(U) IMAGERY COLLECTION AND PROCESSING

National Reconnaissance Program *(Dollars in Thousands)*
Imagery Collection and Processing Overview
Funds by Consolidated Expenditure Center and Base/Ongoing/New
FY 1996-2003

	FY 96	FY 97	FY 98	FY 97-98 Change	FY 99	FY 98-03
Base	[redacted]					

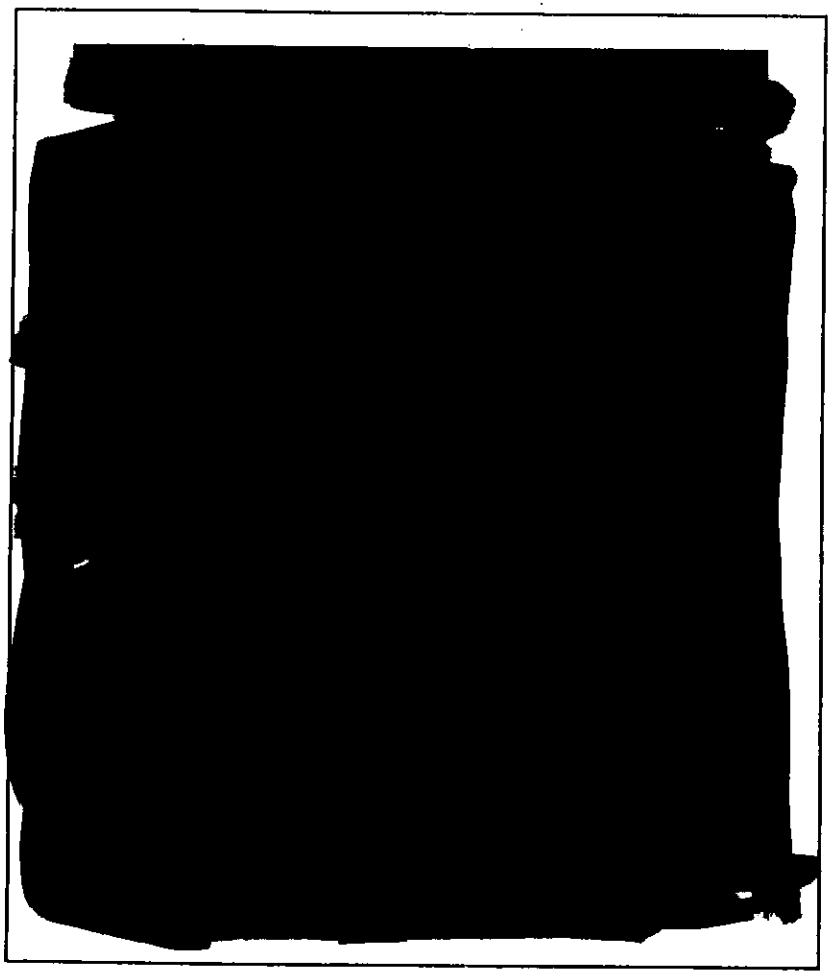
(S/NF)
V0410198

(U) Introduction

(S) The NRO's imagery program provides the primary space surveillance sensors to satisfy a variety of high-priority intelligence needs. These include crisis support; treaty monitoring; support to military operations; advanced weapons development and proliferation; mapping, charting, and geodesy (MC&G); natural disaster assessment; and support to humanitarian relief efforts. Satellite-derived imagery intelligence (IMINT) is a versatile and powerful tool supporting US national security strategy. Post-Cold War threats are more numerous, spontaneous, and geographically diverse than ever before. Imagery satellites are characteristically the first visual reconnaissance sensors on the scene and in many cases, the only ones available. Recognizing the tremendous leverage NRO systems provide, an increasing number of Defense Department programs and weapon systems are integrating NRO imagery systems into their architectures. Today, flexible and robust imagery collection is indispensable in meeting the widest range of threats and policy options encountered in modern history.

(S) The FY 98 program emphasizes imagery's pivotal national security role. It directly supports senior policymakers, Department of Defense (DoD) users and the national Intelligence Community (IC) in addressing a vast array of political, military, civil, environmental, economic, and commercial threats. [redacted] In addition, the FY 98 program includes the follow-on Future Imagery Architecture (FIA) program as a new initiative. FIA implementation will be consistent with recent Jeremiah and Hermann Panel recommendations and will capitalize on available small satellite technology to address the projected needs of tomorrow's customers in the most cost-effective manner possible.

(S) Overall, imagery intelligence is and will continue to be an essential tool for a wide range of mission partners and customers. Global reach, multi-sensor capability, large synoptic area coverage, and immediate response are essential to effectively satisfy growing IC demands. These are the driving requirements for the near-term EIS and longer-term FIA development programs. Both build on current capabilities and are cost-effective solutions to increasingly more demanding user requirements in an ever more austere budget environment. Current imagery capabilities and features appear in the following box.



