers are subject to a number of conditions: they must be approved by the Director of the Office of Management and Budget, the receiving activity must be of a higher priority than the one from which funds are taken, the transfer must be based on unforeseen requirements, and the head of the department from which funds are transferred must not object. In addition, appropriate congressional committees must be notified.\textsuperscript{23} Procedures for reprogramming, while seemingly esoteric, ensure that congressional directions are followed in the expenditure of funds.

There are, however, congressional concerns that reprogramming procedures have not invariably met statutory conditional requirements. In May 2000, the House Intelligence Committee complained about “significant and deleterious movements of money” from field stations to CIA Headquarters that were inconsistent with National Security Act provisions and asked the CIA Inspector General to investigate whether statutory provisions were being followed.\textsuperscript{24} Similar concerns were expressed by the Senate Intelligence Committee: “Recent actions, including taxing directorates for funds to be used in other areas, and moving funds within expenditure centers without congressional notification, have eroded this Committee’s confidence that appropriations are used as intended.”\textsuperscript{25} During floor consideration of the FY2004 intelligence authorization conference report, Senator Roberts, Chairman of the Senate Intelligence Committee, commented on “difficulties in the out years as the National Foreign Intelligence Program becomes burdened with content that is more costly than the budgeted funding. This underestimation of future costs has resulted in significant re-shuffling of NFIP funds to meet emerging shortfalls.”\textsuperscript{26}

\begin{footnotes}
\item[22] U.S. Congress, 108th Congress, 2d session, Senate, Select Committee on Intelligence, \textit{To Authorize Appropriations for Fiscal Year 2005 for Intelligence and Intelligence-Related Activities of the United States Government, the Intelligence Community Management Account, and the Central Intelligence Agency Retirement and Disability System}, S.Rept. 108-258, May 5, 2004, p. 10.
\item[23] 50 USC 414(a)(3).
\end{footnotes}
Congress has also criticized the process for reprogramming funds between NFIP programs and non-NFIP programs. In May 2002, the Senate Intelligence Committee expressed concern that “the correspondence it receives notifying it of the reprogramming of funds from one activity to another often does not set forth clearly how the ... requirements of ‘higher priority’ and ‘unforeseen’ circumstances have been satisfied.” Section 305 of the FY2003 Intelligence Authorization Act “clarifies the ‘unforeseen’ requirement by stating that such a requirement does not include the failure of the Director of Central Intelligence to anticipate an action by Congress, such as an authorization or appropriation level lower than that requested in the President’s budget.” The provision was not, however, included in the version of the bill that was enacted as P.L. 107-306. Section 311 of the Senate version of the FY2004 intelligence authorization bill would have deleted the “unforeseen requirements” criterion altogether, but the provision was not adopted in conference.

A Need for Comprehensive Reorganization?

Some believe that major restructuring of the Intelligence Community may be required if certain challenges in ISR efforts are to be addressed effectively. The 2002 Joint Inquiry conducted by the two intelligence committees to review the background of the 9/11 attacks recommended the establishment of a position of Director of National Intelligence (DNI) who would have “the full range of management, budgetary and personnel requirements needed to make the entire U.S. Intelligence Community operate as a coherent whole.” Some Members and the National Commission on Terrorist Attacks Upon the United States (the 9/11 Commission) have also recommended establishing a position of National Intelligence Director (NID) to oversee national programs, but not joint military or tactical intelligence programs which would managed solely by DOD. Proposals to strengthen the overall role of the DCI (or a DNI/NID) in managing the Intelligence Community with greater authorities to execute budgets and transfer funds and personnel among agencies are also under active consideration. Furthermore, a senior Intelligence Community official, Larry Kindsvater, the DCI’s Executive Director for Intelligence Community Affairs, has argued the need to reorganize the Intelligence Community, and proposed, among other things, to give the DCI authority to transfer funding across agencies with congressional approval.

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27 U.S. Congress, 107th Congress, 2d session, Senate, To Authorize Appropriations for Fiscal Year 2003 for Intelligence and Intelligence-Related Activities of the United States Government, the Community Management Account, and the Central Intelligence Agency Retirement and Disability System, S.Rept. 107-149, May 9, 2002, p. 9.


29 Ibid. Legislation has been introduced in the 108th Congress with the intention of strengthening the coordination of intelligence activities (in addition to S. 1520, H.R. 4104, H.R. 4584, S. 190, and S. 6); a detailed analysis of these bills lies beyond the scope of this Report.

