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DOC 1

(U) MEMORANDUM FOR BRIAN GREEN, SASC
CHUCK ALSUP, SASC

(U) SUBJECT: Future Imagery Architecture Lessons Learned

(U) The National Imagery and Mapping Agency (NIMA) and the National Reconnaissance Office (NRO) recently completed a "Lessons Learned" assessment on the development of the Future Imagery Architecture (FIA). This assessment was originally requested during a House Permanent Select Committee on Intelligence (HPSCI) Fiscal Year (FY) 2004 hearing on the FIA program. Subsequently, the Senate Select Committee on Intelligence also requested a lessons learned assessment in their marks to the NRO's FY 2004 budget request.

(U) The enclosed report was signed out by the Directors of NIMA and the NRO and is a copy of what was provided to the HPSCI. Copies of the assessment are being provided to other NRO and NIMA oversight committees. If you have any questions about the enclosure please contact Mr. Joe Perry, NIMA Congressional Liaison, (301) 227-7390 or (b)(3) 10 USC 424 (b)(6) NRO Legislative Liaison, at (b)(3) 10 USC 424 (b)(6)

Sincerely,

David E. Olsen
Director
Legislative Liaison

Attachment:

(U) "FIA Lessons Learned"

DOWNGRADE TO UNCLASSIFIED
WHEN SEPARATED FROM ENCLOSURE

CL BY: D/NIMA
CL REASON: 1.4(c)
DECL ON: X1
DRV FROM: Multiple Sources

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DOC 2

(U) MEMORANDUM FOR TOM HAWKINS, SAC

(U) SUBJECT: Future Imagery Architecture Lessons Learned

(U) The National Imagery and Mapping Agency (NIMA) and the National Reconnaissance Office (NRO) recently completed a "Lessons Learned" assessment on the development of the Future Imagery Architecture (FIA). This assessment was originally requested during a House Permanent Select Committee on Intelligence (HPSCI) Fiscal Year (FY) 2004 hearing on the FIA program. Subsequently, the Senate Select Committee on Intelligence also requested a lessons learned assessment in their marks to the NRO's FY 2004 budget request.

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Sincerely,

David E. Olsen
Director
Legislative Liaison

Attachment:

(U) "FIA Lessons Learned"

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CL REASON: 1.4(c)
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DOC 3

(U) MEMORANDUM FOR BOB LAUTRUP, HASC

(U) SUBJECT: Future Imagery Architecture Lessons Learned

(U) The National Imagery and Mapping Agency (NIMA) and the National Reconnaissance Office (NRO) recently completed a "Lessons Learned" assessment on the development of the Future Imagery Architecture (FIA). This assessment was originally requested during a House Permanent Select Committee on Intelligence (HPSCI) Fiscal Year (FY) 2004 hearing on the FIA program. Subsequently, the Senate Select Committee on Intelligence also requested a lessons learned assessment in their marks to the NRO's FY 2004 budget request.

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Sincerely,

David E. Olsen
Director
Legislative Liaison

Attachment:

(U) "FIA Lessons Learned"

DOWNGRADE TO UNCLASSIFIED
WHEN SEPARATED FROM ENCLOSURE

CL BY: D/NIMA
CL REASON: 1.4 (c)
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DRV FROM: Multiple Sources

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DOC 4

(U) MEMORANDUM FOR STEVE NIXON, HAC

(U) SUBJECT: Future Imagery Architecture Lessons Learned

(U) The National Imagery and Mapping Agency (NIMA) and the National Reconnaissance Office (NRO) recently completed a "Lessons Learned" assessment on the development of the Future Imagery Architecture (FIA). This assessment was originally requested during a House Permanent Select Committee on Intelligence (HPSCI) Fiscal Year (FY) 2004 hearing on the FIA program. Subsequently, the Senate Select Committee on Intelligence also requested a lessons learned assessment in their marks to the NRO's FY 2004 budget request.

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Sincerely,

David E. Olsen
Director
Legislative Liaison

Attachment:

(U) "FIA Lessons Learned"

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WHEN SEPARATED FROM ENCLOSURE

CL BY: D/NIMA
CL REASON: 1.4(c)
DECL ON: X1
DRV FROM: Multiple Sources

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DOC 5

The Honorable Pat Roberts, Chairman
The Honorable John Rockefeller, Vice Chairman
Select Committee on Intelligence
United States Senate
Washington, DC 20510

Dear Mr. Chairman and Mr. Vice Chairman

(U) The National Imagery and Mapping Agency (NIMA) and the National Reconnaissance Office (NRO) recently completed a "Lessons Learned" assessment on the development of the Future Imagery Architecture (FIA). This assessment was originally requested during a House Permanent Select Committee on Intelligence (HPSCI) Fiscal Year (FY) 2004 hearing on the FIA program. Subsequently, the Senate Select Committee on Intelligence also requested a lessons learned assessment in their marks to the NRO's FY 2004 budget request.

(U) The enclosed report was signed out by the Directors of NIMA and the NRO and is a copy of what was provided to the HPSCI. Copies of the assessment are being provided to other NRO and NIMA oversight committees. If you have any questions about the enclosure please contact Mr. Joe Perry, NIMA Congressional Liaison, (301) 227-7390 or (b)(3) 10 USC 424, (b)(6) NRO Legislative Liaison, at (b)(3) 10 USC 424, (b)(6)

Sincerely,

David E. Olsen
Director
Legislative Liaison

Enclosure:

(U) "FIA Lessons Learned"

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WHEN SEPARATED FROM ENCLOSURE

CL BY: D/NIMA
CL REASON: 1.4(c)
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**(U) Response to Question for the Record
on Future Imagery Architecture Lessons Learned**

(U) Question: What lessons learned can the National Imagery and Mapping Agency (NIMA) and the National Reconnaissance Office (NRO) draw from the Future Imagery Architecture (FIA) experience?

(U) Response: During the past year, NIMA and NRO have worked to adjust the end-to-end FIA program towards a more executable and robust baseline. We have also spent considerable energy trying to assess what went wrong in the past and how to avoid those problems in the future. In general, the lessons learned from FIA can be grouped into five major categories: importance of end-to-end system engineering; development of realistic program budgets and schedules; use of appropriate contract incentive structures; over-reliance on the precepts of acquisition reform; and the need for better integration of heritage and future program plans.

~~(S//TK)~~

1. ~~(U)~~ Importance of End-to-End System Engineering. FIA reminds us of the importance of thorough, end-to-end system engineering as a key element of our program planning. Within the context of multi-agency programs, we need to organize ourselves carefully to create a cogent, end-to-end system engineering approach to assure that the entire enterprise (not just the system) works as required. Since the end-to-end system engineering for FIA was not done up front, the creation of the Joint Management Office (JMO) was essential to closing the FIA program. For future efforts, we are searching for a better and more easily replicable structure. In the meantime, we have applied this lesson learned in the (b)(1)4c, (b)(3) 10 U.S.C. 424 program, where we have clearly focused on integrating the tasking, processing, exploitation, and dissemination elements of the effort into the larger program.

2. (U) Development of Realistic Program Budgets and Schedule. The FIA experience reminds us of the need for a thorough, independent cost estimate at the initiation of a program that can serve as a cost baseline and reference throughout the life of the acquisition. FIA actually began with a realistic cost estimate that "fit" within the FIA cost cap. However, the pressures of smaller budgets and increasing intelligence demands in the late 1990's, coupled with a very low negotiated cost from Boeing, led us to add program scope without adding the corresponding resources.

~~(S//DYE)~~ That experience suggests several related lessons which should also be captured. First, cost estimates must be updated as a program matures; we intend to do another top-to-

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 bottom FIA cost review at the end of the rebaselining effort. Second, we must recognize that, within a competitive down select environment (particularly one occurring before a mature baseline design), we cannot depend upon a realistic cost estimate from competing offerors. This realization should drive our use of the government cost estimate rather than the negotiated price, especially for out-year budget planning. Competitive pressures must also be considered in the contract and incentive structures. The President's Fiscal Year 2004 budget request is based on our own independent cost estimate, as provided by the NIMA and NRO Cost Groups, and has been adjusted to the schedule" (b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c
(b)(1) 4e
(b)(1) 4g, (b)(3)
10 U.S.C. 424

by the FIA JMO. Third, early investment in risk reduction activities against the program's high-risk areas is a necessity. In the FIA case, this risk reduction investment may have brought issues to the surface earlier, given us greater confidence and realism in the schedule, and allowed us to identify alternative paths early enough to have been implemented. Although this would have required additional resources at the beginning of the program, the overall cost and schedule impacts probably would have been reduced. Finally, we are reminded again of the importance of the program manager's reserve in providing flexibility to perform the mission. These same points apply to the program's schedule as well as cost, and the current FIA schedule was built with these considerations in mind.

3. (U) Use of Appropriate Contract Incentive Structures. One of the major shortcomings of the FIA contract was the use of an overly complex fee structure. The Boeing FIA fee structure was based on extensive use of incentive, vice award, fee provisions. These provisions limit the program manager's flexibility in adjusting incentives to meet evolving contract conditions. This flexibility is particularly important for programs with a high degree of risk because it is not necessarily clear at program initiation where the incentives will be needed. The extensive use of incentive vice award fee provisions, coupled with a tortuously complex algorithm for determining the fee, led to a fee plan that was ineffective in motivating contractor performance against the government's greatest needs.

(U) These problems with the incentive structure were aggravated by a focus on a single, clearly measurable criterion for earning the fee - contract completion cost as compared to the initial bid. As previously discussed, it should have been apparent from the outset that the contractor's bid in a highly competitive environment was unlikely to yield true program costs. However, by explicitly tying almost all of the contractor's earned fee to the bid, we forced the contractor to hold to the initial estimate well beyond the point when this was no longer possible. Further, it drove the contractor to constrain the use of very limited risk reserves during the early

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stages of the program, despite the program's rising risk posture.

(U) We have since revamped the entire FIA space and ground incentive structure and rebalanced the use of award fee and incentive fee provisions. As recommended in the Faga panel report, we have focused these incentives clearly and simply on mission assurance and program schedule. While we have by no means eliminated the contractor's cost performance as a measure, we have carefully adjusted its place in the hierarchy of incentives to allow sound program management to be the driving factor.

4. (U) Over-reliance on Precepts of Acquisition Reform. FIA was designed to implement all of the precepts touted as "acquisition reform." We maximized the use of commercial practices, commercial parts, and management insight in order to help justify our decision to accept the lower overall program cost. As the results suggest, this was probably the acquisition equivalent of a "bridge too far."

(U) "Acquisition reform" is not a panacea or replacement for good government program management. In our view, we went too far in reducing government oversight and demonstrated once again that Total System Performance Responsibility does not reduce the need for a full and trained government program team. Commercial practices can only, at best, yield commercial performance that can never be adequate for the highly complex and crucial national security applications we support.

(U) An additional lesson within this general context of acquisition reform is the need to provide the program manager with the authority and government/Federally Funded Research and Development Center (FFRDC) resources necessary to do the job. Lacking these, we proceed at our own peril. We are now certain that the Boeing contractor and program office approaches more closely mirror our historical oversight role, and that we have given the government program manager the required authority. However, critical government-sponsored FFRDC resources are severely constrained throughout the national security space community.

5. (TS//BYE) Need for Better Integration of Heritage and Future Program Plans. The potential ~~(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424~~ within the context of FIA reminds us of the critical importance of planning for a robust handoff between past and future programs. Driven by the cost constraints of the 1990's, FIA was designed with too little attention to the seams between it and the ~~(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424~~ legacy effort. The pressure to limit reliance on sparing as a philosophy to lower mission risk was misplaced in an area so critical to our national security. By committing to a complete swap of our entire infrastructure ~~(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424~~ and ground - within the context of a single effort, we have increased the risk

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to continued mission performance. This structure was driven more by an attempt to save resources rather than by the need for continued, guaranteed, mission assurance. This need for a robust handoff is one of the reasons we have resisted, and will continue to resist, the urge to limit the FIA buy to fewer than the currently planned complement of satellites.

(U) In summary, we recognize that we can properly manage future program risk by taking an end-to-end system engineering approach, prudently using the government estimates of cost and schedule, applying well thought out and properly focused incentives, carefully watching how we apply elements of acquisition reform, and integrating current and heritage programs. We always expect that the beyond-the-state-of-the-art solutions we bring to the forefront will inject risk into our programs. We need to ensure that we do not exacerbate that risk with poor management practices.

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DOC 7

The Honorable Pat Roberts, Chairman
 The Honorable John Rockefeller, Vice Chairman
 Select Committee on Intelligence
 United States Senate
 Washington, DC 20510

Dear Mr. Chairman and Mr. Vice Chairman:

(U//~~FOUO~~) The enclosed correspondence responds to a Congressionally Directed Action levied by your committee's Audit Report on National Reconnaissance Office (NRO) Future Imagery Architecture (FIA).

(U//~~FOUO~~) I appreciate the opportunity to respond and note that the audit report was thorough and in my opinion a fair and balanced assessment of the FIA program. I would also like to point out that there have been numerous external panels and reports that have provided recommendations on ways to improve NRO acquisition as a result of the lessons learned from FIA. Many of the enclosed responses to your audit include activities and processes already implemented and some that I am incorporating into my policies and directives in the near future. I would be pleased to provide your committee with appropriate updates on our progress at your convenience, in addition to the requested semi-annual updates.

(U//~~FOUO~~) Should you require additional information concerning this report, please contact me directly at (b)(3) USC 424 (b)(6)

Sincerely,

Peter B. Teets

Enclosure:

~~(S//BYE)~~ Response to Recommendation of
 SSCI's Audit Report on NRO FIA

CL BY: (b)(3) USC 424 (b)(6)
 CL REASON: 1.4(c)
 DECL ON: 25X1
 DRV FROM: NCG 5.1
 1 May 2000

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1. **Finding:** The NRO and Boeing grossly underestimated FIA program cost.

Recommendation: Provide semi-annual updates to the intelligence oversight committees.

Response: Both the National Reconnaissance Office (NRO) Legislative Liaison (LL) office and the Joint Management Office (JMO) will provide periodic reviews of Future Imagery Architecture (FIA) program status, to include cost, schedule, and end-to-end performance. These reviews will be presented to the six Congressional intelligence oversight committees. Per the Senate Select Committee on Intelligence's (SSCI) request, these reviews will be scheduled on a semi-annual basis, or more often commensurate with achieving major program milestones or upon discovery of significant issues or concerns. In a letter dated 11 December 2003, Congresswoman Jane Harman, the Ranking Democrat on the House Permanent Select Committee on Intelligence (HPSCI), requested similar updates. We are working to schedule this review. Annotated briefings will be delivered to all concerned to ensure the information is provided regardless of attendance at the review sessions. The NRO/LL will coordinate with FIA elements within the National Geospatial-Intelligence Agency (NGA) and with the JMO to ensure a system-wide review. The most recent FIA program update was provided to the staff of the oversight committees on 7 November 2003.

2. **Finding:** The NRO's attempt at "acquisition reform" did not achieve the intended cost savings or program management improvements. Instead, the NRO's overemphasis on cost resulted in overruns that were not promptly reported by the contractor.

Recommendation: Describe how FIA lessons learned have been incorporated into policy, future acquisitions, and program management training. Also, describe the state of acquisition reform within the NRO.

Response: The NRO has taken action in response to FIA lessons learned. These actions address a number of key acquisition management functional areas, including program cost estimates, program oversight and review, and systems

CL BY: (b) (3) 10 U.S.C. 424
(b) (6)
 CL REASON: 1.4(C)
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 May 2000

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engineering/test planning. Necessary changes have been (or will soon be) incorporated into NRO training and documented in signed NRO directives and policies. Each functional area is more specifically addressed below.

Cost Estimates

The primary goal of the NRO Cost Group (NCG) is to provide the Director, NRO (DNRO) an unbiased, realistic projection of program costs. The NCG monitors its performance by comparing its independent cost estimates (ICEs) against actual program costs. To date, the NCG performance "track record" reflects a 15 percent root mean squared difference between ICEs and actual costs. Considering the inherent variability in space-related costs, a 15 percent difference is an acceptable estimation. However, we think it can be improved. The actions detailed below have all been taken, both in direct response to FIA lessons learned and/or as part of the general and continual improvement of NCG estimating methods and tools.

a. Independent Technical Assessment (ITA). An ITA has been incorporated for all major ICE's. Members of the ITA team work with NCG analysts to review technical characteristics of the program and provide critical inputs to NCG cost estimating models and risk assessments.

b. Risk analysis process. The risk process used by the NCG has been thoroughly reviewed to ensure a realistic cost. The NCG now recommends budgeting at the more representative mean (versus the median) in the cost distribution.

c. "New Ways of Doing Business" and "commercial practices". No savings stemming from these practices will be accepted without detailed substantiation. This is a specific lesson learned from FIA.

d. Tools and database improvements. Improvements in these areas are continuous. New tools include the NRO Cost Analysis Toolkit, a cost and technical database consisting of over 30 NRO, Department of Defense, and National Aeronautics and Space Administration programs. The NCG has also developed new phasing and schedule analysis tools that have been shared with other cost estimating organizations. The NCG database has seen

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continuous additions, particularly in legacy IMINT, additional Air Force space, and commercial space programs.

Program Oversight and Review

Specific changes have been made in the program review process, both prior to and subsequent to its initial approval for acquisition.

a. The Independent Program Assessment (IPA), completed as part of the NRO Acquisition Board (NAB) process, has been modified to ensure FIA lessons learned are specifically addressed. New programs must pass their IPA before they are approved to begin acquisition. Fourteen criteria are examined. In direct response to FIA lessons learned, the IPA must now assess: 1) program office "readiness" (staffing levels and expertise); 2) acquisition strategy, including a review of contract structure and incentives to ensure they match government priorities for the program; and 3) the adequacy of the proposed test program.

b. Additional independent program reviews will now be completed subsequent to initial program approval. The goal will be to check progress at key development milestones (e.g., System Design Review) against the program cost, schedule, and performance baselines. Alternately, an additional review could be triggered prior to a major milestone if any program indicator points to problems. These reviews will be in addition to the quarterly program and business meetings currently held with the Deputy Director, NRO, the Deputy Director for System Engineering (DDSE), and the Deputy Director for Business Plans and Operations.

c. The format and content of NRO Baseline Agreement and Acquisition Reports are being re-examined to ensure they meet their original objective of documenting, monitoring schedule, cost, and performance commitments for major NRO programs.

d. The NRO is working with its Mission Partners to ensure end-to-end program requirements and commitments are understood at the front end of the program, and continually managed through the life of the program. (See also Question 3).

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In response to lessons learned on FIA and other space programs, NRO DDSE and the Air Force Space and Missile Systems Center formed a Mission Assurance Task Force. The Task Force found a strong link between the reduced test programs implemented in the 1990's, and increases in on-orbit anomalies. The increased acquisition cost and schedule risk entailed in finding design or manufacturing problems later, rather than sooner, in the process was also recognized. The results of this task force will culminate in changes to policy regarding testing practices. It will also result in NRO system engineering instructions that NRO acquisition programs will be required to follow.

3. Finding: The NRO and NIMA [now NGA] failed to coordinate adequately in the program's early stages. Also, the NRO did not properly inform IC officials about FIA's problems and CMS did not take an active oversight role.

Recommendation: Provide the SSCI with a plan to address coordination, oversight, and control of future IC acquisitions involving more than one agency.

Response: The NRO is working closely with all of our mission partners to ensure a balanced end-to-end national reconnaissance program. The NRO is executing an integrated approach to requirements and architecture development, acquisition, and operations of all current and future programs that involve multiple and joint agencies.

There are several organizational and process options the NRO is utilizing, such as Joint Program Offices and the consideration of instituting joint NABs. In recent instances during the NAB process, the DNRO has demanded proof of integrated master schedules that match with our mission partners and asked for verification of mission partner commitment and funding, ensuring the NRO and joint partners are all working together and are properly aligned to meet customer requirements. Moreover, the program offices are being tailored to meet the requirements of the applicable agencies for each specific program. For example, the NRO is working closely with the FIA JMO, Community Management Staff (CMS), and Under Secretary of Defense for Intelligence to ensure accurate cost estimates

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and industry best practices are leveraged in the development, acquisition and operations of all future NRO systems. This level of review and collaboration between organizations in the early stages of program planning requires NRO to work with our mission partners and oversight offices to plan and program for sufficient resources to support a balanced end-to-end architecture.

4. Finding: The overall level of expertise for NRO military and civilian personnel has declined considerably in the last 10-20 years.

Recommendation: Provide the SSCI with a long-term plan to address personnel issues at the NRO. This report should clearly define the efforts to engage component organizations in negotiations that will guarantee the systematic development of NRO expertise and outline the advantages and disadvantages of creating an NRO-unique personnel system.

Response: The NRO has engaged in two rounds of human resources strategic planning since the creation of the first *NRO Strategic Plan* in 1998. Nearing completion of implementation activities for the second of these rounds, the NRO conducted a Human Capital Accountability Assessment Framework¹ (HCAAF) review in July 2003 in preparation for development of a comprehensive workforce management strategy. Strategy development began in late September 2003, and completion is expected toward the end of second quarter Fiscal Year 2004. The primary driving considerations behind this effort are the new *2003 NRO Strategic Plan* with its emphasis on program management and systems engineering competencies, the NRO's multi-year technical *Way Ahead* for system deployments that enables more deliberate workforce planning, and the pending implementation of space cadre development programs among some of the NRO's parent elements.

The workforce management strategy will address all aspects of the human resources lifecycle including the operating concepts and future direction for:

¹ The HCAAF, developed by the Office of Personnel Management as part of the President's Management Agenda, is a comprehensive set of human capital standards for Federal agencies and is used by the NRO in its Federal Managers' Financial Integrity Act (FMFIA) Program.

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- a. Requirements definition in the manpower, leadership, and competency areas,
- b. Workforce acquisition through recruiting and staffing,
- c. Employee and leadership development programs and activities, and
- d. Performance management using parent element and NRO programs.

The above sections of the strategy will be developed presupposing continued employment of a multi-agency workforce within the NRO. In a separate section, the strategy will address the efforts needed to assess alternative approaches to providing personnel functions in ways that would better support the NRO's mission. The alternative approaches to be studied would address the relationships between the parent elements and the NRO's corporate human resources operations, the configuration of embedded and centralized personnel activities, and the benefits and drawbacks of creating an NRO-unique personnel system.

5. Finding: Compartmented requirements drove unnecessary design changes and cost without benefit. Lack of documentation compounded the problem.

Recommendation: Provide a compartmented annex to the lessons learned recommendation in item 2.

Response: In the summer of 2002, the NRO and IC Inspector Generals performed an investigation of the compartmented portions of the FIA program. Their report, which was provided to both the SSCI and HPSCI, identified three fundamental problems:

- a. The program lacked an adequate audit trail. Specifically, the program office failed to document senior-level decisions in a disciplined manner.
- b. Briefings presented to NRO oversight agencies (Congress, CMS, and Office of the Secretary of Defense) were not at the appropriate classification to ensure full visibility into program issues or developing

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problems. Program office briefings slides were held to, in many cases, a generic (BYEMAN) classification level, leaving no written record of if, or in-what depth, compartmented issues were discussed. The lack of compartmented briefings, or minutes from these briefings, made it impractical to determine if the NRO program office had provided necessary insight into ongoing compartment issues.

c. Major scope and system design changes were executed on the contract due to compartmented requirements without clear contractual documentation.

The Director of Central Intelligence asked the DNRO to take action to address these issues. In September 2003, the DNRO signed out Director's Note 2003-35, specifically addressing program requirements for an audit trail for all contract/program records, briefing at the appropriate classification level to ensure inclusion of all pertinent information, and documentation of all major program scope and design changes. In addition, the DNRO tasked the DDSE to initiate formal directives to institute and ensure continued application of corrective procedures learned from experience with FIA. These corrective actions include:

a. Making explicit the linkage between directives for foundational acquisition and records management policies.

b. Adding materials to NRO acquisition and management training programs to raise the emphasis on program documentation.

c. Documenting critical business processes in NRO Directorate Management Control Plans.

d. Identifying a core group of NRO personnel to receive system-high access to support senior decision makers.

e. Conducting independent program reviews on all programs, regardless of security classification, to assure that security will not be a barrier to sound acquisition management.