(U) Acquisition Reform and Business Process Improvement

(U) To build on current capabilities and develop cost-effective solutions, the IMINT Directorate is committed to acquisition reform and continuous process improvement. We are actively pursuing a wide range of initiatives throughout the directorate in response to the recently completed Jeremiah Panel final report and various internal IPT recommendations. The following summarizes key initiatives and successes.

(U) Human Resource Efficiency

(S/NK)

(U) Software Acquisition

(U) The IMINT Directorate assessed its current software acquisition processes during the summer of 1996 with the Software Engineering Institute (SEI). The SEI, located at Carnegie Mellon University, was established in 1984 by Congress as a federally funded research and development center. Their mission is to provide leadership in advancing the state of the practice of software engineering to improve the quality of systems that depend on software. The SEI has access to leading edge technology and has supported several hundred government and industry organizations with improving their software acquisition, development and maintenance practices.

(U) The purpose of IMINT's efforts with the SEI is to identify and implement improvements which will allow systems to be developed and delivered in less time with reduced life cycle costs. The first phase, completed in August 1996, assessed the government acquisition process and identified strengths and opportunities for improvement.

(U) Phase 2 provides a strategy and plan for prioritizing and implementing the software acquisition improvement opportunities identified in Phase 1. The SEI results will be integrated into the overall IMINT Directorate strategic improvement plan along with recommendations and results from other efforts such as the Baldridge Assessment. This phase addresses managerial issues and outlines specific plans associated with implementing the recommendations.

(U) Phase 3 focuses on improving the program office and developing contractor risk management processes. We will conduct a software risk evaluation on a portion of IMINT's development effort. The SEI will work with the NRO team to identify risk areas, mitigation strategies, and practices to manage the changing risks over the life of the program.

(U) The acquisition reform Integrated Product Team (IPT) continues to identify and implement other acquisition process improvements. These include eliminating over-specification of what is required, using Mil-Specs by exception only, and incorporating best commercial practices wherever possible to achieve the best value to the government and the taxpayer.

[redacted]

(U) Consolidation of Development and Maintenance Activities

[redacted]

12198

(U) Changes from the FY 97 CBJB

(U) The FY 98 program contains a number of significant changes from the FY 97 baseline. The most significant is FIA acquisition start. FIA pre-acquisition and risk reduction activities began in FY 97 in direct response to legislation directing the development of smaller satellites to replace existing NRO systems. We plan contractor source selection and the start of development and production activities for June 1998 to be followed by significantly more aggressive activity in the FY 99 program as FIA matures.

[redacted]

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Channels Jointly

(U) Transfers to NIMA

(U) In addition, a number of programmatic changes resulted from the creation of the National Imagery and Mapping Agency (NIMA). Consistent with NIMA's charter and FY 97 legislation, we are currently transitioning a number of tasking, dissemination, and exploitation-related activities from the NRO to NIMA. Major activities transitioning to NIMA's FY 98 program include:

— The Requirements Management System (RMS)

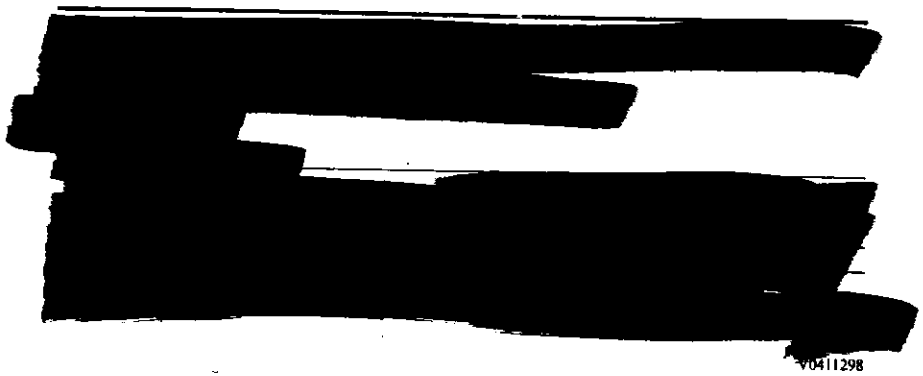
— The Image Data Exploitation (IDEX) System

— The Defense Dissemination System (DDS)

— Certain dissemination and exploitation-related research and development (R&D) projects, and

— Selected customer support activities.