30 Larry C. Kindsvater, “The Need to Reorganize the Intelligence Community,” Studies in Intelligence, Vol. 47, No. 1, 2003. This recommendation was echoed by former DCI Robert (continued...
Such proposals could reduce the problems inherent in coordination among separate agencies and might facilitate a more coherent approach to ISR acquisition. Yet, any effort to create a DNI or strengthen the statutory authorities of the DCI would probably be strongly opposed by DOD. The military services would undoubtedly insist on the need to manage the ISR systems that directly support their operating forces, and argue that it would be extremely unlikely that an entity separate from DOD could efficiently manage the acquisition of ISR systems of this type.

Many observers believe that there will be a continuing need for organizational arrangements that permit overlapping use of national and tactical systems — and the complex bureaucratic arrangements that such overlapping use entails. It is possible to envision technologies that would someday permit separate systems for national and tactical consumers without unacceptable costs in the same way that desktop computers made large mainframes much less preferable for certain functions, but, for the foreseeable future, such technologies are unlikely to be available, and intelligence consumers will have to share access to many ISR systems. Differing requirements of separate agencies will have to be accommodated in designing and operating ISR systems. As a result, it appears likely that there will be a continuing need for a complex structure of ISR coordination. The question for many in Congress is how to find ways to improve existing coordinate mechanisms which they believe have been unsatisfactory. Any reorganization effort will, however, have to take into account the complicated relationships that govern the acquisition of ISR systems.

### Multiple Types of ISR Programs

One argument used by those proposing a major reorganization of intelligence programming and budgeting is that the different categories of intelligence programs are obsolete in today’s complex technological and threat environment. ISR programs are currently grouped into three major categories — the National Foreign Intelligence Program (NFIP), the Joint Military Intelligence Program (JMIP), and Tactical Intelligence and Related Activities (TIARA).\(^{31}\) The three categories of intelligence activities used in programming and budgeting are based on the different consumer being served, different management arrangements, and different oversight in Congress.\(^{32}\)

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\(^{30}\) (continued...)


\(^{31}\) NFIP is defined by statute (50 USC 401a(6)); the National Security Act refers to JMIP and TIARA (50 USC 403-3(c)(1)). The U.S. Government collects vast quantities of other data — including the reports of diplomats, information gathered by non-intelligence components of the military services, open source materials, and economic statistics — that are of great importance to policy makers, military leaders, and to intelligence analysts, but such collection is not undertaken by intelligence agencies and is not included in intelligence budgets.

\(^{32}\) Intelligence spending totals remain classified (although the figures for FY1997 ($26.6

(continued...))
NFIP Programs Serve National Decisionmaking

NFIP is defined in statute as:

All programs, projects, and activities of the intelligence community, as well as any other programs of the intelligence community designated jointly by the Director of Central Intelligence and the head of a United States department or agency or by the President. Such term does not include programs, projects, or activities of the military departments to acquire intelligence solely for the planning and conduct of tactical military operations by United States Armed Forces.  

NFIP is usually described as consisting of programs to support national decisionmakers, especially the President, the National Security Council (NSC) staff, and heads of cabinet departments, especially the Secretaries of State and Defense. Major NFIP programs include:

- Central Intelligence Agency Program (CIAP)
- General Defense Intelligence Program (GDIP)
- Consolidated Cryptologic Program (CCP)
- National Geospatial-Intelligence Program [formerly the National Imagery and Mapping Agency Program (NIMAP)]
- National Reconnaissance Program (NRP)
- DOD Foreign Counterintelligence Program\(^\text{34}\) (FCIP)

NFIP encompasses more than half of overall intelligence spending and includes most efforts of the Intelligence Community (IC) — the CIA, the Defense Intelligence Agency (DIA), the National Reconnaissance Office (NRO), the National Geospatial-Intelligence Agency (NGA) [formerly the National Imagery and Mapping Agency (NIMA)], and the National Security Agency (NSA). The DCI has overall responsibility for preparing NFIP budget submissions based on input from DOD agencies that have NFIP responsibilities. NFIP budget totals are authorized in annual intelligence authorization acts; total amounts are specified in the classified schedule that accompany appropriations legislation, but are not made public.\(^\text{35}\)

\[^{32}\text{...continued}\]
\[^{33}\text{50 USC 401a(6).}\]
\[^{35}\text{Funding for two small NFIP programs, the Community Management Account (which funds community-wide coordination efforts) and the CIA Retirement and Disability System}\]

...
JMIP Programs Serve the Defense Department

The JMIP was established in 1995 to include defense-wide efforts that provide support to multiple defense consumers. There are four principal components to the JMIP:

- the Defense Cryptologic Program designed to provide cryptologic support to military commands;
- the Defense Imagery Program designed to provide imagery support to military commands;
- the Defense Mapping, Charting, and Geodesy Program;
- the Defense General Intelligence and Applications Program that includes sub-programs managed by DIA and other agencies in support of DOD commands.  