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f. Expanding compliance reviews to ensure these changes result in high-quality program documentation practices.

These measures will correct shortfalls in NRO program documentation ensuring effective communication and an audit trail for all major program scope and design changes.

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DOC 9

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1. Finding: The NRO and Boeing grossly underestimated FIA program cost.
Recommendation: Provide semi-annual updates to the intelligence oversight committees.

Response: The NRO Legislative Liaison (LL) office will ensure that periodic reviews of FIA program status, to include cost, schedule, and end-to-end performance, are presented to the six Congressional intelligence oversight committees. Per the SSCI's request, these reviews will be scheduled at least semi-annually, or more often commensurate with achieving major program milestones or upon discovery of significant issues or concerns. Annotated briefings will be delivered to all concerned to ensure the information is provided regardless of attendance at the review sessions. NRO/LL will coordinate with FIA elements within the National Geospatial-Intelligence Agency and with the Joint Management Office to ensure a system-wide review. The most recent FIA program update was presented to the oversight committees on 7 Nov 2003. The next review will be scheduled within the six-month window.

2. Finding: The NRO's attempt at "acquisition reform" did not achieve the intended cost savings or program management improvements. Instead, the NRO's overemphasis on cost resulted in overruns that were not promptly reported by the contractor.

Recommendation: Describe how FIA lessons learned have been incorporated into policy, future acquisitions, and program management training. Also, describe the state of acquisition reform within the NRO.

Response: The FIA program fell into early problems due to the implementation of new "Acquisition Reform" practices learned from the business sector. It was believed that "Acquisition Reform" would confer to government the major cost benefits enjoyed by the commercial sector. Acceptance of these practices; however, proved impractical in the development of new technology. Relaxed government controls, requirements flexibility, and tracking cost as an independent variable resulted in delayed responses to technical and budget problems.

Lessons learned from the FIA experience, and the subsequent rebaselining, led to several changes that are now incorporated into the program oversight and review processes. These activities occur before and support the NRO Acquisition Board (NAB) and are incorporated under Directive 7.¹ Some very specific modifications have been made to Independent Program Assessments (IPAs) and Independent Program Reviews (IPRs):

In the IPA, a program is evaluated against 14 parameters that describe the program end-to-end. The FIA lessons learned have been incorporated in the instructions to the IPA team members in

¹ Managed by the Deputy Directorate of System Engineering (DDSE), Directive 7 delineates the rules for the acquisition oversight process. Independent Program Reviews, as stipulated in Directive 7, support NAB decision processes: Independent Technical Assessments (ITA), Independent Cost Assessments (ICA) preparing Independent Cost Estimates (ICEs), and Independent Program Assessments (IPA).

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their evaluation of the IPA parameters and in turn the Independent Program Review (IPR).

Additional IPRs are proposed and are being reviewed for inclusion in Directive 7, specifically: regularly scheduled post Key Decision Point (KDP) IPRs for the DNRO for all designated programs, and ad hoc IPRs to address discrepancies or concerns arising from the Quarterly Program Reviews (QPRs) with the DDNRO and DDSE and Quarterly Business Reviews (QBRs) with the DD/BPO and the DDSE. In special cases the DNRO or DDNRO may also request another NAB.

The NRO has also responded to specific lessons in the following areas:

- Basic program monitoring of the schedule, cost, and performance commitments for FIA could have alerted decision makers and provided opportunities for corrective intervention. Baseline Agreement & Acquisition Reports (BAARs) are updated yearly, or when thresholds are threatened, and provide decision accountability.

The DNRO, DDSE, and DD/BPO conduct QPRs and QBRs on all designated programs, which will provide the opportunity for more frequent BAAR updates to highlight deviations and to reflect updated baselines on a regular basis. In response to BAAR highlighted deviations, an additional IPR or NAB can be invoked to bring programs back on track.

- NRO management signed the contract for FIA before all requirements were agreed. Added requirements led to cost and schedule adjustments not only from the new capabilities, but also from ripple effects to subsystems that required frequent adjustments throughout the FIA contract.

Definitive requirements are mandated and locked in for all programs prior to contract signature according to Directive 7.

- Relying on contractor resources, the initial FIA development team lacked expertise and experience to identify and respond to technical problems or to recognize the increased risks inherent in some of the new requirements.

Program Office staffing expertise is now an item of interest for IPAs and is now incorporated into one of the 14 NAB parameters that are reviewed.

- The FIA contract provided heavy disincentives for discrepancy discussions through the Award fees structuring. This inhibited contractors from raising problems early and delayed government responses.

Acquisition strategies and specific contract structures, such as incentive clauses, are high interest items within the IPA process

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and are codified in one of the 14 NAB parameters that are reviewed.

- FIA developers frequently bypassed incremental tests in favor of integrated tests, saving money but failing to identify and isolate problems associated with new technology.

DDSE, in conjunction with the Air Force Space and Missile Systems Center (SMC), is sponsoring a Mission Assurance Task Force that is specifically addressing testing philosophies, among other technical areas, across all NRO acquisition programs. The results of this task force will culminate in changes to NRO policy regarding testing practices, and will result in NRO system engineering instructions that NRO acquisition programs will be required to follow.

- NRO Senior Management decided that the high risk assumed in FIA was acceptable.

The DNRO has significantly increased the emphasis on internal assessments of designated acquisition programs within the NRO; a team approach is being instituted and the DNRO is focusing his decision making acutely on the results of these IPAs, which includes independent cost estimates. The DNRO has also decided to invoke external reviews for some of the major acquisition programs to ensure objectivity and confirmation of internal assessments. This approach will be reflected in NRO acquisition policy.

- The lessons learned from the FIA experience are captured in "NRO Best Practices" incorporated into Program Management and certification training programs provided in the Acquisition Center of Excellence (ACE).

The ACE has an inherent lessons learned capability to draw from based on over 450 source selections to date. This lesson learned "body of knowledge (BOK)" is woven into the ACE recommended source selection process that we teach through our Training and Education Branch as well as practiced by our Acquisition Consultants. One of the major source selections contributions to this BOK is the Future Imagery Architecture (FIA) experience. The structure of the training program was revamped over the past six months to specifically address the workforce's lack of acquisition and program management experience.

3. Finding: The NRO and NIMA [now NGA] failed to coordinate adequately in the program's early stages. Also, the NRO did not properly inform IC officials about FIA's problems and CMS did not take an active oversight role.

Recommendation: The NRO to provide the SSCI with a plan to address coordination, oversight, and control of future IC acquisitions involving more than one agency.

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Response: NRO is working closely with all of our mission partners to ensure a balanced end-to-end national reconnaissance program. The NRO is executing an integrated approach to requirements and architecture development, acquisition, and operations of all current and future programs that involve multiple and joint agencies. There are several organizational structural options that the NRO is utilizing, such as Joint Program Offices and the consideration of instituting joint NABs. In recent instances during the NAB process, the DNRO has demanded proof of integrated master schedules that match with our mission partners, and has asked for verification of mission partner commitment and funding, ensuring the NRO and joint partners are all working together and are properly aligned to meet customer requirements. Moreover, the program offices are being tailored to meet the requirements of the applicable agencies for each specific program. For example, the NRO is working closely with the FIA Joint Management Office (JMO), CMS and USD(I) to ensure accurate cost estimates and industry best practices are leveraged in the development, acquisition and operations of all future NRO systems. This level of review and collaboration between organizations in the early stages of program planning requires NRO to work with our mission partners and oversight offices to plan and program for sufficient resources to support a balanced end-to-end architecture.

4. Finding: The overall level of expertise for NRO military and civilian personnel has declined considerably in the last 10-20 years.

Recommendation: Provide the SSCI with a long-term plan to address personnel issues at the NRO. This report should clearly define the efforts to engage component organizations in negotiations that will guarantee the systematic development of NRO expertise and outline the advantages and disadvantages of creating an NRO-unique personnel system.

RESPONSE: The NRO has engaged in two rounds of human resources strategic planning since the creation of the first *NRO Strategic Plan* in 1998. Nearing completion of implementation activities for the second of these rounds, the NRO conducted a Human Capital Accountability Assessment Framework² (HCAAF) review in July 2003 in preparation for development of a comprehensive workforce management strategy. Strategy development began in late September 2003, and completion is expected toward the end of 2nd quarter FY2004. The primary driving considerations behind this effort are the new 2003 *NRO Strategic Plan* with its stronger emphasis on program management and systems engineering competencies, the NRO's multi-year technical *Way Ahead* for system deployments that enables more deliberate workforce planning, and the pending implementation of space cadre development programs among some of the NRO's parent elements.

The workforce management strategy will address all aspects of the human resources lifecycle including the operating concepts and future direction for:

² The HCAAF, developed by the Office of Personnel Management as part of the President's Management Agenda, is a comprehensive set of human capital standards for Federal agencies and is used by the NRO in its Federal Managers' Financial Integrity Act (FMFIA) Program.

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- Requirements definition in the manpower, leadership, and competency areas,
- Workforce acquisition through recruiting and staffing,
- Employee and leadership development programs and activities, and
- Performance management using parent element and NRO programs.

The above sections of the strategy will be developed presupposing continued employment of a multi-agency workforce within the NRO. In a separate section, the strategy will address the efforts needed to assess alternative approaches to providing personnel functions in ways that would better support the NRO's mission. The alternative approaches to be studied would address the relationships between the parent elements and the NRO's corporate human resources operations, the configuration of embedded and centralized personnel activities, and the benefits and drawbacks of creating an NRO-unique personnel system.

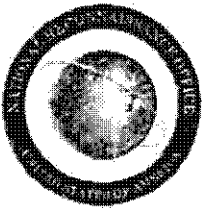
5. Finding: Compartmented requirements drove unnecessary design changes and cost without benefit. Lack of documentation compounded the problem.

Recommendation: Provide a compartmented annex to the lessons learned recommendation in item 2.

Awaiting compartmented response from (b)(3) 10 USC 424, (b)(5)

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Office of the Director

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DOC 10

NATIONAL RECONNAISSANCE OFFICE

5 May 2005

The Honorable Peter Hoekstra, Chairman
The Honorable Jane Harman, Ranking Member
Permanent Select Committee on Intelligence
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman and Ms. Harman:

~~(U//FOUO)~~ I am writing in response to your letters of 22 April 2005 (HPSCI 2005-0715 Cost to Terminate FIA) and 4 May 2005 (HPSCI 2005-0808 Concerns Regarding FIA), requesting termination costs for various elements of the Future Imagery Architecture (FIA) contract, and regarding actions taken in response to FIA program performance issues.

~~(S//TK//PROPIN)~~ In response to your request for costs related to three different program termination scenarios, the following preliminary information is provided:

1. ~~(S//TK//PROPIN)~~ Cost to terminate the FIA program:
[Redacted]
2. ~~(S//TK//PROPIN)~~ Cost to terminate the [Redacted] portion of the FIA program: [Redacted]
3. ~~(S//TK//PROPIN)~~ Cost to rescope the FIA program to a [Redacted] procurement [Redacted]. The estimated net savings that would result from this action, given the current FIA budget position, is less than [Redacted].

~~(S//TK//PROPIN)~~ These costs and savings estimates are very preliminary figures, just received from the contractor. Under provisions of the Federal Acquisition Regulation, the contractor would have a full year to develop a detailed termination cost estimate for review and negotiation by the government, should such a decision be made.

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1 May 2000

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~~(S//TK)~~ Over the last several years, the Intelligence Community and the Department of Defense have searched for a viable alternative to FIA--an alternative that could satisfy the nation's critical national imagery requirements, including high quality, precision, responsiveness, capacity, and all-weather operations. Unfortunately, the resulting assessment has been, and continues to be, that FIA is the only program that can be available to meet this set of critical needs before the fly-out of legacy and Enhanced Imaging System (EIS) vehicles. Should the FIA program be cancelled or further delayed, there would be a potential loss of these critical capabilities in the post-2010 period, as the EIS vehicles reach their end-of-life. In my view, the nation cannot afford to take such a risk.

~~(S//TK)~~ Unfortunately, the FIA program continues to perform poorly from both a cost and schedule perspective. During the past six months, (b)(1), (b)(7)(C), (b)(7)(D), (b)(7)(F) experienced schedule erosion of over six months and one year (b)(1), (b)(7)(C), (b)(7)(D), (b)(7)(F). When you are expending nearly (b)(1), (b)(7)(C), (b)(7)(D), (b)(7)(F) that corresponds to unacceptable increased cost. A great deal of this poor performance is directly attributable to Boeing's inability to demonstrate performance in the role of prime contractor, effectively directing and controlling subcontractors and vendors. Improving this performance is critical to FIA's success, because more than 50 percent of the program is executed by subcontractors. Given that, I informed Boeing management on 28 April 2005 that I was: 1) deferring an award fee decision for the period 1 October 2004 to 31 March 2005 (the assessed award fee score would have been zero percent); 2) suspending them from provisional fee billings for the next 12 months, April 2005 to March 2006; 3) adding them to the National Reconnaissance Office's (NRO) Contractor Responsibility Watch List (CRWL), making them ineligible for future NRO contract awards, without specific approval by the NRO's Business Plans and Operations, Director, Office of Contracts. Such approval would require a determination that the new work would not be negatively affected by the problems Boeing has experienced on FIA. Simultaneously, we are requiring Boeing to convert approximately (b)(1), (b)(7)(C), (b)(7)(D), (b)(7)(F) of already collected fee to cost due to their failure to achieve negotiated schedule and cost milestones.

~~(S//TK)~~ Boeing's placement on the NRO CRWL is in accordance with written NRO policy and procedures. That policy requires placement on the CRWL to be specifically considered whenever a contractor's performance in a rating period is assessed as less than "adequate" (an assessed score at less than 70 percent). Placement on the CRWL is a certainty if the contractor demonstrates sustained poor performance, or if the problems

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experienced on one program are likely to be seen on another program. Given Boeing's overall performance on FIA, and the criticality of demonstrated prime contractor skills in the performance of any future NRO development effort, Boeing was placed on the NRO CRWL.

(U//~~FOUO~~) The NRO is taking a number of additional actions, some in concert with Boeing, to address FIA performance issues. Actions include: 1) allocating a significant portion of the NRO-level increase in Federally Funded Research and Development Center resources to the FIA program team; 2) reassessing the government program team to ensure my program manager has the right mix of skills and experience levels available to him; 3) completing numerous independent technical reviews of individual FIA subsystems; 4) beginning an independent mission assurance effort with the Lockheed Martin Corporation, to ensure FIA performs well on orbit; 5) initiating a "Red Team" assessment to more fully understand the achievability and the likely cost of FIA; and 6) initiating a joint Acting Director NRO/Contractor Executive Committee forum, to ensure problems are addressed jointly, quickly, and effectively.

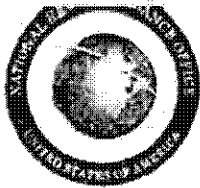
(U//~~FOUO~~) The FIA program is critical to national security, and there are just no viable alternatives in the near term. Given that, it is absolutely essential that we make the FIA program successful. I have taken action, internally and externally, to drive FIA toward success. I will continue to keep you fully informed of our progress. Should you have any questions or require additional information regarding the FIA program, please contact me.

Sincerely,

Dennis J. Fitzgerald, Jr.
 Dennis Fitzgerald
 Acting Director

cc:
 UnderSecretary of Defense
 (Intelligence)
 Director of National Intelligence
 Senior Advisor
 Executive Director, Intelligence
 Community Affairs
 National Reconnaissance Program
 Senior Monitor, Office of
 Management and Budget

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NATIONAL RECONNAISSANCE OFFICE

DOC 11

12 August 2005

The Honorable Pat Roberts, Chairman
The Honorable John Rockefeller, Vice Chairman
Select Committee on Intelligence
United States Senate
Washington, DC 20510

Dear Mr. Chairman and Mr. Vice Chairman:

As you are aware, the National Reconnaissance Office recently commissioned a Red Team to examine the [redacted] of the Future Imagery Architecture (FIA) program, called [redacted]. Specifically, the Red Team was chartered to examine the viability of the [redacted] program and, if the program was not considered viable, to explore and examine any reasonable alternatives.

The FIA Red Team has completed its work and briefed various members of Congress and their staffs. This letter serves to transmit a copy of the Red Team's final, written report to ensure your complete access and insight into their results and recommendations.

The Red Team recommendations on [redacted] will be fully considered in determining a Director of National Intelligence position on the overhead imagery architecture. That position will be finalized by early September 2005, so as to inform final Congressional deliberations on the fiscal year 2006 budget.

The Red Team report has not been provided to the industrial base because of the cost references contained within and the potential disruptions to future acquisitions. For this reason, I ask that you do not distribute outside government channels. Should you have any questions or require additional information, please contact me.

Sincerely,

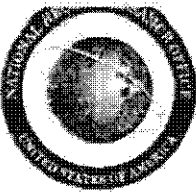
Betty J. Sapp
Business Plans and Operations

Enclosure

Final FIA Red Team Report

CL BY: [redacted]
CL REASON: 1.4(c)
DECL ON: 25X1
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1 May 2000

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NATIONAL RECONNAISSANCE OFFICE

2020/12/01 10:00:00

12 August 2005

The Honorable Ted Stevens, Chairman
Appropriations Committee
Defense Subcommittee
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

As you are aware, the National Reconnaissance Office recently commissioned a Red Team to examine the of the Future Imagery Architecture (FIA) program, called Specifically, the Red Team was chartered to examine the viability of the program and, if the program was not considered viable, to explore and examine any reasonable alternatives.

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Sincerely,

Betty J. Sapp
Business Plans and Operations

Enclosure

Final FIA Red Team Report

CL BY:
CL REASON: 1.4(C)
DECL ON: 25X1
DRV FROM: NCG 5.1
1 May 2000

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NATIONAL RECONNAISSANCE OFFICE

DOC 11

Title of the Dupes Document:

12 August 2005

The Honorable Duncan L. Hunter, Chairman
 Armed Services Committee
 U.S. House of Representatives
 Washington, DC 20515

Dear Mr. Chairman:

~~(S//TK)~~ As you are aware, the National Reconnaissance Office recently commissioned a Red Team to examine the ~~(b)(1), (b)(3), (b)(7)(C), (b)(7)(D)~~ of the Future Imagery Architecture (FIA) program, called ~~(b)(1), (b)(3), (b)(7)(C), (b)(7)(D)~~. Specifically, the Red Team was chartered to examine the viability of the ~~(b)(1), (b)(3), (b)(7)(C), (b)(7)(D)~~ program and, if the program was not considered viable, to explore and examine any reasonable alternatives.

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Sincerely,

Betty J. Sapp
 Betty J. Sapp
 Business Plans and Operations

Enclosure

~~(S//TK//NF)~~ Final FIA Red Team Report

CL BY: ~~(b)(3), (b)(7)(C), (b)(7)(D)~~

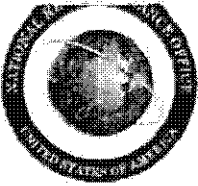
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1 May 2000

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NATIONAL RECONNAISSANCE OFFICE

Director of the Central Security Agency

12 August 2005

The Honorable John W. Warner, Chairman
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

~~(S//NF)~~ As you are aware, the National Reconnaissance Office recently commissioned a Red Team to examine the ~~(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424~~ of the Future Imagery Architecture (FIA) program, called ~~(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424~~. Specifically, the Red Team was chartered to examine the viability of the ~~(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424~~ program and, if the program was not considered viable, to explore and examine any reasonable alternatives.

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~~(S//NF)~~ The Red Team recommendations on ~~(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424~~ will be fully considered in determining a Director of National Intelligence position on the overhead imagery architecture. That position will be finalized by early September 2005, so as to inform final Congressional deliberations on the fiscal year 2006 budget.

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Sincerely,

Betty J. Sapp
Betty J. Sapp
Business Plans and Operations

Enclosure

~~(S//NF)~~ Final FIA Red Team Report

CL BY: ~~(b)(3) 10 U.S.C. 424, (b)(6)~~
CL REASON: 1.4(c)
DECL ON: 25X1
REV FROM: NCG 5.1
1 May 2000

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NATIONAL RECONNAISSANCE OFFICE

DOC 11

Office of the Deputy Director

12 August 2005

The Honorable Peter Hoekstra, Chairman
The Honorable Jane Harman, Ranking Member
Permanent Select Committee on Intelligence
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman and Ms. Harman:

As you are aware, the National Reconnaissance Office recently commissioned a Red Team to examine the [redacted] of the Future Imagery Architecture (FIA) program, called [redacted]. Specifically, the Red Team was chartered to examine the viability of the [redacted] program and, if the program was not considered viable, to explore and examine any reasonable alternatives.

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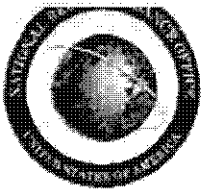
Betty J. Sapp
Business Plans and Operations

Enclosure

Final FIA Red Team Report

CL BY: [redacted]
CL REASON: 1.4(c)
DECL ON: 25X1
DRV FROM: NCG 5.1
1 May 2000

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NATIONAL RECONNAISSANCE OFFICE

DOC 11

Office of the Deputy Director

12 August 2005

The Honorable C. W. Bill Young, Chairman
Appropriations Committee
Defense Subcommittee
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

~~(S//TK)~~ As you are aware, the National Reconnaissance Office recently commissioned a Red Team to examine the ~~(b)(1)1-4c, (b)(1)1-4e, (b)(1)1-4g, (b)(3)10 U.S.C. 424~~ of the Future Imagery Architecture (FIA) program, called ~~(b)(1)1-4c, (b)(1)1-4e, (b)(1)1-4g, (b)(3)10 U.S.C. 424~~. Specifically, the Red Team was chartered to examine the viability of the ~~(b)(1)1-4c, (b)(1)1-4e, (b)(1)1-4g, (b)(3)10 U.S.C. 424~~ program and, if the program was not considered viable, to explore and examine any reasonable alternatives.