(U) Baseline System Description



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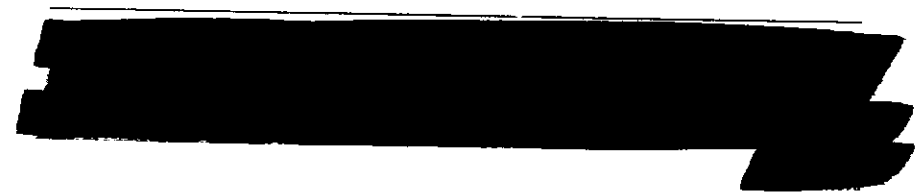
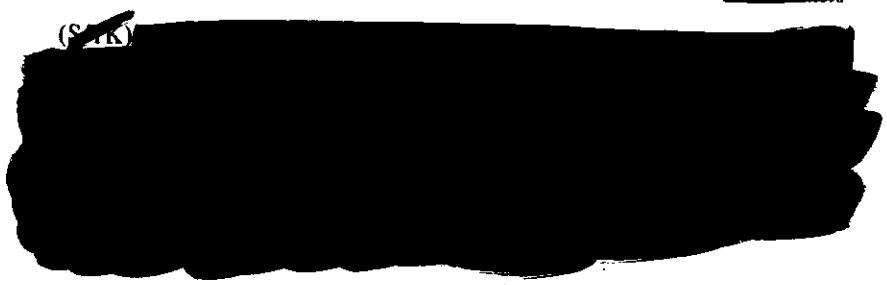
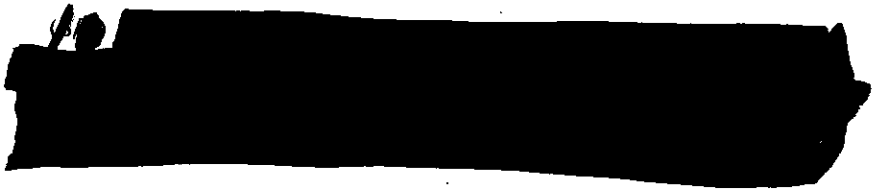




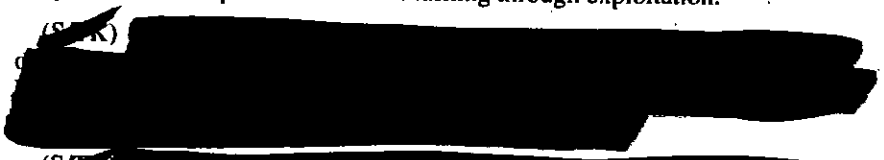
(U) Baseline System Enhancements

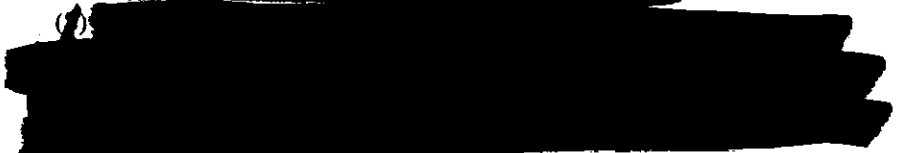


(U) A synopsis of significant improvements to baseline capabilities and other ongoing improvements is captured in Figure 13.

(U) RMS, an integrated imagery management system replacing CAMS and portions of the Defense Intelligence Agency's Automated Imagery Requirements and Exploitation System achieved initial operating capability (IOC) in June 1996.

- (U) RMS allows optimal collection efficiency for users, supports dynamic and time-sensitive requirements taskings thereby reducing current nomination-to-tasking timelines and provides enhanced feedback concerning the progress of user requests from initial tasking through exploitation.





National Reconnaissance Program

	Appropriated to Date	FY 97	FY 98	FY 97-98 Change	FY 99	FY 98-03
[redacted]						

(S/TK)
12098

(U) Satellite Launch Planning

[redacted]

(U) Future Imagery Architecture

[redacted]

[redacted]

(U) As part of our FIA study, we assessed the gap between customer requirements and our fulfillment of them, and identified critical imagery shortfalls. We used a stoplight rating model to evaluate current imagery capabilities and shortfalls (Figure 19). GREEN signifies key user requirements that are at least 75 percent satisfied with existing capabilities; YELLOW signifies 50-75 percent satisfaction; and RED indicates marginal or less than 50 percent capability. Based on this assessment, the following attributes characterize future requirements:

— Assured availability to meet operational needs

— Capability to image anytime, anyplace

— Reduced cost

— Flexibility to quickly respond to changing needs

[redacted]

(U) Acquisition of the FIA will employ new streamlined acquisition procedures. Using these procedures, the NRO will not use the architecture alternatives developed in the IAS to dictate the FIA constellation or ground architecture. Instead, the NRO will issue a statement of needs and requirements derived from the IAS and invite competitive proposals. The architecture alternatives developed in the IAS will then become one of the metrics by which we evaluate proposals. This approach should reduce acquisition lead times, yield a greater variety of potential solutions from which to choose, and reduce acquisition costs by reducing the amount of low-level government specifications in the architecture's design. We expect to receive proposals for the FIA in the spring and summer of 1997, evaluate them throughout the remainder of calendar year 1997, and award contracts by mid-1998.

(U) Summary

(U) Looking to the future, we see an evolving geopolitical environment, new technological possibilities, and most importantly, changing customer needs. Now, more than ever, improving the flexibility and responsiveness of imaging systems to the changing needs of the military commander and National Community is vitally important. With our mission partners, we have prepared a program that answers ever more demanding requirements with innovative and cost-effective technical solutions. The result is a fiscally sound program fully responsive to both current and evolving customer requirements.

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