In its report on the FY2001 Intelligence Authorization act, the House Intelligence Committee described a number of JMIP programs in the year 2000, including modifications to reconnaissance aircraft, Global Hawk UAVs, and antenna systems for reconnaissance aircraft.  

TIARA Programs Serve the Military Services

TIARA programs are “a diverse array of reconnaissance and target acquisition programs that are a functional part of the basic military force structure and provide direct information support to military operations.” In the year 2000 the House Intelligence Committee described a number of TIARA programs — cryptologic and language skills training for the Army, an Army ground station to use with the JSTARS aircraft, funds for extending naval space surveillance, hyper spectral sensing systems on Air Force UAVs, and a tactical video system for Special Operations Forces. An annual list of TIARA programs is not published, although some are

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35 (...continued)
accounts is, however, made public.


indicated in appropriations reports. Unlike JMIP programs which tend to be completely intelligence systems, TIARA includes “related activities,” systems that are essentially parts of various weapons systems (and that can be reclassified out of TIARA).

Over a number of years it has become apparent that, to consumers of intelligence, distinctions among NFIP, JMIP, and TIARA programs are becoming indistinct. As the Intelligence Resource Manager’s Guide noted, “As systems grow in complexity and capability and methods become more sophisticated, increasing numbers of intelligence assets are capable of simultaneously serving both national and tactical purposes.” For example, there has been for a number of years a program, known as Tactical Exploitation of National Capabilities (TENCAP), which is designed to facilitate the use of satellite imagery and other NFIP products by military commanders. In some military engagements with important diplomatic and political implications, low-level tactical intelligence acquired through TIARA systems is also desired by senior officials to support their efforts at crisis management.

As a result, observers argue that the three categories of ISR programs cannot be meaningfully considered by themselves; they must be considered as parts of a greater whole and, accordingly, the NFIP, JMIP, and TIARA categories are outmoded. However, changing the statutes, regulations, and rules which established the three categories obviously would be difficult and would affect organizational relationships in both executive and legislative branches. One result of abolishing the system could mean a devolution of acquisition to a multitude of program managers throughout the military services — an approach that most observers would argue could have major drawbacks.

Another alternative to current procedures would be to give the DCI significantly greater responsibility for the preparation and execution of ISR programs (NFIP and TIARA) in order to avoid overlap — an approach that could dilute the influence of the Office of the Secretary of Defense (OSD) in acquiring ISR systems that are closely tied to military operational capabilities. Proponents of any effort to revise these procedures would undoubtedly be pressed to demonstrate that a new approach could overcome the limitations of existing procedures.

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ISR Programming and Budgeting Procedures Differ Among Agencies

Programming and budgeting of ISR systems are managed by the Department of Defense (DOD) and its many components, and by the Intelligence Community (through the office responsible to the DCI for inter-agency coordination, the Community Management Staff (CMS)). The Office of Management and Budget (OMB) also plays a critical role in allocating budgetary goals that can constrain intelligence spending proposals. Congressional responsibilities are spread among armed services, intelligence, appropriations, and other committees. Although it would be easy to question the number of entities involved, the reality is that the overlap results from the evolution of a multiplicity of systems and the variety of consumers. Whereas NASA can singlehandedly manage a moon probe, no intelligence agency will ordinarily by itself collect, analyze, and disseminate finished intelligence. Different procedures used for different ISR systems by different agencies can also complicate efforts to achieve compatibility and maximize effectiveness.

Role of the DCI

While the DCI is responsible for presenting the NFIP budget, he has only an advisory role for JMIP and TIARA. Responsibilities for ISR programs are set forth in law and regulations. The National Security Act of 1947, as amended, provides that the DCI shall:

(1) facilitate the development of an annual budget for intelligence and intelligence-related activities of the United States by —

(A) developing and presenting to the President an annual budget for the National Foreign Intelligence Program; and

(B) participating in the development by the Secretary of Defense of the annual budgets for the Joint Military Intelligence Program and the Tactical Intelligence and Related Activities Program....

The act also provides 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 National Foreign Intelligence Program.”

In recent years, the CIA budget — the only part of the NFIP managed solely by the DCI — is comprised mainly of personnel expenses — the salaries of case officers, assets, analysts, managers, etc. along with associated costs for equipment, buildings and grounds. In the past, the CIA was also involved in significant procurement efforts such as reconnaissance satellites, manned aircraft such as the U-
2, and UAVs. The CIAP is managed by the Executive Director of the CIA, a senior staff official at CIA; other agencies play a relatively minor role in CIA acquisition efforts.