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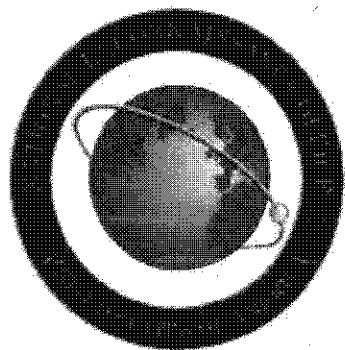
Betty J. Sapp
Betty J. Sapp
Business Plans and Operations

Enclosure
~~(S//TK//NF)~~ Final FIA Red Team Report

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(b)(1), (1.4c), (b)(7)(C), (b)(7)(D)
U.S.C. 424

FIA Satellite Systems Replan ECP and Status Update

Presentation for the Congressional Staff

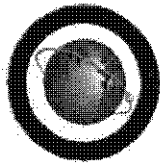
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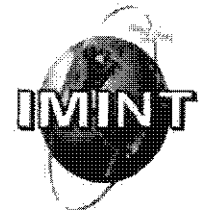
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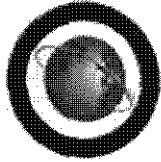
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Agenda

- Review results of Negotiation with Boeing on FIA Restructure
- Discuss application of (b)(1), 4e, (b)(1), 4g, (b)(3) 10 U.S.C. 424 (b)(1), 4e, (b)(1), 4g, (b)(3) 10 U.S.C. 424 on FIA
- Provide current program status

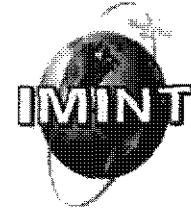
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(b)(1), 4c, (b)(1), 4c
(b)(3) 10 U.S.C. 424

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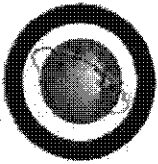
Replan Background



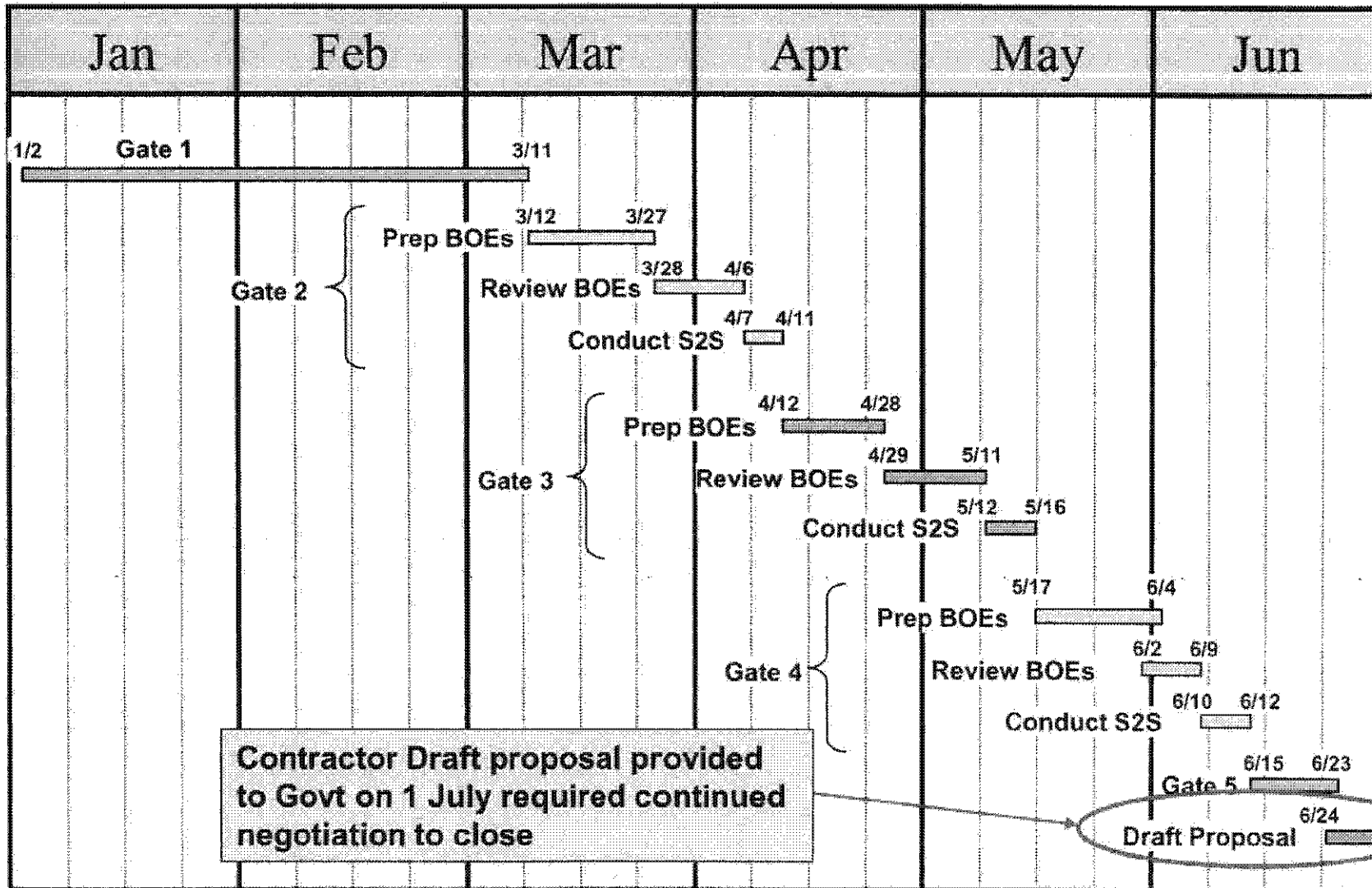
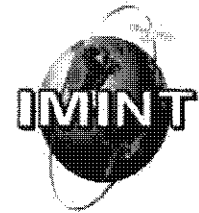
- FIA (b)(1), 4c, (b)(1), 4c
(b)(3) 10 U.S.C. 424 replan directed by the DCI on 23 Oct 03
 - Response to continuing problems with FIA program performance and possibility of an (b)(1), 4c, (b)(1), 4c, (b)(3) 10 U.S.C. 424
- Govt request for Contractor ROM on 1 Nov
 - CROM received on 22 Nov
- Govt issued ATP for (b)(1), 4c, (b)(1), 4c
(b)(3) 10 U.S.C. 424 Replan on 23 Dec
 - Provided contractor the ability to execute changes
 - Directed deletion of (b)(1), 4c, (b)(1), 4c
(b)(3) 10 U.S.C. 424 from first flight vehicle
 - Established 1 Jul as planning date for final negotiation of ECP

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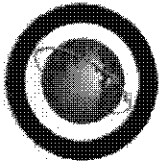
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ECP Schedule

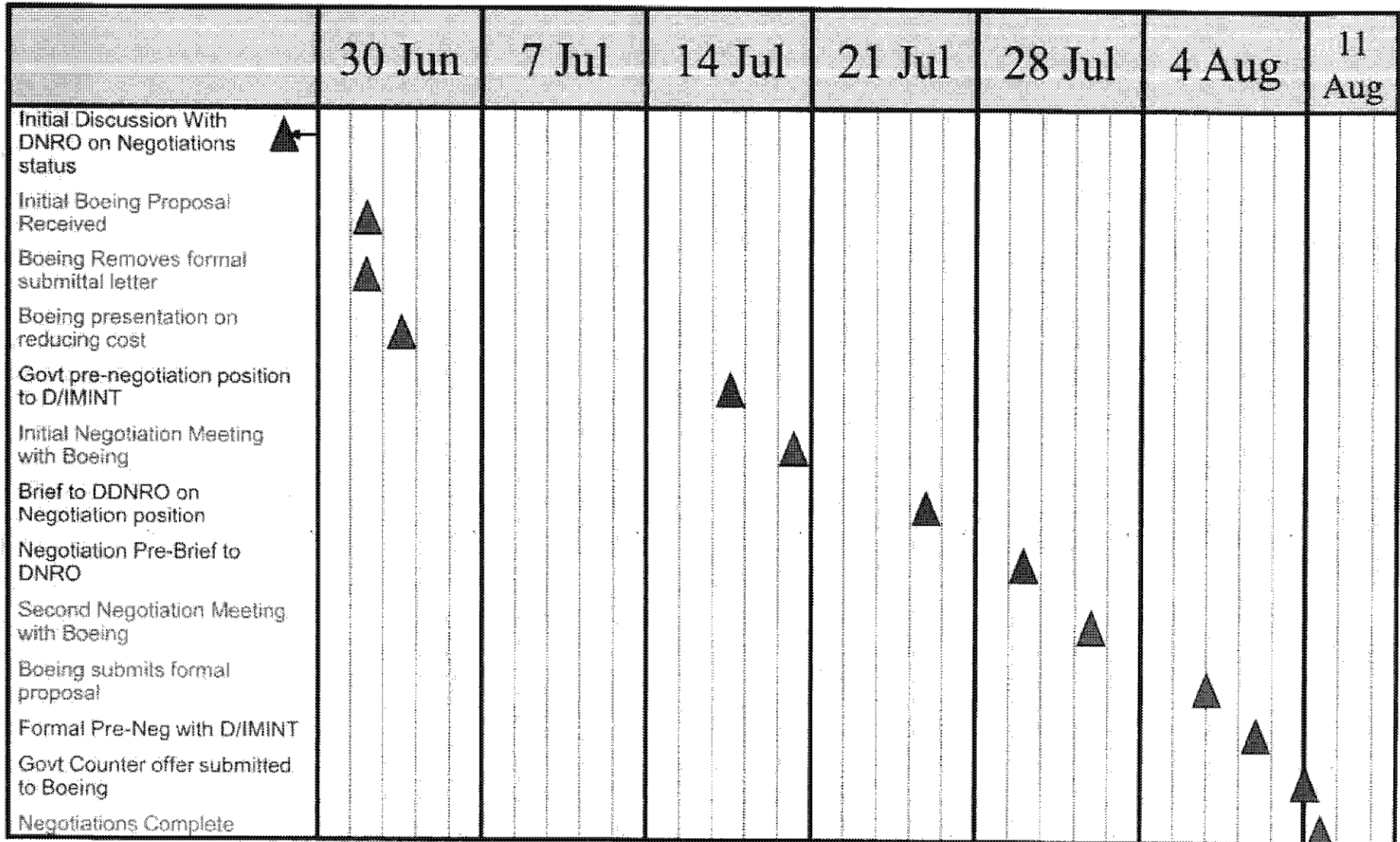
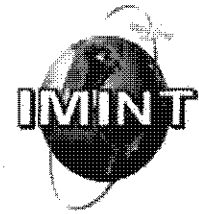


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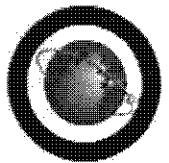
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Negotiation Timeline

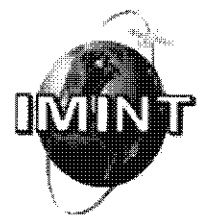


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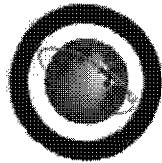


Negotiation Position Track

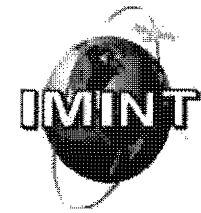


	Boeing Initial Proposal	Govt Position
Actual Cost	(b) (1) 4e, (b) (1) 4e, (b) (3) 100, (b) (1) 4e, (b) (1) 4e, (b) (3) U.S.C. 424 (b) (4)	(b) (1) 4e, (b) (1) 4e, (b) (3) 100, (b) (1) 4e, (b) (1) 4e, (b) (3) U.S.C. 424
DCAA Adjustment		
Teammate MR		
Teammate COM		
Teammate Fee		
Prime MR		
Total Cost		
Prime COM		
Prime Fee		
Total ECP		
Original Contract		
Fee Penalty		
Total Revised Price		10,332

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Boeing ECP As Submitted

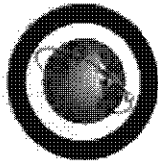
- On 5 Aug Boeing submitted firm proposal
- Delta Cost was [REDACTED]
 - Increase of [REDACTED] in development, and decrease of [REDACTED] in O&M
- Total resulting contract value would have been \$10.487B
- Govt analyzed proposal against S2S #3 understandings and existing contract data

*Actual Increase was [REDACTED] Boeing Incorrectly applied their agreed to [REDACTED] fee penalty to the ECP value

ECP 016 DELTA BASIC CONTRACT MODIFICATION

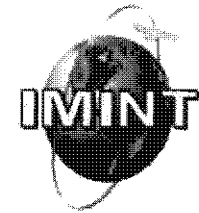
	TOTAL CONTRACT VALUE AS OF POD50	CLIN 0002 O&M (Deleted)	Starting Development Contract Value	ECP Design, Development & Production	ECP Basic O&M	Total ECP	REVISED TOTAL CONTRACT VALUE AS OF ECP-1B
Estimated Cost	[REDACTED]						
FCCOM	[REDACTED]						
TOTAL TARGET COST	[REDACTED]						
Task Order Fee	[REDACTED]						
Incentive Fee	[REDACTED]						
Award Fee	[REDACTED]						
TOTAL FEE	[REDACTED]						
TOTAL CPFF/AF/IF	[REDACTED]						\$10,580
TOTAL FEE %	[REDACTED]						

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Breakdown of Boeing Developmental Proposal



Current Contract

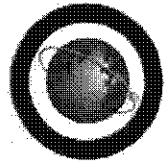
ECP 16 Proposal

Proposed Total Contract

Current Contract		ECP 16 Proposal		Proposed Total Contract	
Current Dev Cost	\$5,229.72	Proposed ECP Cost	\$4,095.05	Total Dev Contract Cost	\$9,324.77
1.1 SEIT/PM	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424, (b)(4)	1.1 SEIT/PM	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424, (b)(4)	1.1 SEIT/PM	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424, (b)(4)
1.3 Ground	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424	1.3 Ground	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424	1.3 Ground	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424
1.4 Launch	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424	1.4 Launch	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424	1.4 Launch	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424
Offset Account (no-add)		Offset Account		Offset Account	
Other MR/COM/TM Fee		Teammate MR		Other MR/COM/TM Fee	
		Teammate COM			
		Teammate Fee			
		Prime MR			
		DCAA Adjustment			
Current Dev Price	\$5,865.18	Proposed ECP Price	\$4,565.96	Total Dev Price	\$10,341.14
Current Fee	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424, (b)(4)	Prime ECP Fee	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424, (b)(4)	Existing Total Price	10,431.14
Current COM		Prime ECP COM		Less Fee Penalty	(90.00)
Current Dev % Fee		Proposed ECP % Fee		Resulting Dev % Fee	(b)(1)(1), (b)(1)(4), (b)(1)(5), (b)(3), 10 U.S.C. 424, (b)(4)
		ECP % Fee (Including BSS Fee)		Resulting % Fee (Including BSS ECP Fee)	

- Govt breakout of Boeing proposal against existing contract values
- Starting Basis for Govt Analysis

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Negotiation Position Track



	Boeing Initial Proposal	Govt Position	Boeing Revised Proposal	Govt Position	Boeing Formal Proposal	Govt Position	Final Negotiation
Actual Cost	(b)(1), (1.4c), (b)(3), (b)(4)	(b)(1), (1.4c), (b)(3), (b)(4)	(b)(1), (1.4c), (b)(3), (b)(4)	(b)(1), (1.4c), (b)(3), (b)(4)	(b)(1), (1.4c), (b)(3), (b)(4)	(b)(1), (1.4c), (b)(3), (b)(4)	(b)(1), (1.4c), (b)(3), (b)(4)
DCAA Adjustment							
Teammate MR							
Teammate COM							
Teammate Fee							
Prime MR							
Total Cost							
Prime COM							
Prime Fee							
Total ECP							
Original Contract							
Fee Penalty							
Total Revised Price		10,332		10,332		10,334	10,334

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Budget Available for FSS Contract

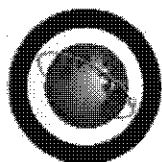
	thru FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Total
FSS Contract Dev Budget (FY04 adjusted)	3,126.8	1,976.9	1,785.1	1,580.9	1,068.7	432.6	215.6	157.1	10,343.8
FSS Contract O&M Budget			46.6	75.6	85.4	87.2	89.8	81.8	466.4

Total RDT&E Available \$10,343M

Total O&M Available \$466M

- Examined fiscal year spread based on head count and on contractor proposed spread

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Budget vs Initial and Final ECP-16 Positions (Dev)

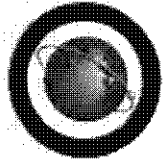


	thru FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	Total
Current Development Budget	3,126.8	1,976.9	1,785.1	1,580.9	1,068.7	432.6	215.6	157.1		10,343.8

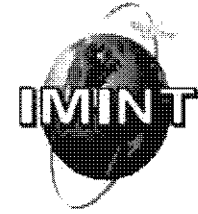
Contractor Position	
Contractor Proposed	(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
Gov't MR	
Total Required	
FY Delta - Contractor	
Cumulative Delta - Contractor	

Govt Position	
Government Recommendation	(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
Gov't MR	
Total Required	
FY Delta - Gov't	
Cumulative Delta - Gov't	

**Phasing to be Reviewed Following
NRO ICE and Contractor IBR in Fall**



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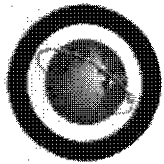
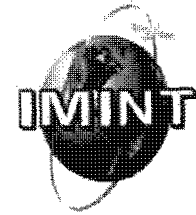


Other Terms and Conditions

- Relieved contractor commitment of \$60M for (b)(1), (1.4c), (b)(1), (1.4d), (b)(3), (U.S.C. 424) O&M in 2006-2009
 - Actual cost for govt will be about \$20M
- Allowed Boeing to share teammate fee with any teammate (b)(1), (1.4a), (b)(3), (U.S.C. 424) but with no fee on fee addition
- Agreed to allow Boeing to share 50% of any under run up to \$200M (\$100M more potential fee)
- Changed slope of Schedule Incentive to 12 months instead of 10 months

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Negotiation Summary

- Govt achieved its objectives
 - Allowed incorporation of appropriate resources, risk reduction, and testing
 - Corrected flawed contract structure and incentive plan
 - Provided fair settlement for both parties
- Rebaseline sets program down the right path
 - Barring major technical issue, should cover current risk
- Supported overall enterprise restructure for the end to end effort

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Agenda



- Review results of Negotiation with Boeing on FIA Restructure

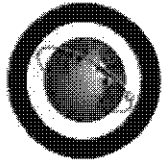
- Discuss application of [REDACTED] on FIA

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

- Provide current program status

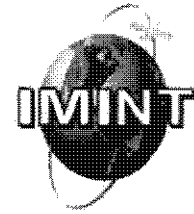
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(b)(1)1.4c,
(b)(1)1.4g, (b)(3)
10 U.S.C. 424

Background



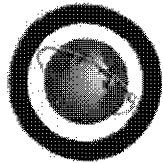
- [Redacted]

- NRO currently incorporating experiment on [Redacted] to understand intelligence value of [Redacted]

- FIA asked to examine possibility of [Redacted]

[Redacted]

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(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

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Study Objectives



- Study the incorporation of (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 capability into FIA
- Develop and evaluate (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 FIA concept:
 - Develop (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
 - Model/analyze (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 properties of the (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 and identify issues or constraints
 - Develop/assess (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 concepts
 - Assess (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 resolution options
 - Address (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 modifications
- Identify technical and schedule risks
- Identify follow on activities

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(b)(1): 4c, (b)(7): 1.4g, (b)(3): 10 U.S.C. 424

FIA

IMINT

(b)(1): 4c, (b)(7): 1.4g, (b)(3): 10 U.S.C. 424

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(b)(1): 4c, (b)(7): 1.4g, (b)(3): 10 U.S.C. 424


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(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Results

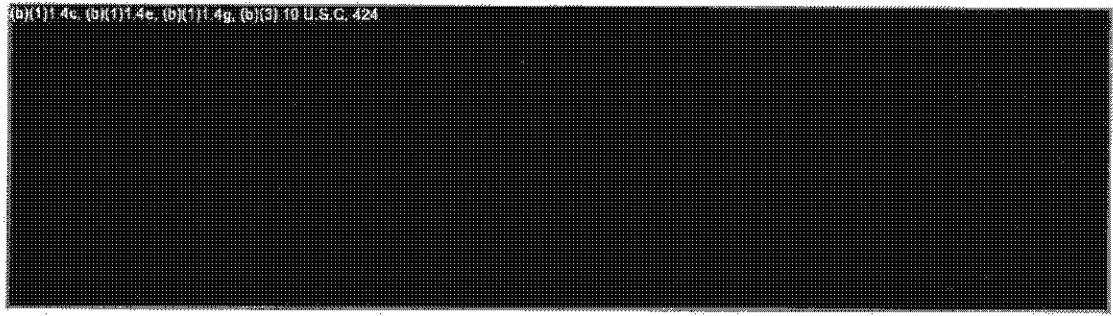
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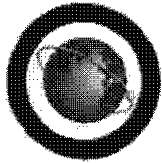
(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



19

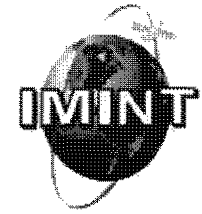
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



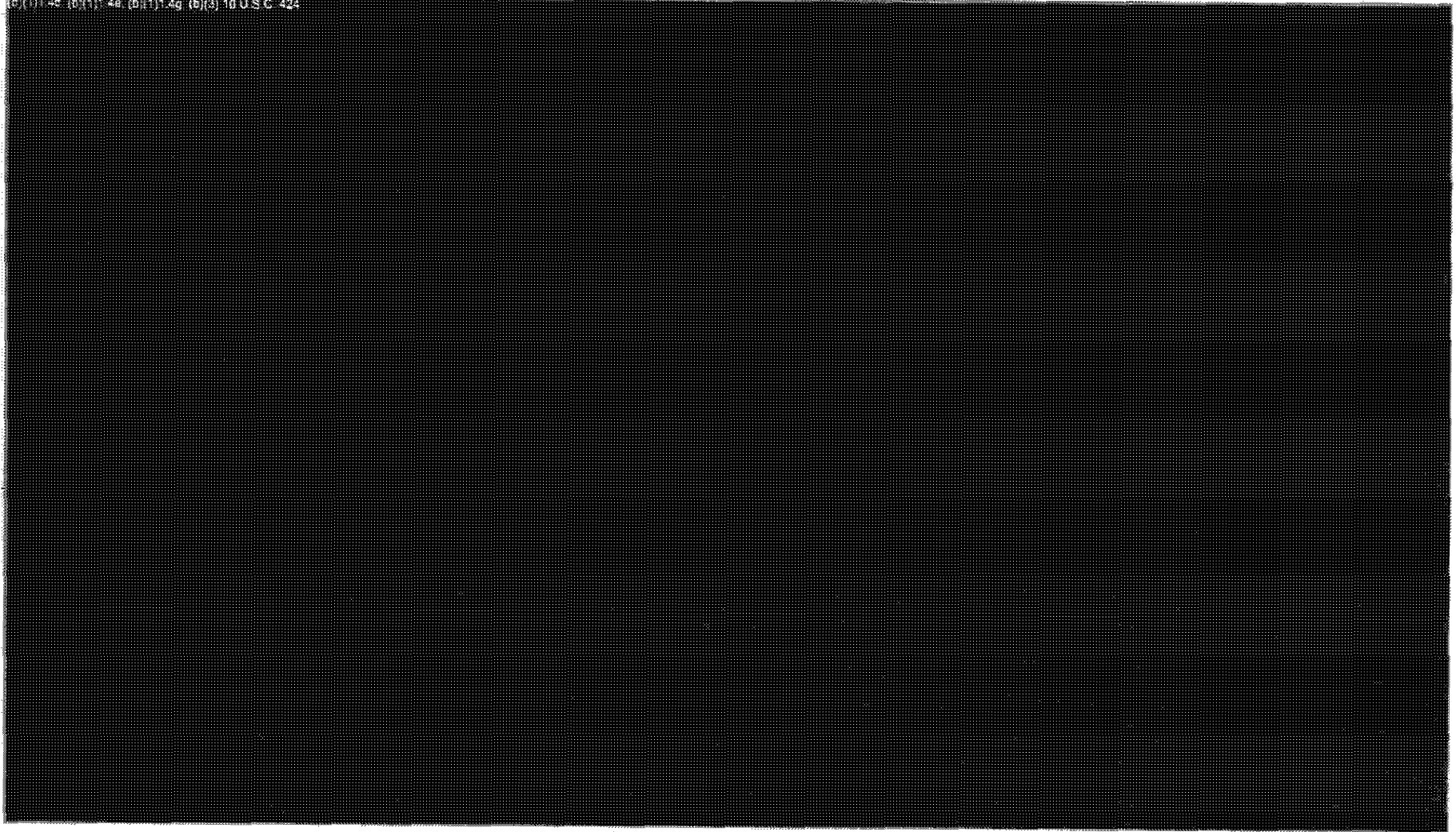


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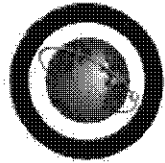
Focal Plane Layout



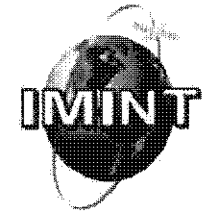
(b)(1)1-c (b)(1)4e (b)(1)1.4g (b)(3)10 U.S.C. 434



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Focal Plane Results

No significant limiting focal plane issues identified

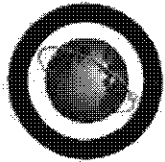
- Redesign is low risk – within process capabilities

— (b)(1) 4c, (b)(1) 4g, (b)(6) 10 U.S.C. 424 focal planes could be built with appropriate electronics

— (b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424 cases met SNR specs

— (b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424 was marginal for SNR (b)(1) 4c, (b)(1) 4g, (b)(2) 10 U.S.C. 424 inputs used

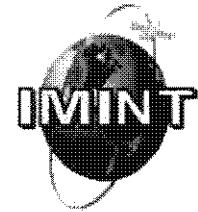
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(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

Program Implications



Calendar Year

2003

2004

2005

2006

2007

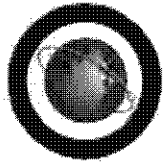
2008

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

[Redacted content]

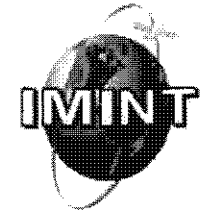
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(b)(1) 4c
(b)(1) 4g, (b)(3)
10 U.S.C. 424

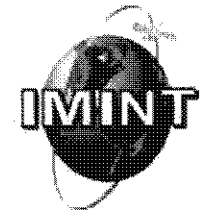
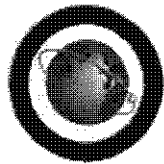
Performance Impact Summary



- Baseline FIA [redacted] Has Significant Impacts on [redacted] Performance
- No Significant Limiting Focal Plane Issues Identified
- Lengthy [redacted] Focal Plane Redesign combined with the need for additional FY04 funding fundamentally preclude [redacted] on [redacted]

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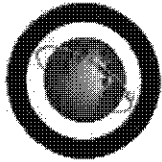
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Follow-on Activities

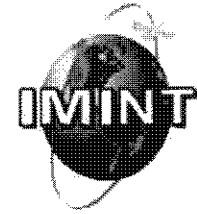
- Examine FIA [redacted] configuration
 - In Work, preliminary results expected 03NOV
- Conduct study of [redacted] as compared with [redacted] Utility
- Conduct study to determine appropriate insertion point for additional [redacted] collector in IMINT Architecture of the Future

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Agenda



- Review results of Negotiation with Boeing on FIA Restructure
- Discuss application of (b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424 (b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424 on FIA
- Provide current program status

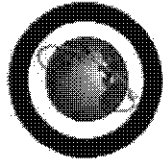
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Satellite Names

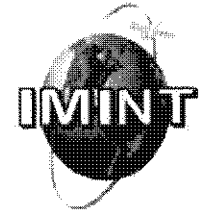
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3)10 U.S.C. 404

Satellite Names

(b)(1)1.4c, (b)(3)1.4e, (b)(1)1.4g, (b)(3)10 U.S.C. 424



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Notable Program Milestones

- All Flight Mirrors incorporated on [REDACTED]
 - First light this week
- [REDACTED] in fabrication complete
 - In final test prior to [REDACTED] Delivery
- [REDACTED] software fully coded and integrated
 - System acceptance test begins 3 Dec

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~~SECRET//NOFORN~~



Notable Program Issues

- Many Parts problems negatively impacting schedule
 - Single ASIC issue impacting [redacted] payload
 - [redacted] issues significantly delaying bus sell-off for [redacted]
 - Multiple parts issues in [redacted] has made it [redacted] critical path
- Correcting quality processes is a major program focus

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FIA

~~SECRET//DYE//X4~~
(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Program Schedule

Critical Path - October 2003

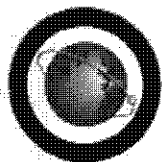


2003					2004					2005																	
A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

[Redacted content]

~~SECRET//DYE//X4~~



FIA

(b)(1)1.4c, (b)(1)1.4g, (b)(2) 10 U.S.C. 424

~~SECRET//DYE//IX1~~

Program Schedule

(b)(1)1.4c, (b)(1)1.4g, (b)(2) 10 U.S.C. 424

Critical Path - October 2003

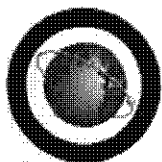


2003					2004					2005					2006																		
J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O

(b)(1)1.4c, (b)(1)1.4g, (b)(2) 10 U.S.C. 424

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~~SECRET//D//E//X1~~

FIA Integrated Ground Schedule October 2003

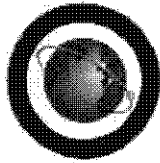


2002			2003			2004			2005			2006			2007															
O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A

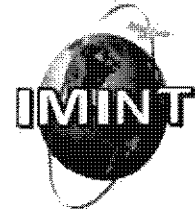
(b)(1)1.4c, (b)(1)1.4g, (b)(2)10 U.S.C. 424



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~~SECRET//BYE//X1~~



FIA Satellite

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Rebaseline sets program down the right path
 - Provides right resources to get the job done
 - Barring major technical issue, should cover current risk

- (b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 [redacted] test, and transition completes (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 [redacted]

- (b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 [redacted]
 - Technical design and performance are solid
 - Very challenging schedule given realized slips

- (b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 [redacted]
 - Design fully vetted and predicted performance better than expected
 - Challenging integration of optical payload remains our top risk
 - Schedule holding although substantial work remains

- (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 [redacted] Outlook
 - Key year for (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 [redacted]
 - Budget in place covers all anticipated needs
 - Chances for success remain positive although challenging

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~~SECRET//BYE//X1~~

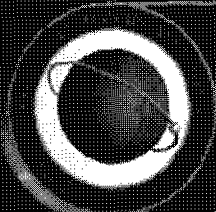


Where We Go From Here

- Initial Baseline Review
 - Make sure what we negotiated is put in place
- Independent Cost Estimate
 - Make sure we understand the cost of what we've put in place
- Test thoroughness review
 - Make sure it's enough
- Independent Review Panel (Faga Follow-up)
 - Make sure it all fits

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Future Imagery Architecture

(b)(3) 10 U.S.C. 424; (b)(6)

Deputy Director, FIA Satellite Systems (FSS)
NRO IMINT

12 November 2003

(b)(3) 10 U.S.C.
424; (b)(6)

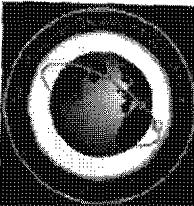
CL By

CL Reason: 1.4(c)

DECL ON: X1

Derived From: NCG 5.1 01 May 00

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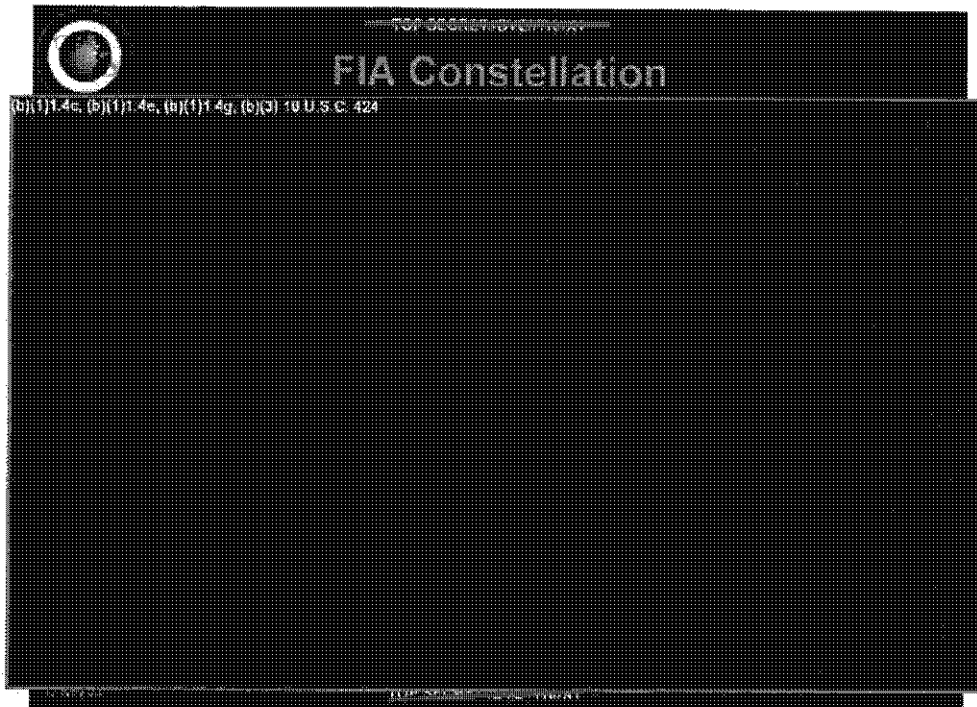
Future Imagery Architecture (FIA)

- FIA is...
 - The *next generation* National system for spaceborne imagery collection, processing, and exploitation

- NRO Elements are:
 - MIND: Mission Integration and Development (MIND)
 - DPEs: Data Provider Elements
 - (b)(1)1,4C (b)(1)1,4B (b)(3) (U) S E C 42A
 - [Redacted]
 - Command and Control
 - Image Processing

- NIMA Elements are:
 - Information Management
 - Archive & Dissemination
 - Exploitation

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~~(S//TK)~~ Key points:

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(new)

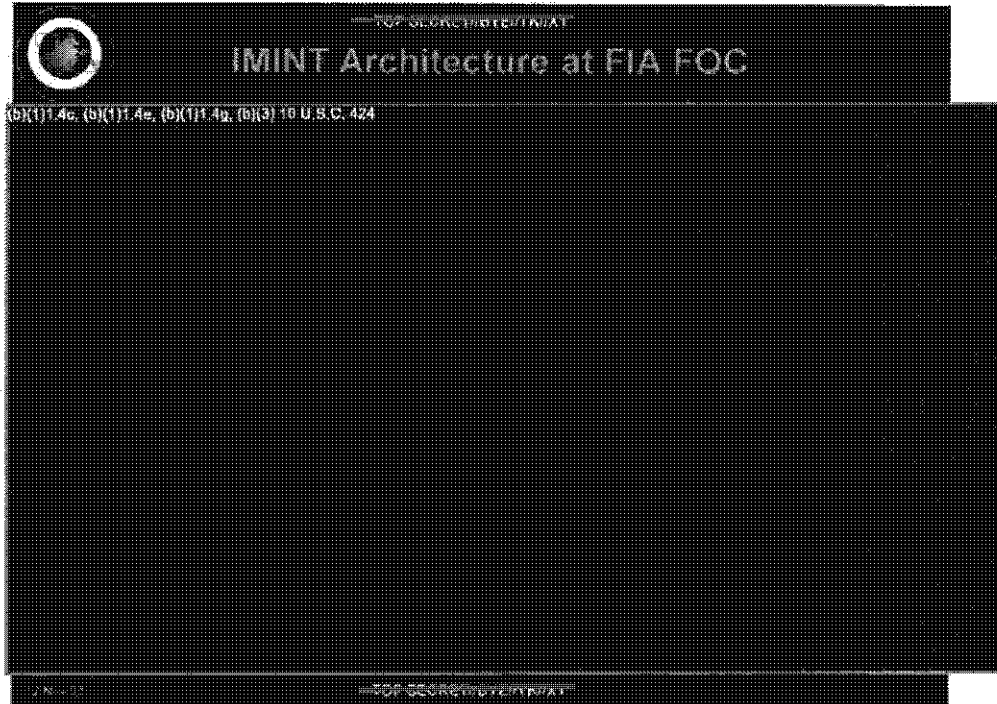
- Revisit improvement

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Area collection improvement

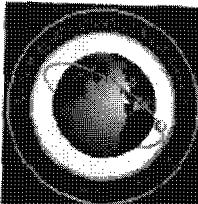
(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(new)



- ~~(S//TK)~~ Based on current MLE data, (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 will still be flying in (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424.
- ~~(S//TK)~~ The (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 will shut down at (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 flyout (right around this time).
- ~~(S//BYE//TK)~~ Via the RRF, there is a "virtual" link between (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 and the (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424.
- ~~(S//TK)~~ The architecture is survivable; survivable/backup components and locations are not shown on this chart.
- ~~(S)~~ (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 can be used for command & control.

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FSS Program Progress

Technical

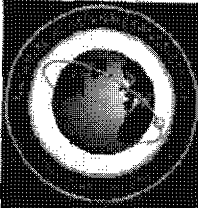
- (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 Critical Design completed
 - Detailed design review 16 October 03
- Delivered composite optical bench and all primary mirrors
- (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 Mirror Installation Completed
- Completed fab on (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
- Completed independent review of optical payload
- Completed software development for (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
- Delivered Wideband Data Equipment to (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 on 4 Nov

Programmatic

- \$4.5B ECP negotiated and in place
- Integrated schedule established
- Quality audits of major manufacturers
- Rebaselined end-to-end test strategy
- New incentive plan incorporated

12 Nov 03

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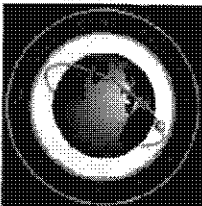


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Notable Program Issues

- Many Parts problems negatively impacting schedule
 - Single ASIC issue impacting [redacted] payload [redacted] (Control Moment Gyros) issues significantly delaying bus sell-off for [redacted]
 - Multiple parts issues in [redacted] has made it [redacted] critical path
- Correcting quality processes is a major program focus

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~~TOP SECRET//BYE//TK//X1~~

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 1.0 U.S.C. 424

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 1.0 U.S.C. 424

Program Schedule

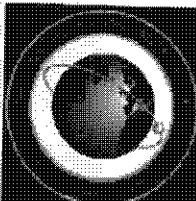
Critical Path - October 2003

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 1.0 U.S.C. 424



12 NOV 03

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Flight 1 and 2

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Taking

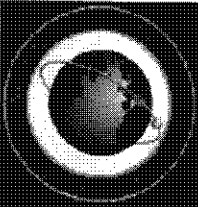
Shape

(b)(1)1.4c, (b)(1)1.4g, (b)(1)1.4h, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(1)1.4h, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(1)1.4h, (b)(3) 10 U.S.C. 424

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~~TOP SECRET//BYE//TK//X1~~

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424

Program Schedule

Critical Path - October 2003

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424

2003

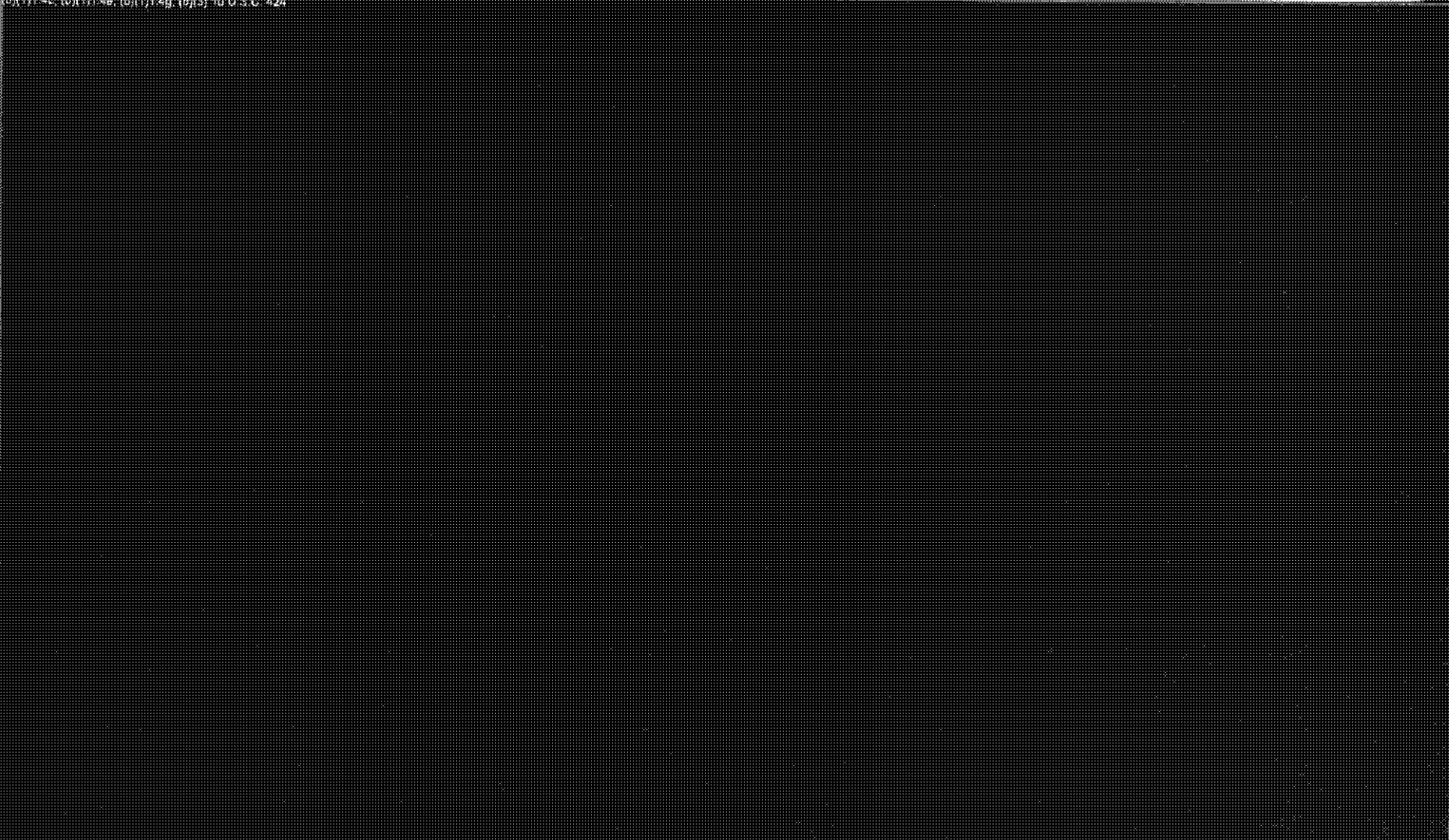
2004

2005

2006

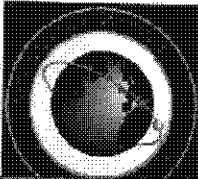
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424



12 Nov 03

~~TOP SECRET//BYE//TK//X1~~



Flight 1

~~TOP SECRET//BYE//TK//X1~~

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

Taking

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

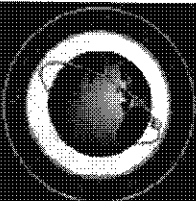
Shape

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

12 Nov 03

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(b)(1), 4c, (b)(1), 4g, (b)(1), 10 U.S.C. 424

Schedule

October 2003

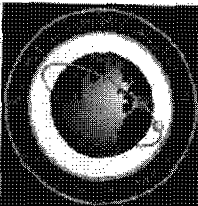
2002			2003			2004			2005			2006			2007															
O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A

(b)(1), 4c, (b)(1), 4g, (b)(1), 10 U.S.C. 424



12 Nov 03

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Current Challenges and Responses

- **Many issues with Parts Manufacturing and Quality**

- Govt/Boeing (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
- Significant increase in Quality Assurance staff included in rebaseline

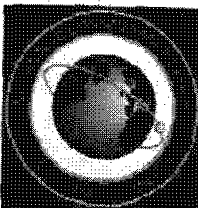
- **Staffing at Boeing and Major Subs**

- Companies have implemented aggressive staff priority, hiring, and retention plans

- **Schedule Erosion on** (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Senior (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 management team scrubbing entire I&T flow
- Contractor training additional teams to allow 24/7 operations if needed

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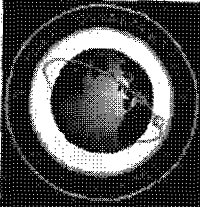
FSS Rebaseline Effort

- Based upon (b) (1) 4c, (b) (3) 10 U.S.C. 424
- Major program office activity since start of year
 - Every aspect of entire program being replanned
- Changed contract to satellite deliverables vice capability
 - Eliminates unsatisfactory CAIV elements and provides more government oversight of delivery actions
- Added multiple government controlled milestones
 - Pre-ship reviews, System Test readiness reviews, etc
- New Award Fee provisions
 - Incentives on schedule, higher Award Fee impact
- Revised Development Value - \$10.3B (increase of \$4.5B)

Negotiations Completed 11 Aug 03

12 Nov 03

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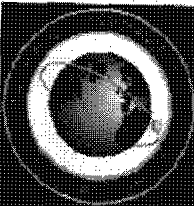


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Where We Go From Here

- **Integrated Baseline Review**
 - Make sure what we negotiated is put in place
- **Independent Cost Estimate**
 - Make sure we understand the cost of what we've put in place
- **Test Thoroughness Review**
 - Make sure it's enough
- **Independent Review Panel (Faga Follow-up)**
 - Make sure it all fits

~~TOP SECRET//BYE//TK//X1~~



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FIA Satellite

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Rebaseline sets program down the right path
 - Provides right resources to get the job done
 - Barring major technical issue, should cover current risk

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

[Redacted]

test, and transition completes

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

[Redacted]

- Technical design and performance are solid
- Very challenging schedule given realized slips

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

[Redacted]

- Design fully vetted and predicted performance better than expected
- Challenging integration of optical payload remains our top risk
- Schedule holding although substantial work remains

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Outlook

- Key year for [Redacted]
- Budget in place covers all anticipated needs
- Chances for success remain positive although challenging

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

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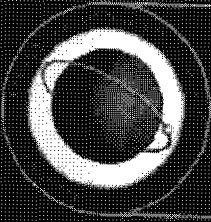
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FIA PROGRAM UPDATE

Mr. Peter B. Teets
Director, NRO
XX February 2004

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~~SECRET//BYE//SI//TK//IX.1~~



Background: Where We've Been

- Sep 1999 award of \$5B FIA Satellite Effort to Boeing

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- First time entrant into imaging satellite market
- Effort incorporated then popular acquisition streamlining elements

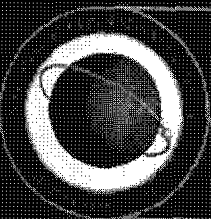
(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Unknown effect upon system life
- Illuminated NRO enterprise-wide issues with parts (HBTs) and processes
- DNRO created the 2002 Faga Panel to review the FIA effort
 - Exposed serious structural problems with the ongoing effort
 - Predicted a slip of at least 2 to 3 years and billions in cost growth
 - Coupled with [redacted] issues, raised [redacted]

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

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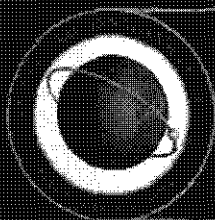
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Background: What We Did

- Examined detailed plans for multiple alternatives
 - Additional (b)(1), 4c, (b)(1), 4g, (b)(3), 10 U.S.C. 424 commercial imagery, accelerated FIA, status quo
- Determined FIA must be fixed and slip held to minimum
 - (b)(1), 4c, (b)(1), 4g, (b)(3), 10 U.S.C. 424
- DCI and SecDef agreed
 - Schedule directed as #1 priority; at all costs, (b)(1), 4c, (b)(1), 4g, (b)(3), 10 U.S.C. 424
 - Increased funding for commercial imagery as insurance
- FY 03 Budget restructured with assistance of Congress
 - President's FY 04 request aligned with program needs
- Established the FIA Joint Management Office (JMO) to evaluate and monitor the FIA end-to-end enterprise
 - Established IMINT Strategy Senior Steering Group (IS3G)
- Put new Program Leader in place to oversee restructure

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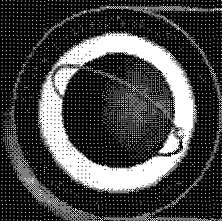


Top Level Status

- **Great strides made over just the last year**
 - Mission Assurance reinstated as program focus
 - Contract restructured and moving forward
 - Cost and Schedule baseline in place that forms the basis for success
- **And the work continues**
 - Multiple ongoing reviews in process or scheduled to make sure we stay on track
 - Congressionally directed ICE, Audit, and Independent Review
 - DDSE Test thoroughness review
 - RAND Lesson Learned Study
 - Cost System Surveillance Review
- **Still a challenging journey, but now on the right track**

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SECRET//BYE//SI//TK//X1



FIA PROGRAM UPDATE

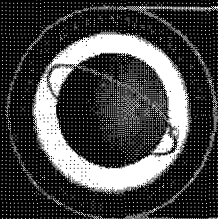
(S) (U) U.S.C. 424, (b)(6)

Director, FIA Satellite
Systems

XX February 2004

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~~SECRET//BYE//SI//TK//X1~~



Topics

- **The FIA Architecture and Enterprise**
- **Issues with Existing Program**
- **Actions Taken**
- **Status and Outlook**

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FIA Satellite Architecture

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

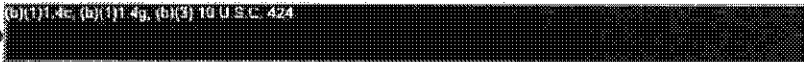


(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



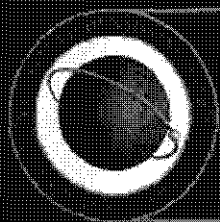
Therefore must maintain ability to fly both constellations until
then.