**Role of the Secretary of Defense**

The Secretary of Defense has a major role in developing programs to address DOD’s intelligence needs and in managing most NFIP programs. The National Security Act assigns to the Secretary of Defense the responsibility to ensure, in consultation with the DCI, that:

(1) the budgets of the elements of the intelligence community within the Department of Defense are adequate to satisfy the overall intelligence needs of the Department of Defense, including the needs of the chairman of the Joint Chiefs of Staff and the commanders of the unified and specified commands and, wherever such elements are performing government-wide functions, the needs of other departments and agencies;

(2) ensure appropriate implementation of the policies and resource decisions of the Director of Central Intelligence by elements of the Department of Defense within the National Foreign Intelligence Program;

(3) ensure that the tactical intelligence activities of the Department of Defense complement and are compatible with intelligence activities under the National Foreign Intelligence Program....

Executive Order (EO) 12333, *United States Intelligence Activities*, requires the DCI, together with the Secretary of Defense, “to ensure that there is no unnecessary overlap between national foreign intelligence programs and Department of Defense intelligence programs....” There are, in addition, a number of inter-agency agreements within the executive branch that govern the coordination of intelligence programs and budget processes.

Most NFIP programs are managed by the Defense Department. National programs managed by DOD are gathered into several intelligence program categories — the General Defense Intelligence Program (GDIP), the Consolidated Cryptologic Program (CCP), the DOD Foreign Counterintelligence Program (FCIP), the National

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44 In recent years, such procurement has been the responsibility of DOD agencies, but in the first months of the George W. Bush Administration there was considerable discussion of Predator UAV acquisition that is carefully documented in the 9/11 Commission Report. See U.S., National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report*, July 2004, pp. 210-214.

45 50 USC 403-5.

46 Section 1.5(q). EO 12333 was signed on December 4, 1981 by President Reagan and remains in effect.

Geospatial-Intelligence Program [formerly, the National Imagery and Mapping Agency Program (NIMAP), and the National Reconnaissance Program (NRP).]

In some cases, a single agency within DOD manages one program; in other cases responsibility is shared. The CCP is managed by NSA. The GDIP largely covers the work of DIA; the CCP is implemented by NSA; geospatial intelligence is the responsibility of the NGA, the NRP is the responsibility of the NRO, and specialized programs are found in various agencies and offices. Counterintelligence (FCIP) is a responsibility of all agencies. Satellites and sigint — responsibilities of the NRO, NGA, and NSA — are the largest ISR programs and constitute a very sizable portion of the estimated $40 billion in annual intelligence spending.

Changes in DOD’s Management of ISR. Overall coordination of these programs within DOD was the responsibility of the Assistant Secretary of Defense for Communications, Command, Control and Intelligence (C3I); but in May 2003 these functions were transferred to the Under Secretary of Defense for Intelligence, a newly created post headed by Stephen Cambone, a longtime associate of Defense Secretary Rumsfeld. The USD(I) is granted authority to “lead departmental activities in programmatic processes related to intelligence and intelligence-related programs, including, but not limited to, program change proposals, program evaluations, assessments, and recommendations.”

Cambone has noted that making decisions on ISR programs early in the process could have major implications for years ahead: “There are a lot of efforts, I think perhaps more than some people appreciate, that are either early in their development or just beginning or are envisioned over the next 18 months or so where a choice between spending the dollar in one direction or another could have a big payoff downstream.” The ultimate role of Cambone and his successors may not be fully determined as yet, but the establishment of his office appears to reflect a more centralized and coordinated approach to ISR acquisition.

How ISR Funding is Included in DOD’s Budget. Managing programs involves planning for future acquisition, preparation of budget documents, and monitoring expenditures. Intelligence funds are programmed, budgeted, and expended in accordance with Defense Department procedures. They are contained

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48 Non-DOD NFIP programs include the Central Intelligence Agency Program (CIAP); the Department of State, Bureau of Intelligence and Research Program; the Department of Justice, FBI Counterintelligence Program; Department of Treasury, Office of Intelligence Support Program; Department of Energy, Foreign Intelligence Program; CIA Retirement and Disability System (CIARDS); and the Community Management Account (CMA). It is to be noted that funding for only the last two programs, CIARDS and CMA, is unclassified and identified in annual intelligence authorization legislation.