-Austere backup to



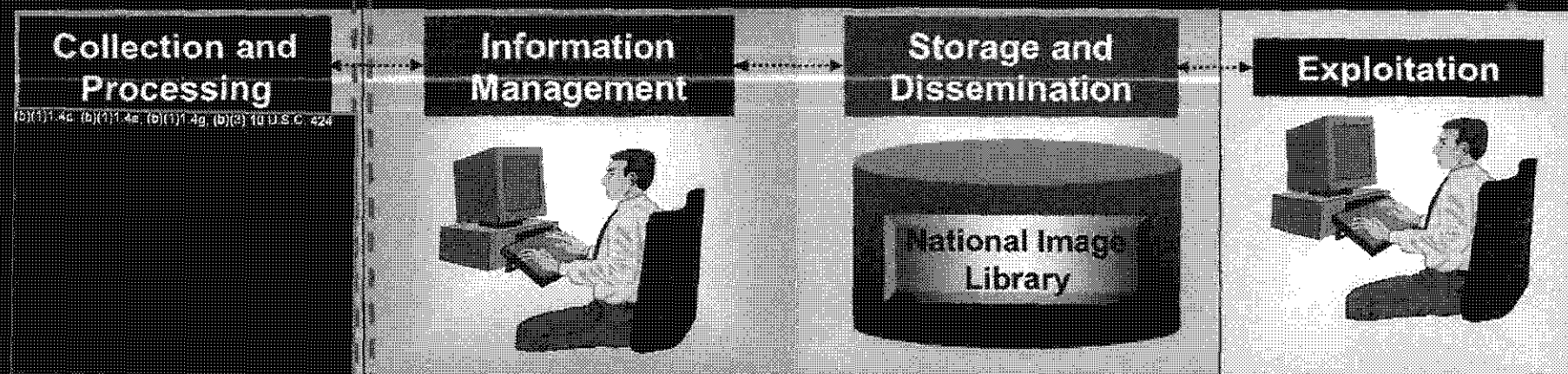
(b)(1)1.4c, (b)(1)1.4g,
(b)(3) 10 U.S.C. 424

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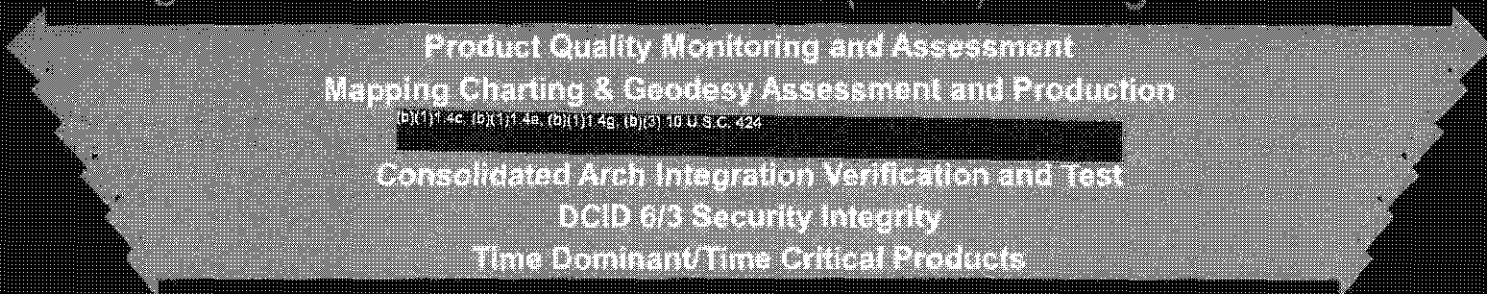
(U) FIA Enterprise Architecture

- FIA represents a change to every element of end-to-end image chain
- Portions individually managed by NRO and NGA
- DCI directed Joint Management Office to ensure end-to-end system worked



NRO Managed

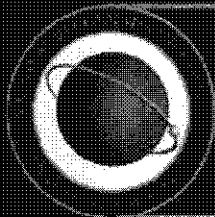
NGA (NIMA) Managed



Enterprise Threads

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SECRET//BYE//SI//TK//X1

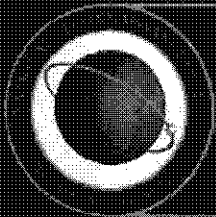


JMO Oct 02 End-to-End Assessment

Cost

- **FIA program budget (thru FY09)** **\$14.29B**
 - \$4.5B (31%) expended to date
- **NRO Cost Group/JMO Independent Cost Est** **\$17.64B**
 - Included all NRO and NGA costs (excluding launch)
- **Additional budget required** **\$ 3.35B**
 - 19% increase in total program thru 09
 - Expenditures through 02 represent 25% of effort

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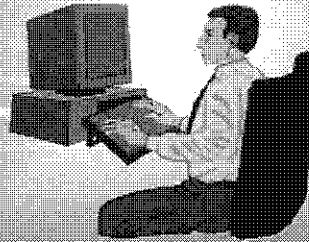
JMO Baseline Enterprise Assessment

(Sep 02)

Collection and Processing

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

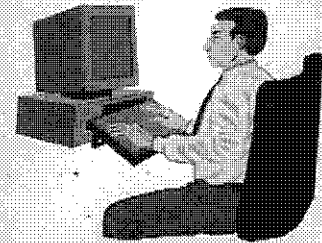
Information Management



Storage and Dissemination



Exploitation



NRO Managed

NGA (NIMA) Managed

Enterprise Threads

Product Quality Monitoring and Assessment

Mapping Charting & Geodesy Assessment and Production

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Consolidated Arch Integration Verification and Test

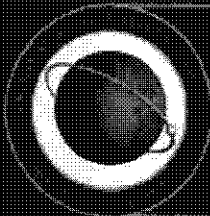
DCID 6/3 Security Integrity

Time Dominant/Time Critical Products

SECRET

█ Significant Risk █ Moderate Risk █ Acceptable Risk

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JMO Schedule Recommendation

(Moderate Confidence)

2003				2004				2005				2006				2007				2008			
1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th

(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(3) 16 U.S.C. 42d



IOC: Initial Operating Capability

FOC: Final Operating Capability

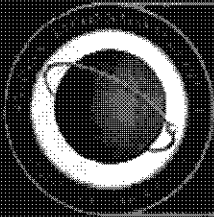
Baseline

JMO Recommendation

No Change

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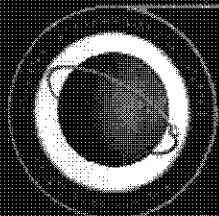


Programmatic Changes

- Highest priority was to fix ongoing efforts at Boeing
 - Contractor reports indicated program “on-track”
 - Careful analysis revealed serious cost, schedule, management, and engineering issues
- Corrective actions:
 1. Directed contractor to eliminate requirement for [REDACTED]
(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424
 2. Directed added delays in the [REDACTED]
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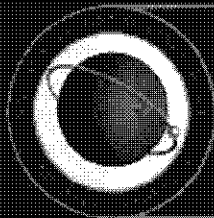
Replanning Activity

- **Intensive seven-month shoulder-to-shoulder process**
 - Coordinated Govt/Contractor effort to fully understand and assess program's cost, risk, and actions needed to meet DCI/DNRO direction
- **Accompanied by complete rebuild of:**
 - Contractor's work statement
 - Schedule and cost management processes
 - Reporting requirements
 - Fee plan
 - Quality and mission assurance activities
 - Subcontractor/teammate management approach
- **Identified (b)(1), (4), (b)(1), (4), (b)(2)
10 U.S.C. 424 worth of necessary added costs & scope**
 - With fee, total price increase to Boeing contract was \$4.5B*

*Note: \$4.5B is consistent with JMO independent estimate for total FIA increase of \$3.35B since this did not include additional \$1.4B in FY08 and 09

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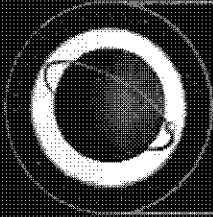
FIA Satellite Contract Increases

- **Added Costs for the Boeing Satellite Contract**
 - Negotiations Settled Aug 11, 2003
 - Breakdown between system elements is approximate
 - Significant increases recognize both new work / testing / risk reduction activities plus true size of original overrun

Initial Contract Value	+	Neg Cost Increase	=	Final Contract Value
= \$5.9B		= \$4.5B		= \$10.3B

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (e)(3) 10 U.S.C. 424

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Sample Risk Reduction and New Tasks

- **Integration and test time extended from** (b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424

- **Impact: Substantially higher mission assurance**
- **10-week payload thermal testing added prior to shipment**
 - **Impact: Detects problems that would cause nearly one-year slip if discovered downstream**
- **Second source of spacecraft batteries added**
 - **Impact: Guards against failure in less experienced primary source**
 - **Second source batteries available in time for** (b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424
- **Tenfold increase in quality assurance and mission assurance personnel**
 - **Impact: Hardware and design flaws discovered and solved before they become on-orbit issues**
- **Plus, added significant, fully costed, schedule margin**

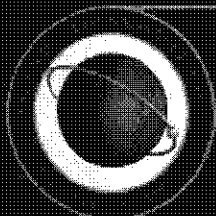
(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424

if issue occurs

(b)(1) 1.4c, (b)(1) 1.4g, (b)(3) 10 U.S.C. 424

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Current Status

Program progressing well

- Designs complete for [redacted]

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- [redacted] nearing start of integration

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- [redacted] Payload Bench fully populated with mirrors and alignment complete

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Ground System Hardware substantially through installation at [redacted] Ground Station

(b)(1)1.4c, (b)(3) 10 U.S.C. 424

- Nearly 4 million lines of code tested and delivered to integration

- All [redacted] communication equipment delivered and installed

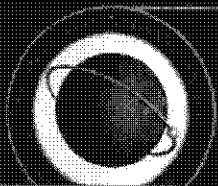
(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

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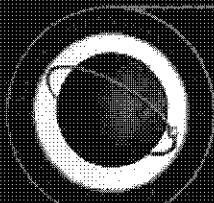
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(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424



(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

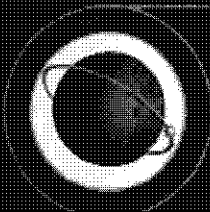
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(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

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Performance Summary

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

- **Performance**

(b)(1) 4c, (b)(1) 4e, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4e, (b)(3) 10 U.S.C. 424

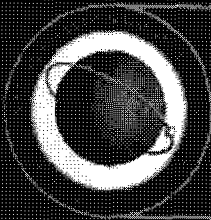
remains on-track
well past design close out -
- at or above requirements

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

- Eng Model test results exceeding predictions
- Good margin against likely and already experienced manufacturing issues

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Cost and Schedule Status

Cost

- Limited period over which to track since negotiation
 - Contractor retains good margin and is adequately funding all work
 - At least 9 months until any real cost problem could be detected
 - Government also retains some limited margin
- Outlook: Barring significant hardware or test issue, we expect costs to remain within budget

Schedule

- Erosion along critical path since Oct 02

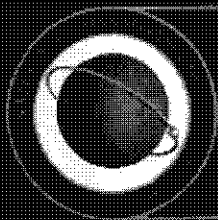
(b)(1), 1.4c, (b)(1), 1.4g, (b)(3) 10 U.S.C. 424

(b)(1), 1.4c, (b)(1), 1.4g, (b)(1), 1.4g, (b)(3) 10 U.S.C. 424

- Outlook: Additional slips expected, but still cautiously optimistic we can deliver on or near planned dates

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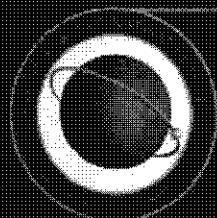


Placeholder for NGA Charts

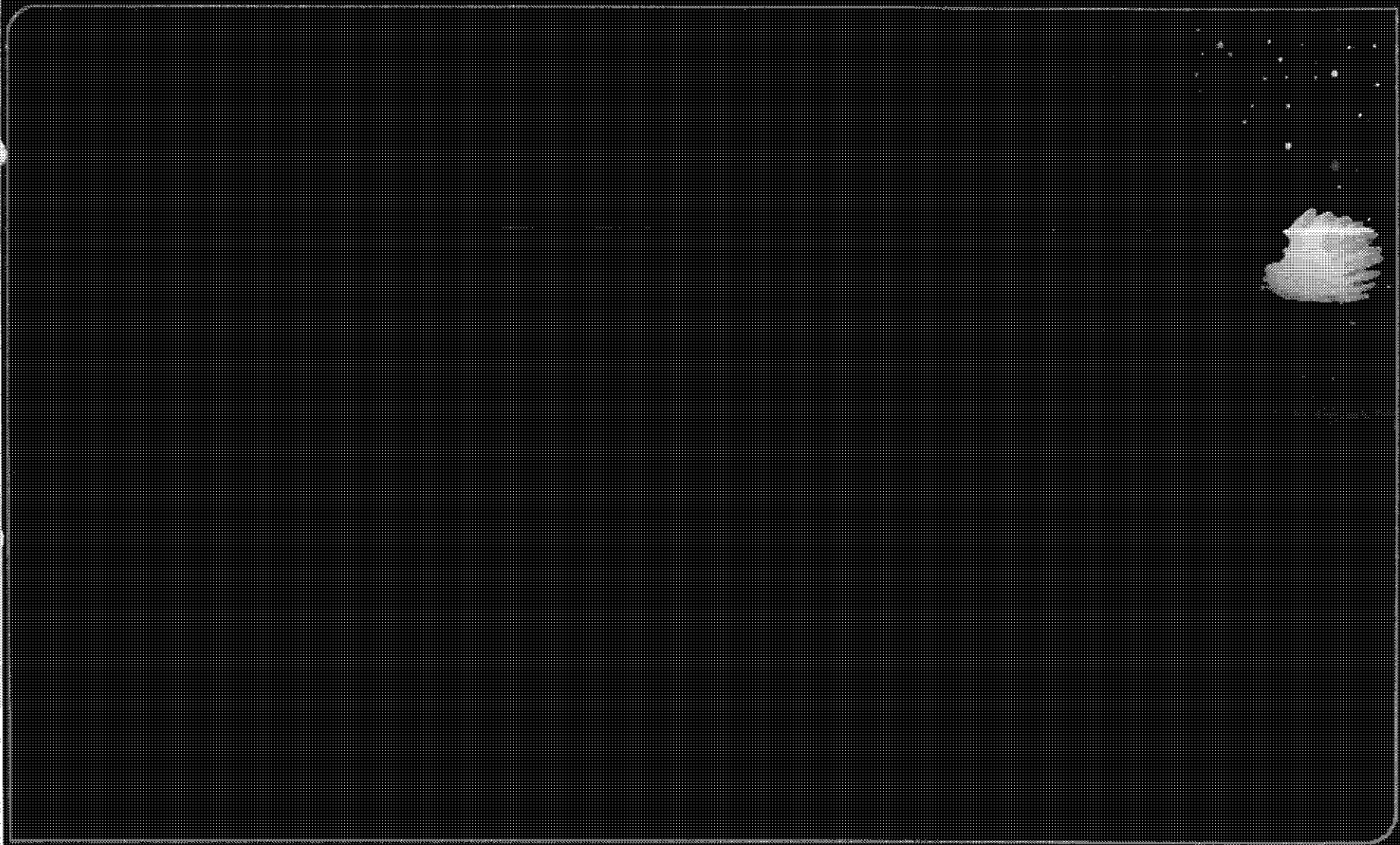


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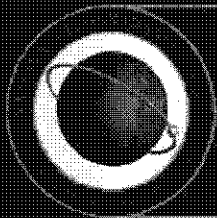


Placeholder for NGA Charts



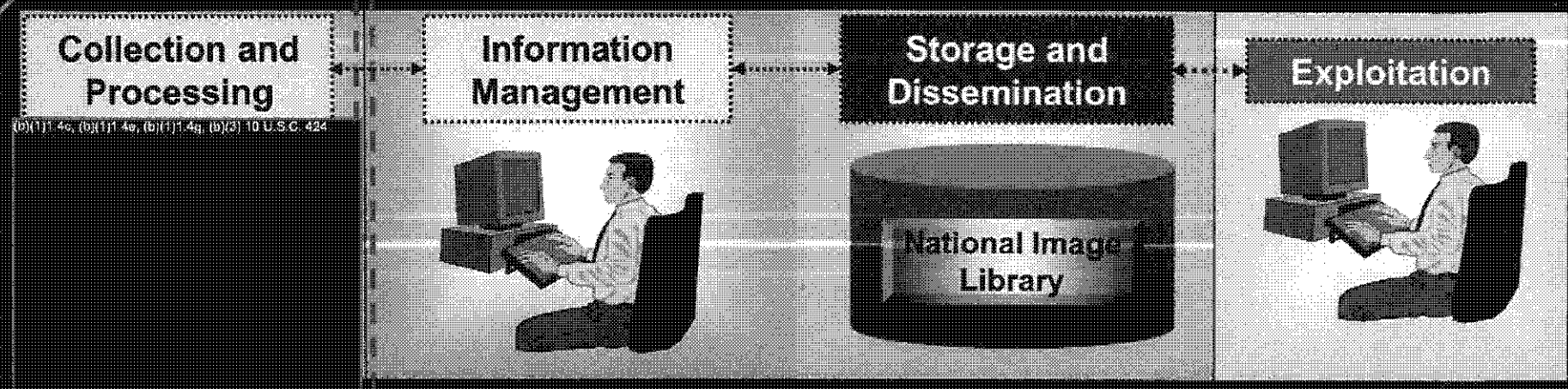
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JMO Baseline Enterprise Assessment

(Aug 03)

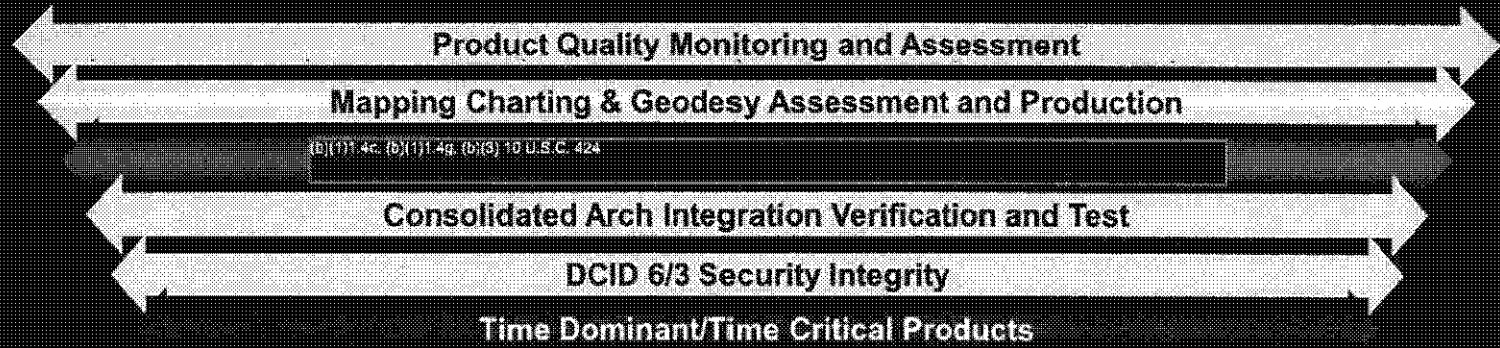


(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

NRO Managed

NGA (NIMA) Managed

Enterprise Threads

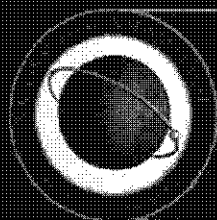


(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424

SECRET

Significant Risk Moderate Risk Acceptable Risk

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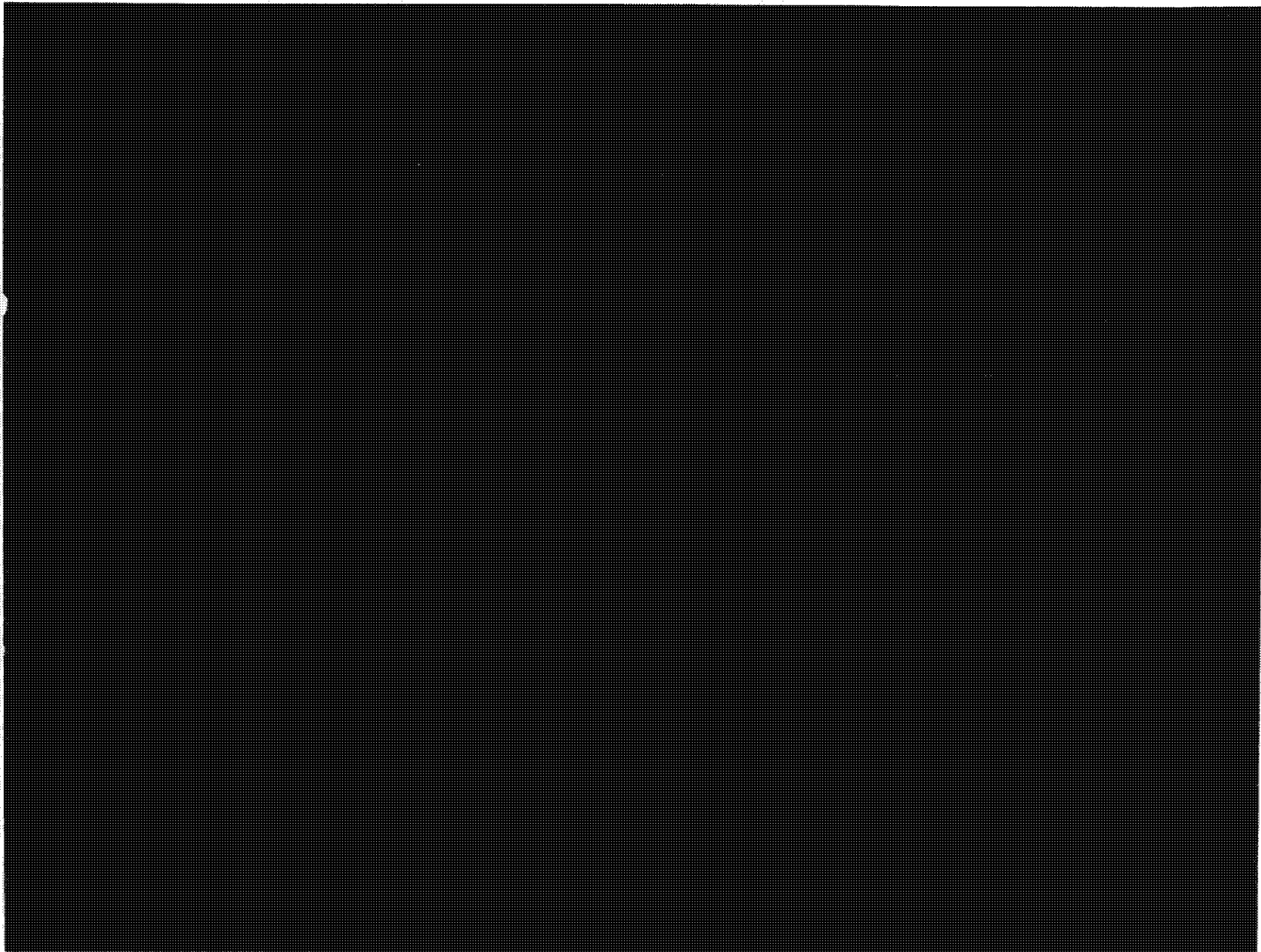
Overall Outlook and Summary

- **Still many, many daunting challenges ahead**
- **Schedule was expected to be and remains our toughest challenge**
 - Driven almost entirely thus far by hardware problems
- **Extraordinary effort invested into trying to make sure we have the remaining effort right**
 - Multiple independent reviews underway or completed trying to see if anything was missed
 - May still need to additionally strengthen test rigor
- **All identified issues addressed and management processes now in effect to monitor true progress**

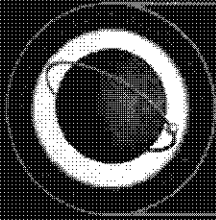
Program is now on the right path

...But the road ahead is far from smooth

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~~SECRET//BYE//SI//TK//X1~~

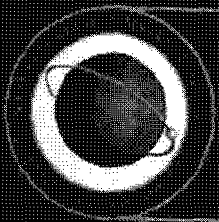


Faga Panel Program Issues

- Satellite development seriously under funded and behind schedule
 - And insufficient margin in (b)(1); 4c; (b)(1); 4g; (b)(3); 10 U.S.C. 424
- Lack of end-to-end enterprise management and control
- Satellite test program inadequate to ensure mission success
- Contract Incentive structure flawed and not in the govt's long term interest
- Insufficient sparing levels throughout the effort

“We believe that today’s FIA risks are too great...The plan was designed and acknowledged to have high risk from the outset and we believe the risk faces us *now*.”

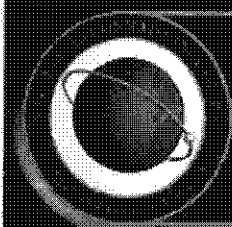
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~~SECRET//DYE//SI//TK//X1~~

DCI, D/NRO, D/NGA Actions to Fix FIA

- Established the FIA Joint Management Office to evaluate and monitor the FIA end-to-end enterprise
 - Established IMINT Strategy Senior Steering Group (IS3G)
- Tasked completion of an end-to-end independent cost and schedule estimate
 - Program office directed to assess possible performance off-ramps if needed to hold schedule
- Established Aerospace-led test review panel to provide detailed assessment of test program shortfalls
- Directed restructuring of contract incentive plan and management approach (away from TSPR)
- Directed adequate sparing be added to program baseline

~~SECRET//DYE//SI//TK//X1~~



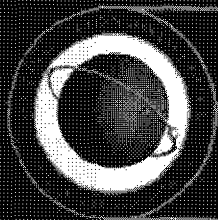
FIA PROGRAM UPDATE

Presentation to the HPSCI

(b)(3) 10 U.S.C. 424, (b)(6)

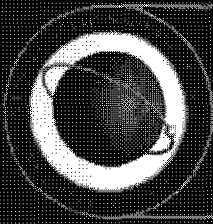
Director, FIA Satellite
Systems

Apr 20, 2004



Topics

- **Background**
- **The FIA Architecture and Enterprise**
- **Actions Taken to Restructure Effort**
- **Current Status and Outlook**



Background: Where We've Been

- **Sep 1999 award of \$5B FIA Satellite Effort to Boeing**

(b)(1) 4c, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(3) 10 U.S.C. 424

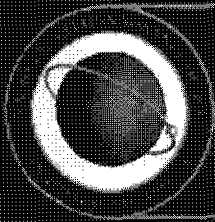
- First time entrant into imaging satellite market
- Effort incorporated then popular acquisition streamlining elements

(b)(1) 4c, (b)(1) 4d, (b)(1) 4g, (b)(3) 10 U.S.C. 424

- Unknown effect upon system life
 - Illuminated NRO enterprise-wide issues with parts (HBTs) and processes
- **DNRO created the 2002 Faga Panel to review the FIA effort**
 - Exposed serious structural problems with the ongoing effort
 - Predicted a slip of at least 2 to 3 years and billions in cost growth
 - Coupled with [redacted] issues, raised the specter of [redacted]

(b)(1) 4c, (b)(1) 4d, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4g, (b)(3) 10 U.S.C. 424



Background: What We Did

- Examined detailed plans for multiple alternatives
 - Additional (b)(1) 4c, (b)(1) 4d, (b)(2) 10 U.S.C. 424 commercial imagery, accelerated FIA, status quo
- Determined FIA must be fixed and slip held to minimum
 - (b)(1) 4c, (b)(1) 4d, (b)(1) 4g, (b)(3) 10 U.S.C. 424
- DCI and SecDef agreed
 - Schedule directed as #1 priority; at all costs, (b)(1) 4c, (b)(1) 4d, (b)(3) 10 U.S.C. 424
 - Increased funding for commercial imagery as insurance
- FY 03 Budget restructured with assistance of Congress
 - President's FY 04 request aligned with program needs
- Established the FIA Joint Management Office (JMO) to evaluate and monitor the FIA end-to-end enterprise
 - Established IMINT Strategy Senior Steering Group (IS3G)
- Changed Program Management Approach



FIA Satellite Architecture

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



Therefore must maintain ability to fly both constellations until

then.

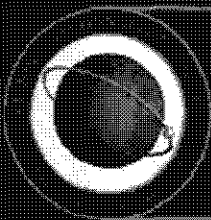
-Austere backup to

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



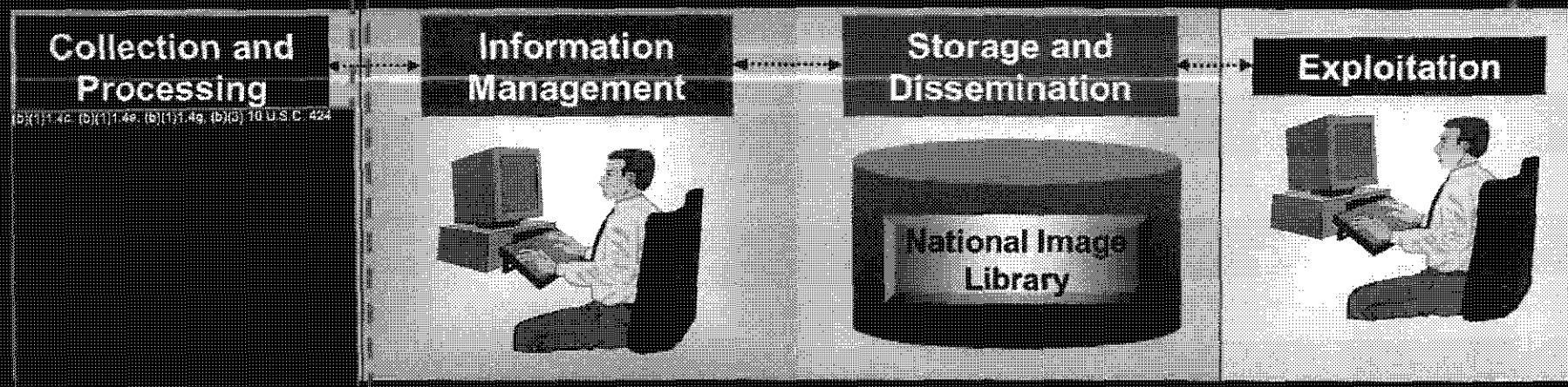
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424





(U) FIA Enterprise Architecture

- FIA represents a change to every element of end-to-end image chain
- Portions individually managed by NRO and NGA
- DCI directed Joint Management Office to ensure end-to-end system worked

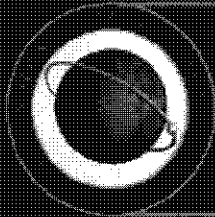


NRO Managed

NGA (NIMA) Managed



Enterprise Threads



FIA

(b)(1), 4c, (b)(1), 4g, (b)(3), 10
U.S.C. 424

Enterprise Schedule

2003				2004				2005				2006				2007				2008			
1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th

(b)(1), 4c, (b)(1), 4g, (b)(1), 4g, (b)(3), 10 U.S.C. 424



IOC: Initial Operating Capability

FOC: Final Operating Capability

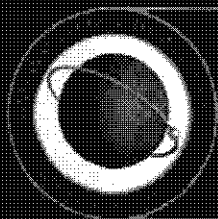
Baseline



JMO
Recommendation

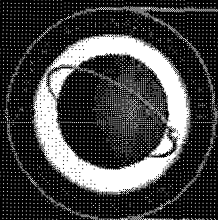


No
Change



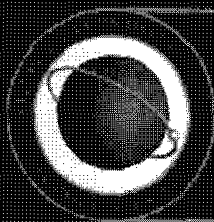
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 - Schedule and cost management processes
 - Reporting requirements
 - Fee plan
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 - Subcontractor/teammate management approach
- **Identified (b) (1) (4); (b) (7) (C); (b) (7) (D)
18 U.S.C. 424 worth of necessary added costs & scope**
 - With fee, total price increase to Boeing contract was \$4.5B*

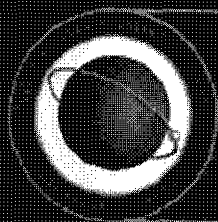


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$$\begin{array}{rclclcl} \text{Initial Contract Value} & & + & \text{Neg Cost Increase} & & = & \text{Final Contract Value} \\ = \$5.9\text{B} & & & = \$4.5\text{B} & & & = \$10.3\text{B} \end{array}$$

(b) (1) 4c, (b) (1) 4d, (b) (1) 4g, (b) (3) 16 U.S.C. 224



Sample Risk Reduction and New Tasks

- **Integration and test time extended from**

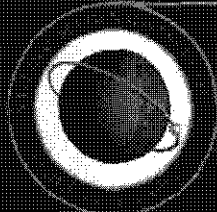
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- **Impact: Substantially higher mission assurance**
- **10-week payload thermal testing added prior to shipment**
 - **Impact: Detects problems that would cause nearly one-year slip if discovered downstream**
- **Second source of spacecraft batteries added**
 - **Impact: Guards against failure in less experienced primary source**
 - **Second source batteries available in time**
- **Tenfold increase in quality assurance and mission assurance personnel**
 - **Impact: Hardware and design flaws discovered and solved before they become on-orbit issues**
- **Plus, added significant, fully budgeted, schedule margin**

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



Current Status

Program progressing well

- Designs complete for [redacted]

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

satellite nearing start of integration

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Payload Bench Delivered to Kpday for

Integration

- Ground System Hardware substantially fully installed at

(b)(1)1.4c, (b)(3) 10 U.S.C. 424

Ground Station

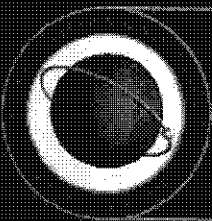
- Nearly 4 million lines of code tested and in final integration

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

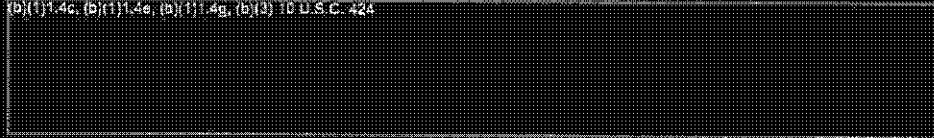
- All [redacted] communication equipment delivered and installed

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

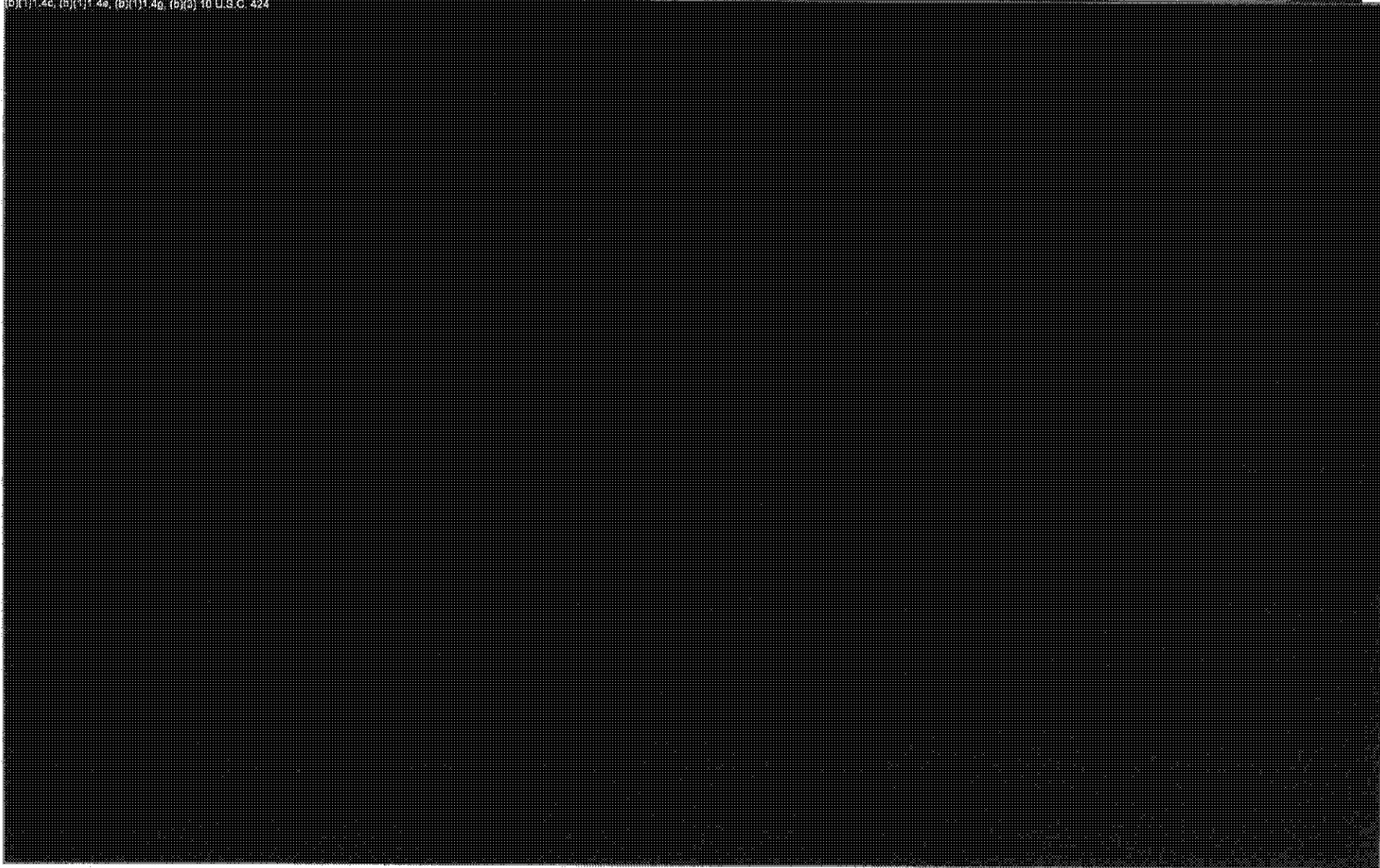
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

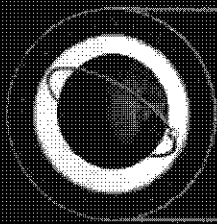


(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424





Performance Summary

(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- **Performance**

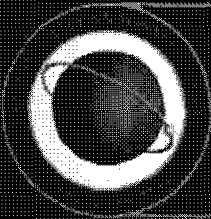
(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

remains 100%
on-track well past design
close out

(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Eng Model test results exceeding predictions
- Good margin against likely and already experienced manufacturing issues



Current Cost and Schedule Status

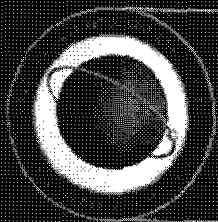
Cost

- Limited period over which to track since negotiation
 - Contractor still overrunning, but within his program margin
 - At least 9 months until any real cost problem could be detected
 - Government also retains some limited margin
- Outlook: Barring significant hardware or test issue, we expect costs to remain within near term budget
 - History & Current ICE indicate that future increases still may occur

Schedule

- Erosion of critical path (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 since Oct 02
 - Fully expected
 - (b)(1)1.4c, (b)(1)1.4g, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
 - (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
- Outlook: Additional slips expected, but trends, (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 are encouraging

(b)(1)1.4c, (b)(1)1.4g, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

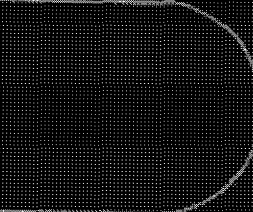
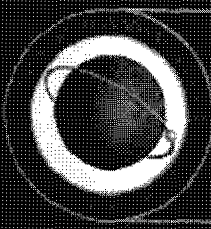


Overall Outlook and Summary

- **Still many, many daunting challenges ahead**
- **Schedule was expected to be and remains our toughest challenge**
 - Driven almost entirely thus far by hardware problems
- **Extraordinary effort invested into trying to make sure we have the remaining effort right**
 - Multiple independent reviews underway or completed trying to see if anything was missed
 - ICE results indicate there is still out-year threat
- **All identified issues addressed and management processes now in effect to monitor true progress**

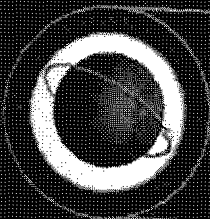
Program is now on the right path

...But the road ahead is far from smooth



Backup

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



December Potential Off-Ramps

- Delete

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Loss of

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Reduce satellite pointing accuracy

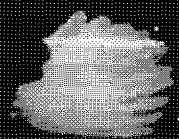
- Best location accuracy worsens by 5ft

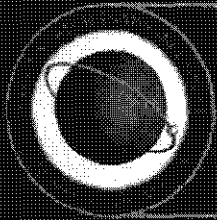
- (b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Reduce mirror polishing

- Slight resolution degradation

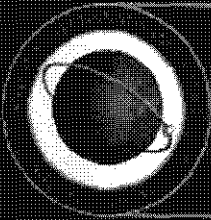
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424





NRO Actions Since Dec

- Deleted (b)(1)1.4c, (b)(1)1.4g, (b)(5) 10 U.S.C. 424 from (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424
 - Huge reduction in cost and schedule risk for first launch
 - Limited overall constellation impact
- Obtained Congressional approval for \$750M Omnibus funding increase
 - Allowed NRO to direct contractor to fully rebaseline to DCI's (b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C. 424 schedule
- Revamped Award Fee plan to focus on mission and schedule performance
 - Eliminated obstructive cost incentive filter
- Reinstated strong govt oversight
 - Eliminated restrictive TSPR constraints
- Directed significant risk reduction activities
 - Focus on mission success instead of cost



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

December Potential Off-Ramps

- Delete

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Loss of

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Reduce satellite pointing accuracy

- Best location accuracy worsens by 5ft

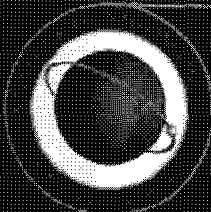
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- Reduce mirror polishing

- Slight resolution degradation

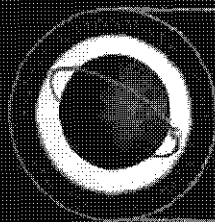
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

Executed
Potential
Unlikely
No, Polishing Complete
No, Eliminated from consideration



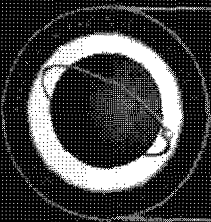
Technical Progress

- **Critical Design complete**
 - Major milestone towards delivery
- **Other [redacted] completed fabrication**
 - **Other [redacted] subsystems in test and integration**
- **Most [redacted] engineering test models meeting/exceeding performance expectations**
- **Independent review of [redacted] payload completed**
 - High grades to payload design
- **Boeing Mission integration facility activated**
 - Critical for mission control station/software testing



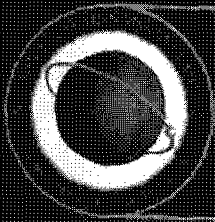
Rebaseline Effort

- Major program office activity since start of year
 - Every aspect of entire program being replanned
- Contractor understands need to get full cost and content on the table
 - Need to assure we understand full extent of effort and remaining risk
- Total contract development cost will increase to about \$10.5B
 - From current baseline of \$6.4B
- Anticipate settlement by July



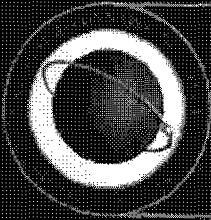
Current Challenges

- **Many issues with Parts Manufacturing and Quality**
 - Hurting multiple programs but especially impacting critical FIA schedule
 - Down to single suppliers in several areas
- **Staffing at Boeing and major subs**
 - Limited pool of talent against backdrop of increasing Aerospace work
 - Single largest controllable threat to FIA Schedule
- **Continuing schedule erosion**
 - Need to balance risks we take with final mission assurance



Lessons Learned

- **Absolute need for a realistic cost and schedule upon entering the program**
 - Requires top-notch, independent cost estimate
 - Hard choices when building out-year budgets
- **Judicious application of Acquisition Reform**
 - Not a substitute for strong govt management
 - Commercial practices yields, at best, commercial results
 - Need for sufficient FFRDC resources
- **Careful consideration of contract incentives**
 - Single focus on cost inappropriate for high-risk development
 - Must be balanced with schedule and mission assurance
- **Prudent overlap between heritage and new systems**
 - Can't risk (b) (1), (4), (b) (3) 10 U.S.C. 221 in National Security Space Systems



Prognosis

- **Rebaseline sets program down the right path**
 - Provides right resources to get the job done
 - Barring major technical issue, should cover current risk

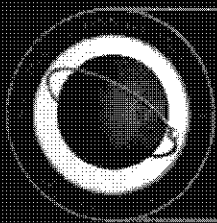
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- [Redacted]
- **Technical design and performance are solid**
- **Very challenging schedule given remaining work**

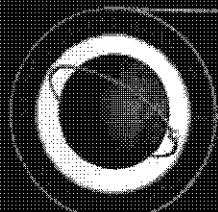
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

- [Redacted]
- **Design fully vetted and predicted performance better than expected**
- **Challenging integration of [Redacted] payload remains our top risk**
- **Staffing at Boeing and subs will determine success**

(b)(1)1.4c, (b)(1)1.4e,
(b)(1)1.4g, (b)(3) 10 U.S.C. 424



\$B	Thru FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Total
Baseline Program (excludes launch)	4.53	2.12	1.94	1.51	1.36	1.30	0.79	0.73	14.29
Required Funding	n/a	0.83	1.03	1.06	0.42	0.01	n/a	n/a	3.35
Revised Program Total	4.53	2.95	2.97	2.57	1.78	1.31	0.79	0.73	17.64

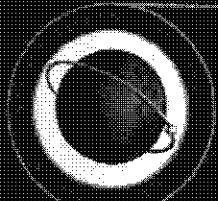


~~TOP SECRET//OYE//SI//TK//X1~~

IMINT's New Baseline

(b)(1)-4c, (b)(1)-4e, (b)(1)-4g, (b)(3) 10 U.S.C. 423

~~TOP SECRET//OYE//SI//TK//X1~~



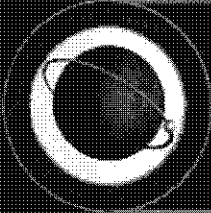
TOP SECRET//OYE//SI//TK//X1

IMINT's New Baseline

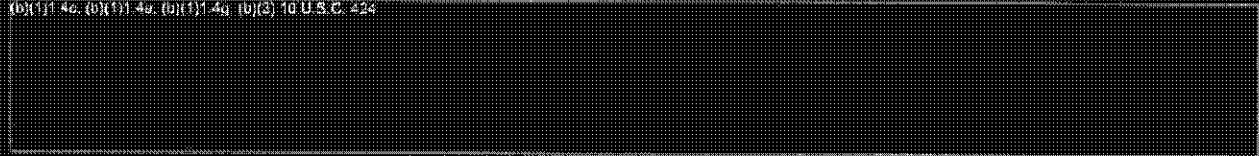
(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