51 Except for the comparatively small intelligence accounts of the State, Justice, and (continued...
with the Budget’s 050 National Defense Function (within Function 051, DOD Budget, or Function 054 Defense-related Activities categories). Funds for CIA are included (“hidden”) in the DOD budget but, once appropriated, are transferred by OMB directly to the DCI for execution. Of the eleven major programs in DOD’s Future Years Defense Program (FYDP), most ISR funding is in Program 3, Command, Control, Communications, Intelligence, and Space. Funding for other programs, such as aircraft, may include intelligence-related research and development, training, and intelligence-related functions may be in other categories. These major categories are, in turn, divided into program elements (PEs) that can be aggregated for different purposes, including the identification of intelligence efforts.

Slightly more than half of annual authorized intelligence spending is devoted to the agencies that are part of the NFIP; the remainder goes to programs that are part of JMIP and TIARA. JMIP programs extend beyond one service and are included in defense authorization and appropriations bills. Some JMIP programs are the responsibility of a single defense agency while others are managed by one service as an “executive agent” for the rest of DOD.

Funding for specific intelligence programs is included in the budgets of the services and defense agencies. This funding is largely hidden in appropriations legislation although some RDT&E programs with special code names are known to fund intelligence efforts. Other funds are included in larger “pots” of money, such as the appropriation account, “O&M Defensewide.”

TIARA programs are usually managed by a single service for its own forces. One analyst describes TIARA as:

nothing more than a reporting concept. It is a designation applied to aggregations of programs, projects and activities in military Service budgets that provide tactical-level intelligence and related support to military operations. These aggregations comprise two types of assets, i.e., organic military intelligence assets and funding for Service-specific tactical intelligence programs.52

As a reporting concept, the TIARA category consists of a variety of programs that may vary from year to year. In some cases, it may be difficult to distinguish among TIARA programs and other surveillance and targeting efforts that may not be categorized as TIARA. To complicate matters further, surveillance programs may be characterized as TIARA one year but not necessarily the next.53

TIARA programs are perhaps the most challenging to review because they are forwarded as part of budget requests from the three military departments. They have to be disaggregated and considered along with TIARA programs of the other

51 (...continued)
Treasury Departments.

52 Intelligence Resource Manager’s Guide, p. 58 (emphases in original).

53 A recent complication is the growing consideration of using UAVs to deliver missiles; a system designed for reconnaissance becoming a weapons delivery systems.
services, a process that is not necessarily easy and one that the parent service may believe to be an integral part of a favored weapons system. Under such circumstances, assessing trade-offs among intelligence programs can become difficult. Similarly, when a weapon system with a TIARA component is delayed or cancelled, there can be significant implications for intelligence efforts that were designed to be integrated with the delayed or cancelled effort.

**Internal DOD Coordinating Boards.** A number of steps have been taken in the past to ensure an integrated approach to intelligence programs, whether NFIP, JMIP, or TIARA. An unusual DOD entity, the Expanded Defense Resources Board, consisting not only of senior DOD military and civilian officials but also the DCI, was established in the mid-1990s to provide a broader executive branch review. Another interagency review entity is the Intelligence Program Review Group which reviews issues, analyzes priorities, and studies funding alternatives at the staff level prior to consideration by the Expanded Defense Resources Board.

**Coordination Between DOD and the IC**

Different procedures used by the Defense Department and the Intelligence Community in dealing with the diffuse efforts that are collectively part of the collection, analysis, and dissemination of intelligence have long been a source of concern to resource managers. As noted in the *Intelligence Resource Manager’s Guide*, by 1993 there was a perceived need to (a) depict intelligence capabilities and associated resources, (b) ensure adequate levels of detail for program review and analysis, (c) ensure that compatible processes were in place to support decisionmaking. “The time had come to tear down barriers that had made it difficult to identify shortfalls and unwanted NFIP/TIARA duplication.”

Accordingly, at congressional urging, the then-DCI, R. James Woolsey, undertook a number of measures during his tenure (1993-1995) to ensure a comprehensive review process by adjusting schedules to ensure that DOD and IC milestones coincided and that there were joint TIARA/NFIP reviews and that a “common budget framework” was established to make characterization of NFIP and TIARA resources consistent. The goal was “to allow resource managers to peer across seams into all program, projects, and activities containing dollars and/or manpower assets designed to meet the same or similar types of missions.” One goal was to identify changes in one program that might have an unintended consequence, e.g. eliminating a TIARA program to collect imagery by an airborne sensor might lead to a requirement for additional, and more expensive, satellite coverage of the area previously covered by reconnaissance aircraft. Implementation of this effort began with the FY1995 budget and continues to be used. Related changes involved DOD, including the Expanded Defense Resources Board and the Intelligence Program Review Group. An interagency Mission Requirements Board was established by the Community Management Staff to ensure that the national and tactical needs of all consumers were addressed.

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55 Ibid.
The process is currently coordinated by DOD and CMS officials ranging from the Secretary of Defense and DCI down to lower-level budget specialists. The DCI and the Secretary of Defense (represented by the Under Secretary of Defense for Intelligence) are responsible for jointly deciding major issues (and negotiating any percentage reductions that might be required to meet cuts ordered by the President or OMB), while their respective staffs interact in defining issues and preparing submissions to congressional committees. In practice, some observers believe that DOD has greater influence in the process given its size and the need to ensure that the military services have the intelligence they need to meet their operational responsibilities.56

Congressional Oversight of ISR Programs

Procedures for congressional oversight of intelligence activities also affect the acquisition of ISR resources. On Capitol Hill, the NFIP is overseen by the two congressional intelligence committees. HPSCI’s jurisdiction is specified in programmatic terms. It has oversight over NFIP along with “intelligence and intelligence-related activities of all other departments and agencies of the Government, including the tactical intelligence and intelligence-related activities of the Department of Defense.”57 Senate rules, on the other hand, focus on agencies; SSCI has jurisdiction over the CIA, DIA, NSA, other DOD agencies and subdivisions, and the intelligence activities of the State Department and the FBI. A crucial difference between the two chambers is the exclusion from SSCI’s jurisdiction of “tactical military intelligence serving no national policymaking function.”58 HPSCI oversees JMIP and TIARA programs, coordinating with the House Armed Services Committee. In practice, SSCI also has an opportunity to provide comments on JMIP and TIARA programs to the Armed Services committee, which has primary jurisdiction. Both intelligence committees have sole jurisdiction over budgets for the CIA, the CIA retirement system, and the Community Management Staff. After committee review, all NFIP programs are included in annual intelligence authorization legislation; NFIP programs are included as well as national defense authorization bills.

JMIP and TIARA programs are authorized by HPSCI and the House Armed Services Committee. As a result of differing jurisdictions of the two intelligence committees, the Senate Armed Services Committees authorizes JMIP and TIARA expenditures. SSCI does not have authorizing authority over JMIP and TIARA, but it reviews and analyzes the JMIP and TIARA budget request, and recommends actions to the Armed Services Committee.

Although the relationship between intelligence committees and armed services committees is generally cooperative, in some instances their approaches have differed. The National Defense Authorization Act of FY1997 (P.L. 104-724)


57 Rule X, section 11(b)(B), of the House of Representatives.

58 94th Congress, S.Res. 400, Section 14(a).
established the National Imagery and Mapping Agency (NIMA) despite the misgivings of Members of HPSCI. The position of Under Secretary of Defense for Intelligence was established by the FY2003 National Defense Authorization Act (P.L. 107-314, section 901), not by an intelligence authorization act. Similarly, it was the FY2004 National Defense Authorization Act (P.L. 108-136, section 921) that changed the name of NIMA to the National Geospatial-Intelligence Agency, not intelligence authorization legislation.

**Conclusion**

Despite the existence of the coordinative mechanisms described above, Congress has formally expressed its concerns that ISR is currently ill-coordinated. In part, coordination difficulties derive from the challenges faced by large governmental organizations in managing fast-moving technological developments. In addition, U.S. post-cold war defense planning is evolving into new, and uncertain, approaches to a wide variety of possible conflict situations. This evolution may make it even more difficult to reach consensus on ISR requirements in future years. Some observers continue to believe that existing institutional arrangements in both executive and legislative branches hinder efforts to achieve a more coherent approach.

Some observers believe that the failure of existing arrangements to satisfy congressional concerns about coordination results in significant measure from the lower relative influence of the DCI and the Community Management Staff compared with that of the Secretary of Defense and DOD. The DCI is arguably at a disadvantage in any dispute with DOD because of the latter’s size, influence, and prestige. Similarly, questions exist regarding the relative influence of intelligence and Armed Services committees. Although such concerns may reflect current bureaucratic realities, they are not inherently determinative. Congress could choose to provide the DCI with additional powers to formulate and execute the intelligence budget. Contrarily, Congress could restrict the DCI’s role and give greater authority to the Secretary of Defense and his subordinate, the Under Secretary of Defense for Intelligence. There will remain an unquestionable need to consider overall requirements of the Intelligence Community which extend throughout the Defense Department as well as other government departments dealing with national security matters. Some observers go so far as to argue that longstanding distinctions among national, joint military, and tactical systems have outlived their usefulness and that a more comprehensive approach should be attempted. Since these distinctions are reflected in statutes, any major changes would require congressional action.