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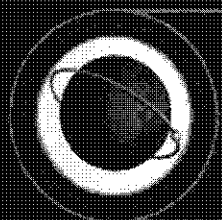


(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



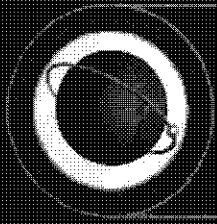
(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(3) 10 U.S.C. 424





(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



Boeing FIA DPE Team

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



•Prime contractor

(b)(1)1.4c, (b)(1)1.4e,
(b)(1)1.4g, (b)(3) 10 U.S.C.
424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

How Much It Costs

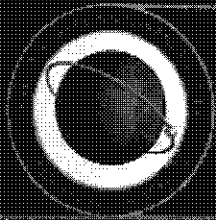
(b)(1)(1).4c, (b)(1)(1).4e, (b)(1)(1).4g, (b)(3) 10 U.S.C. 424

(b)(1)(1).4c, (b)(1)(1).4e, (b)(1)(1).4g, (b)(3) 10 U.S.C. 424



Improved Imagery Capabilities

(b)(1) 1.4c, (b)(1) 1.4e, (b)(1) 1.4g, (b)(3) 1.0 U.S.C. 424



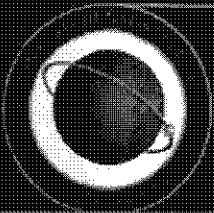
TOP SECRET//SI//COMINT//X

FIA Transforms the Way We Do Imagery

(b)(1)1-2c, (b)(1)1-4a, (b)(1)1-4g, (b)(3)10 U.S.C. 424



TOP SECRET//SI//COMINT//X

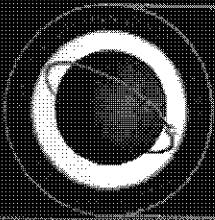


~~TOP SECRET//DTIC//SI//NF~~

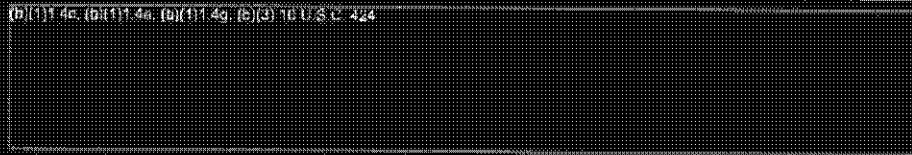
Transforming Imagery Collection

(b)(1), (1.4c), (b)(1), (1.4c), (b)(1), (1.4c), (b)(2), (1.1), (1.5), (1.6), (1.7), (1.8), (1.9), (1.10), (1.11), (1.12), (1.13), (1.14), (1.15), (1.16), (1.17), (1.18), (1.19), (1.20), (1.21), (1.22), (1.23), (1.24), (1.25), (1.26), (1.27), (1.28), (1.29), (1.30), (1.31), (1.32), (1.33), (1.34), (1.35), (1.36), (1.37), (1.38), (1.39), (1.40), (1.41), (1.42), (1.43), (1.44), (1.45), (1.46), (1.47), (1.48), (1.49), (1.50), (1.51), (1.52), (1.53), (1.54), (1.55), (1.56), (1.57), (1.58), (1.59), (1.60), (1.61), (1.62), (1.63), (1.64), (1.65), (1.66), (1.67), (1.68), (1.69), (1.70), (1.71), (1.72), (1.73), (1.74), (1.75), (1.76), (1.77), (1.78), (1.79), (1.80), (1.81), (1.82), (1.83), (1.84), (1.85), (1.86), (1.87), (1.88), (1.89), (1.90), (1.91), (1.92), (1.93), (1.94), (1.95), (1.96), (1.97), (1.98), (1.99), (2.00)

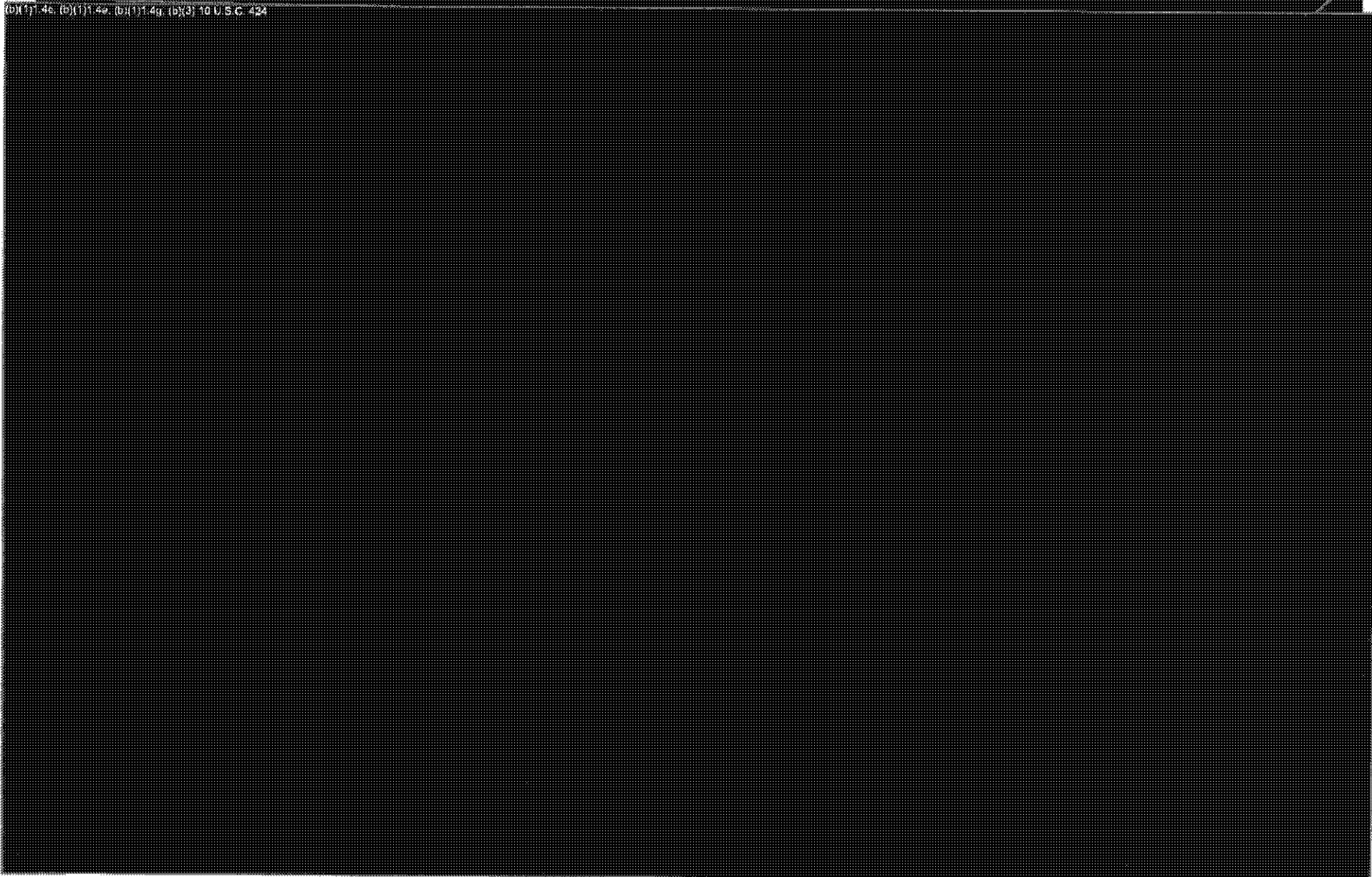
~~TOP SECRET//DTIC//SI//NF~~



(b)(1) 4c, (b)(1) 4a, (b)(1) 4g, (b)(3) 16 U.S.C. 424



(b)(1) 4c, (b)(1) 4a, (b)(1) 4g, (b)(3) 16 U.S.C. 424

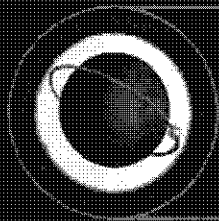




(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(3) 10 U.S.C. 424



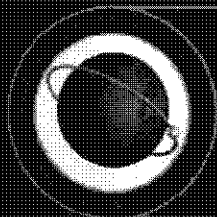
(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(2) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4d, (b)(1)1.4g, (b)(2) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

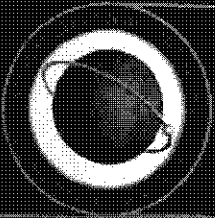
(b)(1)1.4c, (b)(1)1.4a, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



Transforming Imagery Collection

(b)(1)(1.4c), (b)(1)(1.4e), (b)(1)(1.4g), (b)(3) 10 U.S.C. 224

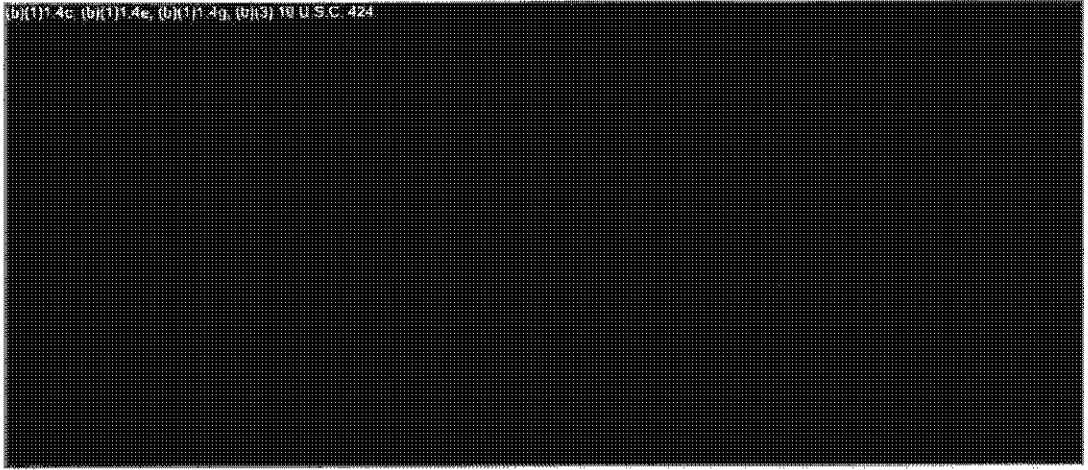


IMINT Architecture at FIA FOC (FY08)

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

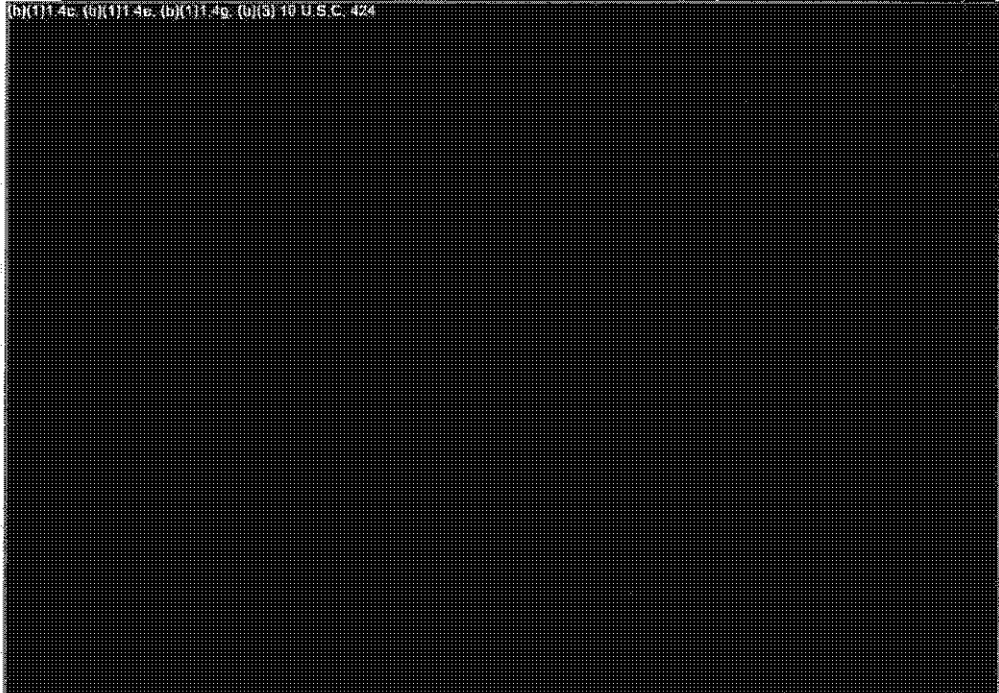


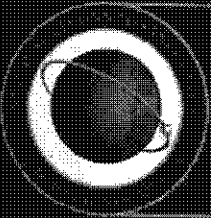


FIA Performance vs EIS

Stepping Stone to Next Generation Imagery Collection

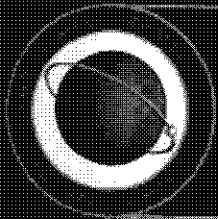
(b)(1)(1.4c), (b)(1)(1.4e), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424





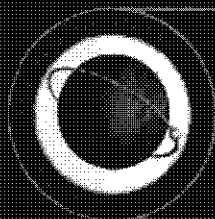
FIA Provides Improved Performance

(b)(1) 4c, (b)(1) 4e, (b)(1) 4g, (b)(2) 10 U.S.C. 424



FIA Provides Improved Performance

(b)(1), 1.4c, (b)(1), 1.4d, (b)(1), 1.4g, (b)(3) 18 U.S.C. 424

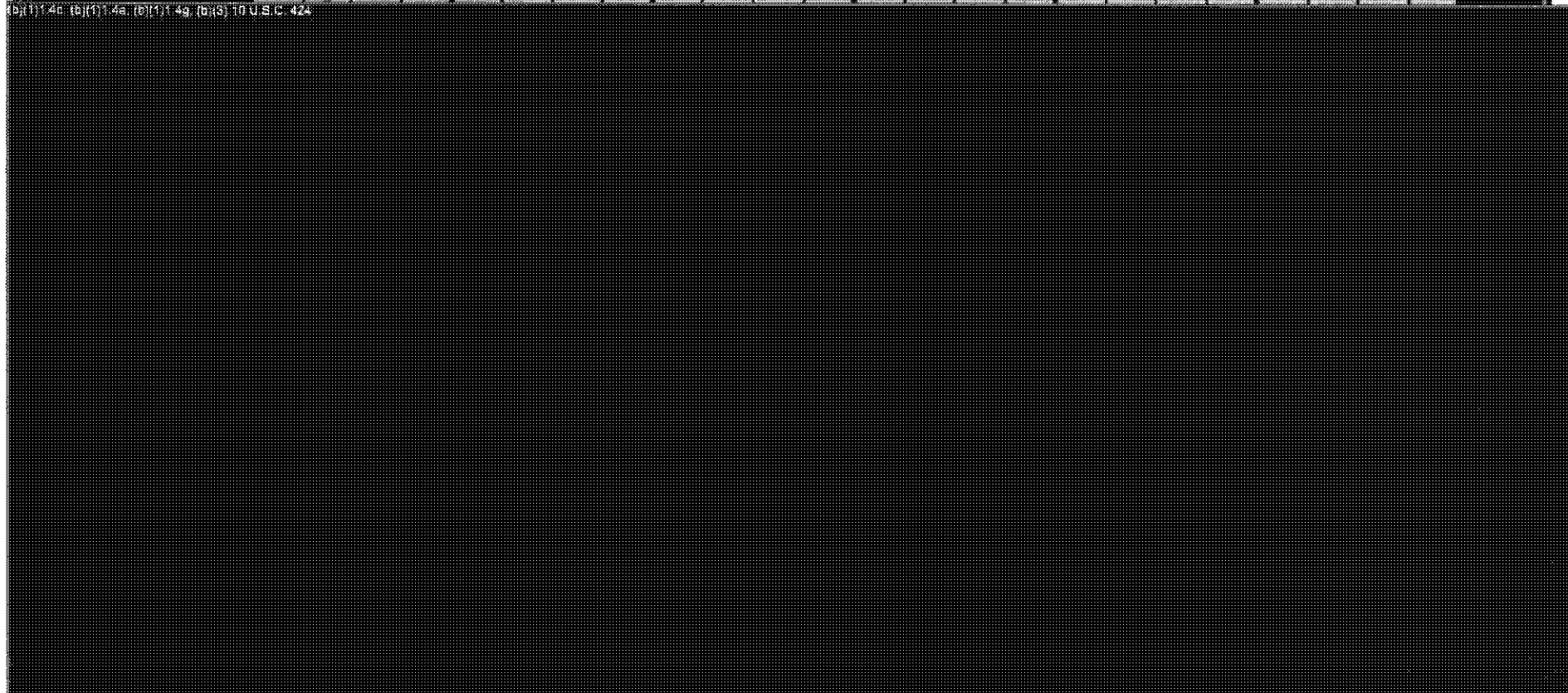


JMO Schedule Recommendation

(Moderate Confidence)

2003				2004				2005				2006				2007				2008			
1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th	1st	2 nd	3 rd	4 th

(b)(1)1.4c, (b)(1)1.4a, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



IOC: Initial Operating Capability

FOC: Final Operating Capability

Baseline

JMO
Recommendation

No
Change

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MEMORANDUM FOR THE RECORD

DATE: 23 SEPTEMBER 2004

SUBJECT: FIA INDEPENDENT REVIEW PANEL (IRP) FINAL BRIEFING TO CONGRESS

ATTENDEES: STAFFERS KEN JOHNSON, NANCY ST LOUIS, DON STONE, ADAM HARRIS (SSCI), JOHN STOPHER (HPSCI), BRIAN GREEN, MITCH CROSSWAIT (SASC), JOSH HARTMAN (HASC)

IRP MEMBERS: WANDA AUSTIN (CHAIR), TOM BETTERTON, JON BRYSON, BOB MIKELSKAS

NRO: (b)(3) 10 U.S.C. 424, (b)(6)

(b)(3) 10 U.S.C. 424, (b)(6)

Executive Summary:

On 23 September 2004, Dr. Wanda Austin briefed the Independent Review Panel findings and recommendations to congressional staffers. This panel was established pursuant to direction in the Classified Supplement to Report Number 108-381, Intelligence Authorization Act for Fiscal Year 2004. Dr. Austin provided findings and recommendations in the areas of FIA source selection, independent cost estimates, fee plan structure, and program margin. The SSCI staff, authors of the CDA, expressed appreciation for the team's work and now consider the action closed. The full report and briefing charts are posted on the BPO/LL Web page. No follow-up actions or requests for additional information were assigned.

Meeting Summary:

- Dr. Austin provided findings and recommendations in the areas of FIA source selection, independent cost estimates, fee plan structure, and program margin.
- At the start of the briefing, Dr. Austin stated that the existence of a congressional cost cap had a bearing on the management of the FIA program. Don Stone (SSCI Staff) took exception. Mr. Stone acknowledged the existence of a cost cap, but stated that Congress was always open to requests for additional funding from the NRO. Dr. Austin agreed that Congress did not exude undue influence on the program; however, the mere existence of a congressionally mandated cost cap affected the behavior of the FIA management team. Mr. Stone acknowledged the clarification.
- Dr. Austin stated the IRP concluded the source selection team underestimated the risk associated with the test and integration portion of the program. Ken Johnson asked how this could have happened. Dr. Austin, with help from (b)(3) 10 U.S.C. 424, (b)(6) replied that the source selection team relied heavily upon commercial practices to reduce the NRO's historic reliance on rigorous test and integration efforts. As such, the T&I effort was under scoped, and the risk associated was under appreciated.
- Mitch Crosswait (SASC Staff) emphatically agreed with the IRP recommendation to reintroduce Mil-Standards, or an equivalent control mechanism, to help prevent parts issues and encourage sharing of lessons learned across the industry. Dr. Austin acknowledged that the industry is migrating back to a Mil-Standard-like construct, but at the time of FIA contract award, that was not the case. (b)(3) 10 U.S.C. 424, (b)(6) stated the National Security Space enterprise is in the process of reviewing/revising Mil-Standards and acquisition policy.
- The group discussed the pros and cons of the acquisition reform environment prevalent at the time of FIA source selection. The IRP concluded that acquisition reform could be made to work, but was taken

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Action Officer: (b)(3) 10 U.S.C. 424, (b)(6) BPO/LL, (b)(3) 10 U.S.C. 424, (b)(6) - 1 -

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to the extreme in the case of FIA. Bob Mikelskas stated that based upon his interviews with source selection team members, they wanted to believe that acquisition reform would work.

- Independent cost estimating was the single most discussed topic at the briefing. Staffers Ken Johnson and Mitch Crosswait asked Dr. Austin which cost estimating group is the most successful/accurate. Dr. Austin said that inquiry was outside the scope of the IRP. She also replied that only the NCG has metrics on the matter, and reported that across the (b)(3) programs on record, the NCG was within 11% of actual cost/EAC. She also clarified that the panel recognized that the cost estimation performance varied with the size and complexity of the program, i.e., it is within 22% of actual cost/EAC for the four major new developments. Ken Johnson, Nancy St. Louis, and Don Stone from the SSCI staff expressed a strong lack of confidence in the NCG's ability to accurately estimate a new program's cost. Don Stone stated the NCG's claims of accuracy were like a bunch of hocus-pocus. Dr. Austin stated the IRP recommends a cost estimate not just at program inception, but also at the major milestones of the program to more accurately reflect the program of record. She also stated that the NRO has already adopted this practice. (b)(3) 10 U.S.C. 424 added that the source selection team's technical subgroup did not adequately assess/communicate program risk to the cost subgroup, thereby exacerbating the situation for FIA. The entire group, staffers included, agreed that an overarching challenge with cost estimating is the inability to predict a reasonable fiscal year spread to the estimate. Even if the bottom line estimate is accurate, the yearly spread will likely be off, causing significant budget problems for the entire organization. (b)(3) 10 U.S.C. 424 also clarified the difference between a source selection team's assessment of a contractor's proposal for cost realism and an independent cost estimate.
- During the discussion of program margin, Dr. Austin stated the IRP recommends the NRO plan, and Congress allow, budget margin. One method the IRP recommends to secure this margin is to budget programs to the 80% confidence level, unlike the current 50% level used today. The 30% difference can be held as management reserve. However, the staffers acknowledged that budgeting to 80% would be a tremendous burden across the NRP. Dr. Austin acknowledged the challenges associated with this recommendation, and suggested that an alternative approach would be to provide program margin at the NRO-level, as opposed to the individual program expenditure centers. (b)(3) 10 U.S.C. 424 followed up this comment with an additional discussion on the challenges of "timing" the need for additional program margin depending on the development phase of a program.
- As Dr. Austin concluded her presentation, Adam Harris (SSCI Staff) asked if there are any acquisitions coming up that would benefit from the IRP's report. Dr. Austin stated that the New Imaging System will be entering source selection soon and that she already met with the program manager (b)(3) 10 U.S.C. 424 to share the IRP's findings and recommendations.
- The SSCI staff, authors of the CDA, expressed appreciation for the team's work and now consider the action closed. The full report and briefing charts are posted on the BPO/LL Web page:
 - Report:
[http://romwebapps/Romnet/Documents/ROMDOCS/LL_ACTIONCONG\\$Austin%20IRP%20Final%20Report%2028Aug04.doc](http://romwebapps/Romnet/Documents/ROMDOCS/LL_ACTIONCONG$Austin%20IRP%20Final%20Report%2028Aug04.doc)
 - Briefing:
[http://romwebapps/Romnet/Documents/ROMDOCS/BRIEFS1\\$Austin%20IRP%20Final%20Briefing%2028%20Aug%2004.ppt](http://romwebapps/Romnet/Documents/ROMDOCS/BRIEFS1$Austin%20IRP%20Final%20Briefing%2028%20Aug%2004.ppt)

Action Items: None

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~~SECRET//DYLE//X1~~

MEMORANDUM FOR THE RECORD

DATE: APRIL 15, 2002

SUBJECT: FIA IRT BRIEFING TO CONGRESSIONAL STAFFERS

ATTENDEES:

ROM: (b)(3) 10 U.S.C. 424, (b)(6) NIMA/LL ROBERT CARDILLO

STAFFERS: HPSCI: JOHN STOPHER, KIRK MCCONNELL, BETH LARSON, MIKE SHEEHY; SSCI: MELVIN DUBEE, LINDA TAYLOR; SASC: CREIGHTON GREENE, BRIAN GREEN, CHUCK ALSUP

FIA IRT: MARTY FAGA, JIMMIE HILL, DAVE JEREMIAH, (b)(3) 10 U.S.C. 424, (b)(6)
 (b)(3) 10 U.S.C. 424, (b)(6) (NRO GOVT POC)

Overview:

This briefing was an outbrief of the FIA Independent Review Team (IRT) that had been chartered by Mr. Teets in Feb 2002. This briefing was the same as was given to the ASDC3I (8 April) and the CMS (11 April). Briefer was Marty Faga, team chief. With very few exceptions, the team members provided the answers to questions.