Even in the absence of major statutory changes, some observers believe better coordinative mechanisms could be developed. Admittedly, it would be almost impossible to design analytical processes that would identify definitive options for ISR systems readily acceptable to all interested parties. The diverse nature of the

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systems, the multiple customers for data, the number of intelligence agencies, and the
dynamics of ever-changing ISR technologies make a multi-year “roadmap” extremely
difficult. Yet, a more disciplined assessment of the potential advantages and
disadvantages of different ISR options could be required for review in the executive
branch and in congressional committees.

Given the potential for the need for future budgetary restraints on ISR programs,
with or without a new procedural framework, the acquisition of expensive new
systems will undoubtedly remain an especially complex challenge to government
decisionmakers.
Appendix A: A Case Study in ISR Acquisition: The Future Imagery Architecture (FIA) and Global Hawk UAVs

Efforts to procure a new generation of reconnaissance satellites and high altitude unmanned aerial vehicles (UAVs) serve as a case study that illustrates the dilemmas involved in the acquisitions of intelligence platforms and systems. Both of these expensive and technologically sophisticated platforms can support national policymakers as well as military commanders. Each has strengths and limitations. While no serious observer would argue that U.S. ISR requirements could be met by only one approach, many believe that there have been insufficient efforts to achieve an appropriate mix that provides optimal collection capabilities while avoiding unnecessary duplication or wasted resources.

Satellite imagery has long been one of the most valuable tools of the intelligence profession. The need for to obtain accurate estimates of Soviet military forces in the mid-1950s led the U.S., in order to avoid highly dangerous overflights by conventional aircraft, to develop special planes that could fly at very high altitudes and ultimately to build reconnaissance satellites that could identify small objects from space. Satellite imagery became the cornerstone of arms control efforts in the Cold War and, coupled with the availability of precision guided munitions, became the key to those post-Cold War defense tactics that rely on highly selective targeting to destroy selected targets with minimal collateral damage.

Satellite programs are among the most expensive intelligence efforts, with individual satellites costing a billion dollars each. The need to replace aging satellite programs led the Intelligence Community in the mid-1990s to initiate the Future Imagery Architecture (FIA) program that is intended to provide a greater number of smaller satellites that can provide coverage of more regions for longer periods. FIA has, however, received considerable criticism. In 1998, the House Intelligence Committee has concluded:

For several years, the committee has been concerned with the increasing costs of several major National Reconnaissance Office (NRO) programs and the NRP’s [National Reconnaissance Program through which the NRO is funded] growing share of the NFIP budget. Not seeing any relief from the tight fiscal environment, the committee has sought to find technological innovations and managerial reforms in the NRP that could reduce costs. This goal lay behind the committee’s push to shift to larger numbers of smaller satellites, which the committee thought also would provide better performance against hard targets.

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60 In the 1980s, manned aircraft, especially the SR-71 Blackbird, which flew at very high altitudes, had an important role in overhead reconnaissance, but limited inventories of skilled pilots with highly specialized training and the potential for human casualties were among the factors that led to demise of the program. U-2s, which fly at somewhat lower altitudes, remain in service. Manned aircraft continue to constitute an important component of U.S. ISR capabilities; see Nick Cook, “ISR — Manned or Unmanned? Going Solo?” Jane’s Defence Weekly, November 19, 2003.
reduce satellite vulnerability, and help to counter foreign denial and deception practices.

. . . .

The committee, in summary, is not satisfied that all appropriate measures have been taken to reduce or control costs in the NRP or to adequately measure the cost-effectiveness of all overhead collection activities. The committee believes that the DCI needs to exercise much more knowledgeable and diligent oversight of NRO programs, with an eye to freeing up funds for investment elsewhere, wherever possible. This oversight must extend from requirements tradeoffs, to cost estimating, to acquisition oversight. The DCI also needs to acquire the expertise necessary to make tradeoffs across the major NFIP programs. The DCI can no longer afford to rely on the major program managers to police their organizations and budgets. The committee has recommended additional funds for the DCI to accelerate the development of these capabilities.61

One media account in December 2002 reported that “The National Reconnaissance Office’s next-generation spy satellites, known as Future Imagery Architecture, are more than a year delayed and almost $3 billion over cost, spurring an internal Pentagon debate about whether to proceed with the program at all, say people familiar with the discussions.”62 Further criticism was voiced in May 2003 by a task force established by the Defense Science Board which submitted a report finding that “the FIA program under contract at the time of our review to be significantly underfunded and technically flawed. The task force believes that the FIA program — thus structured — is not executable.”63

The process of satellite procurement and the role of the DCI vis-a-vis DOD has come under some criticism. One former CIA official who worked with the NRO has described “an incredibly inefficient requirements process,” and suggested that the DCI’s role has been reduced to the detriment of the overall satellite reconnaissance effort:

The process for deriving the requirements for the new imagery architecture (FIA) took two years and makes the point about the DCI’s diminished power clear. DoD and the Joint Requirements Oversight Council (JROC) played key roles in the FIA requirements process; now DoD essentially controls all major NRO requirements. The DCI and the CIA have let DoD significantly erode what

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63 Department of Defense, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, Report of the Defense Science Board/Air Force Scientific Advisory Board Joint Task Force on Acquisition of National Security Space Programs, May 2003, p. 31. The Task Force added that theses problems could be mitigated by various changes in approach, including additional funding.
should be the DCI’s major responsibility: the arbitration, consolidation, and establishment of national intelligence requirements.\textsuperscript{64}

FIA, whose satellites are expected to be launched beginning around 2008, absorbs a major portion of the intelligence budget and reportedly continues to be plagued with serious delays and management problems.\textsuperscript{65} According to one media account, the program is more than a year behind schedule and is forcing a shift of some $4 billion from other ISR programs.\textsuperscript{66} Some observers have, accordingly, suggested that many of the capabilities of reconnaissance satellites could be realized by relying on less expensive, high-altitude unmanned aerial vehicles such as Global Hawk, which has recently become available for operational missions and has been used during Operation Iraq Freedom. Proponents of Global Hawks, which have been estimated to cost some $57 million per unit, maintain that these vehicles could provide a considerable portion of the imagery that could otherwise be obtainable by satellites that cost many times that figure.\textsuperscript{67}

There are advantages and disadvantages to both satellites and UAVs (as well as manned aircraft which can also be used advantageously in some circumstances). Satellites have been considered invulnerable to attacks from all but the most sophisticated adversary and can be launched from U.S. territory.\textsuperscript{68} They are in orbit for years and can be shifted from target to target as needs change. On the other hand, they are expensive and there are inevitably limited numbers in the U.S. inventory. Global Hawks, on the other hand, can be launched when needed, and can be targeted by local commanders. They do not, however, have the capability to remain overhead for lengthy periods (sometimes termed a “long-dwell capability”), and they may be vulnerable to attack. While inexpensive in comparison with satellites, they are far too costly to be considered expendable, as is the case with some tactical UAVs.


\textsuperscript{65} One media account is Douglas Pasternak, “Lack of Intelligence,” \textit{U.S. News & World Report}, August 11, 2003. Consideration has been given to much greater use of civilian reconnaissance systems; in 1999, the Senate Intelligence Committee urged NIMA to identify imagery requirements that could be met by commercial imagery in order that funds could be target for that purpose. U.S. Congress, 106th Congress, 1st session, Senate, Select Committee on Intelligence, \textit{Authorizing Appropriations for Fiscal Year 2000 for the Intelligence Activities of the United States Government and the Central Intelligence Agency Retirement and Disability System}, S.Rept. 106-48, May 11, 1999, p. 5.


\textsuperscript{68} The relative invulnerability of satellites from hostile attack is no longer considered a given, however; see Jeremy Singer, “Importance of Protecting Satellites, Ground Systems Growing,” \textit{Space News}, September 15, 2003, p. 26.
UAV acquisition has been as heavily criticized as FIA. HPSCI, in particular, has pointed out problems with Global Hawk procurement:

The Committee is very concerned about the management and cost growth of the Global Hawk endurance UAV program.... [Because of Air Force-initiated upgrades] a $10 million per copy Global Hawk platform has become at least a $30-40 million aircraft, and the cost will increase substantially further as additional and improved sensors, and corresponding power/payload upgrades, are added. In fact, the Air Force projects that the average total unit cost (including all program costs) will exceed $75 million per copy.

... there is now an effort to flood the Global Hawk program with money, there are ad hoc plans for rapid, major upgrades before requirements have been established, and no sign of serious examination of where and how Global Hawk fits into an overall collection architecture.... DoD has taken no serious steps to be able to relay and process the huge amounts of data from Global Hawk, or to process, exploit, and disseminate all the data that a fleet of 51 Global Hawks with highly capable sensors will generate.69

Satellites are budgeted under NFIP and operated by the NRO; Global Hawk UAVs, on the other hand, have been budgeted under JMIP and operated by Air Force components of regional commands. These separate paths have made the possibility of potential trade-offs between space and UAV collection vastly more difficult. Observers sense that current procedures to integrate intelligence acquisition efforts have not led to a comprehensive assessment of major issues relating to satellite and UAV programs. If UAVs can do at least part of the work of satellites then, arguably, considerable budgetary savings might be realized. On the other hand, a failure to take advantage of U.S. satellite technological superiority could limit intelligence-gathering capabilities for decades to come and prompt the decline of an important U.S. industry.

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