Issues and Questions:

- Beth Larson inquired as to the FIA funding profile in the early years. Linda Taylor has also asked for info on transfers out of the FIA budget that shaped the funding available to the FIA SPO. Jimmie Hill mentioned that lack of funding during the first three years of the program was a major factor in the current situation and was one of the factors that led to having no spares in the program.
- Kirk McConnell asked whether the Govt had funded the program to the budget cap. Answer was that the gov't funded to the anticipated budget lines and that the cap wasn't the issue. Point was made that the real problem is in the phasing of the funding—not enough in the early years when development and risk reduction is most intense.
- John Stopher asked as to why we anticipate O&M being cheaper for FIA. Answer was that FIA uses COTS HW and SW and maintaining COTS is cheaper. Also, using COTS leads to fewer specialists and engineers. There was some skepticism as to whether FIA O&M will really be cheaper than legacy systems.
- There was a discussion on the 2008 FOC and whether it needed to be protected. Sentiment was that the need for (b)(1) 4c, (b)(3) 10 U.S.C. 424 on-orbit as an FOC requirement is no longer required.
- The IRT emphasized their opinion that we need to proceed with developing an EELV(H) pad at Vandenberg rather than planning to retrofit an existing pad later. Thought was that there would need to be a decision this summer if the EELV(H)

~~SECRET//DYLE//X1~~

Action Officer (b)(3) 10 U.S.C. 424, (b)(6) ROM/LL (b)(3) 10 U.S.C. 424, (b)(6) 1-

option for the [redacted] was going to be preserved without downstream schedule impact.

- Kirk McConnell mentioned that the government and the contractor had consistently told them that the FIA program was on track and now the program appears to be years and billions off track. It was observed that the NRO had submitted FIA risk reduction items in the overguidance portion of the budget and had submitted other, potentially less critical new starts/line items into the core budget request. This was done even when we had not funded FIA to the cap. This topic was visited multiple time in the briefing.
- On the award fee, it was mentioned that the wrong things are incentivized and that the structure needs to be redone. It was mentioned that the incentive plan does not reward system redundancy and capability/capacity beyond the spec—things that have resulted in current systems lasting well beyond design life. There was specific mention that since the cost was overrunning by more than 15%, there was no award fee left for performance and schedule when schedule was the biggest priority at this point in time.
- John Stopher characterized the approach to FIA as a “big experiment” where the government was to incentivize the right things and the contractor would then make the right decisions. It was also opined that we picked a poor program to attempt acquisition reform.
- It was stated that there was a \$1B management reserve at the start of the program but that \$900M of out of scope changes beyond the program manager’s control eroded that to the point where there was no reserve early. Hill, [redacted] all commented on how large programs won’t work if there is no management reserve and that all of the major programs now flying had the benefit of significant management reserve during the development cycle.
- It was opined that there was a lack of end-to-end systems engineering during the early part of the program and that NIMA was several years behind in their activities. [redacted] Jimmie Hill noted that it is difficult to integrate a big system by “meeting at the interface”. It was also mentioned that NIMA is not being held to CKPPs in the same sense as the NRO is.
- John Stopher asked as to the intent to implement the IRT’s recommendation to establish an independent assessment of the test program. He also asked whether the NRO was capable of doing this or was it going to be a construct like the IRT. Jimmie Hill said that he thought the right answer was to do the review and have NRO personnel outside of the FIA SPO do the assessment. Kirk McConnell asked if Mr Teets was planning to do this review—no answer given.
- John Stopher asked about the Congress’s direction that we constrain FIA to [redacted] satellites. The IRT had no real answer/comment on this. John mentioned that the FOC number is variable and that he’d like to see us emphasize [redacted] due to the current on-orbit situation. He also asked if we still think the spacecraft will really last [redacted] years. Jimmie Hill answered that this is a system capability spec, not an individual satellite spec and that the statistics indicated that the system would be available for the [redacted] years and that there is an “extra” [redacted] spacecraft available to ensure [redacted] years of performance.

[redacted] (b)(1), 4c, (b)(3) 10 U.S.C. 424

- There was discussion about the industrial base and contractor and government workforce experience. Jimmie Hill mentioned that this program was a "must win" for the contractors due to the fact that the loser would have no expertise left when the system came up for bid again in 03-04 years. This situation led to overaggressive bidding by the contractors and contributed to the programmatic problems being seen today. It was also perceived that lack of programmatic flexibility (having cost, schedule, and requirements fixed) was resulting in good people becoming frustrated and leaving the program.
- Lastly, there was a discussion on "now what?". Answer was that the NRO is assessing trades, developing a plan for how to allocate risk reduction funds, and determining the actual cost and schedule delays impacts. NRO will need to brief these topics to the Congress as soon as practical.

Action Items: All assigned to IMINT

1. Define how the \$700M of risk reduction funds would be applied against the program in the 02 and 03 timeframe. Respond to SSCI/Linda Taylor, eventually needs to go to all NRP monitors.
2. Describe where the \$900M of management reserve was allocated in the 00-02 timeframe. Respond to SSCI/Linda Taylor and HPSCI/Stopher and McConnell.
3. Define the reallocation of funds that were taken out of the FIA program that resulted it not being funded to the CAP in the early years (not the \$900M). Respond to SSCI/Linda Taylor.

IMINT Responses to Congressional Questions from the FIA 11 Jul Review

NRO - 1	(Andy Johnson) Please provide a copy of the ASIC "spreadsheet" that shows how many we need and when they are being produced/delivered
Answer	<p>ASIC delivery schedules have been a cause of delay within the FIA program, especially the class of ASICs known as HX-3000s, a new line of ASICs from Honeywell. HX-3000s were selected for many FIA applications due to their advanced capabilities in both lower power usage and processor speed. There are two classes of ASIC problems that normally effect programs such as FIA: ASIC design problems requiring redesign (a process commonly referred to as a respin), and ASIC production yields. In the past, respins have been the source of most major delays in space programs, but this has not been a cause of the majority of the issues to date within FIA. While some of the ASICs have required a respin (e.g. on the attached spreadsheet, the top two ASICs, the BRAM ASIC and the ADD, have just now completed a successful proof-of-design phase following their third and second respins respectively), most of the FIA ASICs were successful on their first spin. But, midway through last year, ASIC yield issues began to arise that, by late summer, had caused all ASIC deliveries on the program to stop. The causes of these lowered yields were identified and fixed by March of this year and production is now catching up to the program need. However, in the case of four ASICs (the previously mentioned BRAM and ADD, as well as the EBWC and ERBC) we have yet to produce any that meet our requirements due to either respin (BRAM and ADD), or manufacturing errors (now fixed) not associated with yield (ERBC and EBWC).</p> <p>The attached spreadsheet shows the number and status of ASICs needed for the entire program and for the [REDACTED] [b)(1), 4c, (b)(3) 10 U.S.C. 424] The chart attached to that spreadsheet provides much of the same information but in a more graphical depiction, broken down by the company which is building the subsystem. Even as the FIA program recovers from the past problems with ASICs, they still remain our single most driving schedule issue, and are likely to remain so until all of the [REDACTED] [b)(1), 4c, (b)(3) 10 U.S.C. 424] ASICs are received and successfully integrated and tested in the flight hardware.</p> <p>Attachments: 1a. Spreadsheet "Honeywell HX3000 ASIC Delivery Status for FIA Satellites" 1b. Chart labeled "FIA JHX3000 ASIC Delivery Status"</p>
NRO - 2	(Andy Johnson) NRO to explain how the non-CKPP capabilities in FIA compare to what we are getting now from IMCS and EIS
Answer	Due to the complexity of this issue, the NRO and the JMO will schedule a presentation to the Congress on how these capabilities compare
NRO - 3	(Andy Johnson) NRO to provide a copy of the contract change showing that the contractor no longer has the latitude to trade capabilities against cost
Answer	The deleted contract clause on "Cost As An Independent Variable (CAIV)" is attached. As stated on that page, it was deleted with contract modification 49 (P00049), dated 11 June 2003.
Attachment:	3. Statement from the contracting officer on removal of the CAIV clause.
NRO - 4	(Andy Johnson) NRO to provide info on when the contractor made the trades in the non-CKPPs and when the NRO was notified that the trades had been made
Answer	Attachment 4 provides a synopsis of changes made to the non-CKPPs and how these changes were made
NRO - 5	(Mitch Crosswaite) NRO to provide info on how the CKPP chart will/might change given the changes being made in the contract
Answer	No changes to either the KPPs or the CKPPs are anticipated as a result of the ECP other than those that have already been changed as a result of the removal of the [REDACTED] [b)(1), 4c, (b)(3) 10 U.S.C. 424]

NRO - 6	(Andy Johnson) NRO to provide info on the added cost to Boeing and its subcontractors to fix the problems mentioned in chart 20 (FIA [redacted] regarding the need to shut down the semiconductor plants and take corrective action)
Answer	<p>Several shutdowns have occurred at Boeing parts facilities over the last several months due to inadequate control over the manufacturing process. The initial shutdown occurred 1Q FY03 in their Battery Division followed by a 4Q FY02 shutdown for the [redacted] manufacturing facility. Extensive corrective actions were taken to validate procedures and redo manufacturing. Various industry experts contributed to these corrections.</p> <p>The most recent shutdown occurred in 3Q FY03 at the Boeing Power Electronics manufacturing facility due to multiple workmanship and process control findings. These findings indicated delivered hardware and future deliveries could be subject to failure. Boeing implemented the corrective actions in response to these findings to the satisfaction of the government. It should be stated that in all cases, while the government brought issues to the attention of Boeing, Boeing management made the decisions to shutdown the facilities.</p> <p>The net impact of these shutdowns was a loss of 7 weeks to the unit delivery schedules with workarounds required to recover mission and communication payload schedules. The total cost of the shutdown and corrective actions was estimated to be [redacted]</p>
NRO - 7	(Andy Johnson) NRO to identify the added cost/fee of the ECP for the FIA contract, also identify the subcontractor costs/fee. How much is the NRO paying for additional Boeing Quality Control/Quality Assurance personnel?
Answer	<p>As a result of the negotiated ECP, there is an increase of [redacted] in the cost of the FIA Satellite Development and Production effort (CLIN 0001 of the Boeing FIA contract). Associated with that increase in cost is a [redacted] increase in fee [redacted] which is composed of [redacted] worth of new fee reduced by a penalty of \$90M for the previous contract overrun. The details of these changes to CLIN 0001 in relation to the original contract are shown in Table 1 of the attachment below</p> <p>Within CLIN 0001 are included changes to all FIA subcontractors. Table 2 below breaks out the major subcontractors and an anticipated level of fee they will receive once they have negotiated with Boeing (note that while the government negotiation with Boeing was completed 11 Aug, Boeing may not close with their subs for a few months). As such, these values are estimates of where they will close. During negotiation, the govt limited additional subcontractor fee to a total of [redacted] across all subcontractors (originally bid by the subs at [redacted])</p> <p>Finally, as part of negotiation the government and Boeing agreed on an additional [redacted] worth of explicit effort in the areas of both Mission and Quality Assurance. These dollars include support for an increase of over [redacted] in prime contractor-level mission and quality assurance personnel, exclusive of added efforts incorporated in each segment or subcontractor activity.</p> <p>Attachment: 7. ECP Changes to the Cost of the FIA Contract</p>
NRO - 8	(Andy Johnson) NRO to provide additional insight into FY04 funding requirements for FIA. Address concern that Congress is "blindly" funding FIA in FY04
Answer	<p>The President's budget requested \$2.28B FY04 for the FIA effort across the NRO of which \$1.786B is planned for the Boeing Satellite contract, \$.280B for the [redacted] MIND contract, and the rest to cover govt expenses (GFE cryptographic and terrestrial communication equipment, facilities modifications, and SPO support.) The largest unknown when the FY 04 Budget was submitted was the ultimate cost for the Boeing Satellite effort under the [redacted]</p> <p>As a result of negotiations, we now know that planned contractor spending for FY 04 is [redacted] above the current FY 04 budget. However, current projections anticipate that about [redacted] of FY 03 funding (equivalent to about 6.5 weeks of effort) will roll forward into FY 04. This "roll forward", along with the planned budget, is sufficient to cover anticipated FY 04 expenditures with some limited margin still available.</p>
NRO - 9	(Beth Larson) NRO to take a real world situation, like Iraq, and show how FIA will actually perform relative to current systems
Answer	To be scheduled with the Congress per question NRO-2 above.

Attachment 1a: Honeywell HX3000 ASIC Delivery Status for FIA Satellites

(b)(1) 1.4c (b)(1) 1.4e (b)(1) 1.4g (b)(3) 10 U.S.C. 429



(b)(7) - E, (b)(7) - D, (b)(7) - C, (b)(7) - A

FIA HX3000 ASIC Delivery Status



(b)(7) - E, (b)(7) - D, (b)(7) - C, (b)(7) - A

Attachment 3: Statement from the contracting officer on removal of the CAIV clause

The following clause was deleted from Contract NRO000-99-C-0061 via modification P00049, dated 11 June 2003.

H-24 COST AS AN INDEPENDENT VARIABLE (CAIV) TRADES (DEVIATION)

- (a.) This clause establishes procedures by which the parties may agree to change this contract pursuant to the "Changes" clause without an equitable downward adjustment to the contract price as specified in paragraph (b) of said clause. The parties agree that changes initiated through the "Cost as An Independent Variable" (CAIV) process that result in a cost avoidance or savings to the program may be implemented without an equitable adjustment to contract cost or fee.
- (b.) When an opportunity to consider alternative solutions to meeting program technical requirements is identified, the Contractor shall initiate the CAIV trade process as described in the Contractor's Integrated Management Plan (IMP). Any trade, which avoids or saves cost and does not impact Government controlled documents (i.e., IMINT CCB controlled baseline) may be approved and implemented within the Contractor Engineering Review Board process(es). Trades that impact Government controlled documents that avoid or save cost must be approved by the IMCCB prior to implementation. In its request for approval of such trades, the Contractor shall request that the resultant change be provided with no adjustment to contract cost or fee pursuant to this clause.
- (c.) The Government reserves the right to disapprove any proposed CAIV trade. In the event the Government disapproves a trade, the Government will notify the contractor of its decision and provide direction to either (1) execute the contract as specified in the Government controlled documents at no change in contract cost, fee or schedule or (2) submit an engineering change proposal requesting adjustments to the contract cost, fee, schedule and/or Government controlled documents.

Attachment 4: FIA Non-CKPP Capability Trades

At the initiation of the FIA contract, two classes of Key Performance Parameters (KPPs) were defined: Shared Intel and Defense KPPs [Community KPPs (CKPP)], and unshared KPPs [Non-Community KPPs (Non-CKPP)]. CKPPs were considered inviolate and could not be traded by the program without consent and coordination of both the Joint Requirements Oversight Board (JROC) and the intelligence community Mission Requirement Board (MRB). Non-CKPPs however were able to be traded by the FIA program if necessary to meet other CKPPs or if they could not be afforded.

During the early design years of the contract (1999 - 2001) some of these trades were made. The trades only impacted the [redacted] (b)(1)(1.4c), (b)(3) 10 U.S.C. 424. The requirements for the [redacted] (b)(1)(1.4c), (b)(3) 10 U.S.C. 424 have not changed since formal government control of the requirements.

The FIA Request for Proposal (RFP) required the contractor to submit a draft top-level specification (A-Spec) with his proposal for [redacted] (b)(1)(1.4c), (b)(3) 10 U.S.C. 424. During the subsequent design phase, the contractor and the SPO participated in a thorough review of that draft before finalizing and controlling the document at the government's configuration control board (see timeline below).

[redacted] (b)(1)(1.4c), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424
 [redacted] (b)(1)(1.4c), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424
 Maintaining this condition drove the satellite to a perigee orbit lower than originally proposed [redacted] (b)(1)(1.4c), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424. This change in orbit not only reduced individual image area, but also increased satellite weight (due to the higher fuel load/tank size needed for a lower altitude orbit) and thereby reduced satellite agility. All three combined, dramatically reduced the non-CKPP regional area capability.

The non-CKPP requirements changes were formalized through technical interchange meetings and extensive analysis between the contractors and the government team. The team participated regularly at all levels during the development and analysis of the changes, including the contractor-led Technical Review Boards, Engineering Review Boards, and Configuration Control Boards. Summary briefings to program management were held prior to initiating the formal change process.

For the [redacted] (b)(1)(1.4c), (b)(3) 10 U.S.C. 424 specification the following is the history of the non-CKPP requirements:

- [redacted] (b)(1)(1.4c), (b)(3) 10 U.S.C. 424 global points [redacted] (b)(1)(1.4c), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424
 - March 2001 Contractor CCB approved change
 - July 2001 Contractor CCB approved change
 - August 2001 Contractor and Govt CCB approved change
- Contiguous area [redacted] (b)(1)(1.4c), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424
 - March 2001 Contractor CCB approved change
 - July 2001 Contractor and Govt CCB approved change
- [redacted] (b)(1)(1.4c), (b)(3) 10 U.S.C. 424 regional area [redacted] (b)(1)(1.4c), (b)(1)(1.4g), (b)(3) 10 U.S.C. 424
 - March 2001 Contractor CCB approved change
 - August 2001 Contractor and Govt CCB approved change

(b)(1)1.4c, (b)(3) 10
U.S.C. 424

regional points

(b)(1)1.4c, (b)(1)1.4g, (b)(3) 10 U.S.C.
424

- March 2001 Contractor CCB approved change
- July 2001 Contractor CCB approved A-Spec change
- August 2001 Contractor & Govt CCB approved change

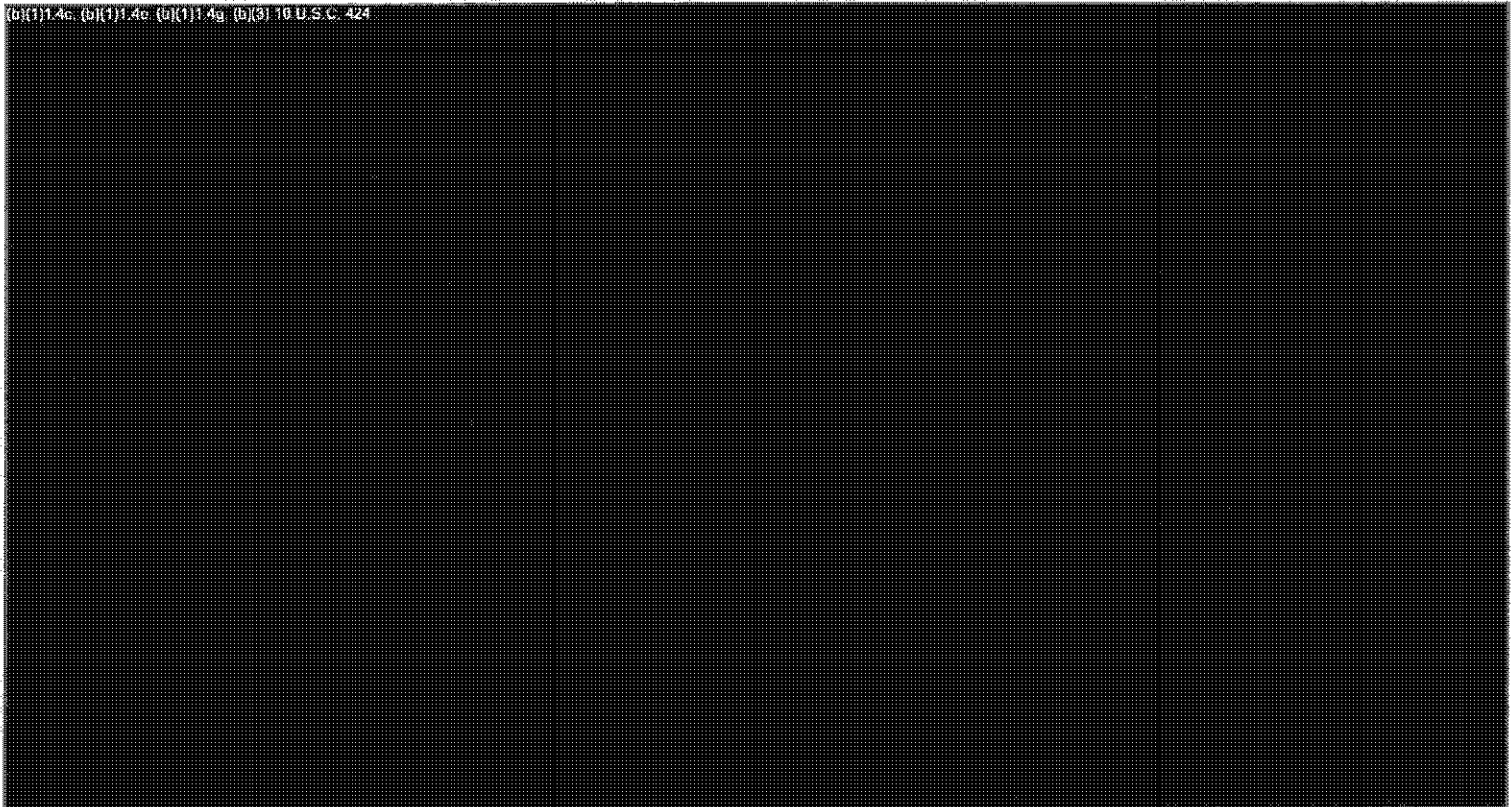
The chart below shows the current status of the requirements versus all KPPs:

(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424

(b)(1)1.4c
(b)(3) 10
U.S.C. 424



(b)(1)1.4c, (b)(1)1.4e, (b)(1)1.4g, (b)(3) 10 U.S.C. 424



Attachment 7: ECP Changes to the Cost of the FIA Contract

Table 1: Changes to CLIN 0001 as a result of the FIA rebaseline ECP

	(b)(7)(1,4c), (b)(7)(1,4e), (b)(7)(1,4g), (b)(3) 10 U.S.C. 424	
Cost		
FCCOM		
Target Cost		
Incentive Fee		
Award Fee		
Fixed Fee		
Total Fee		
Total Basic Contract \$	(b)(7)(1,4c), (b)(7)(1,4e), (b)(7)(1,4g), (b)(3) 10 U.S.C. 424	\$10,324,974,388

*Note: FCCOM is the Facility Capital Cost of Money, a non-fee bearing expense.

Table 2: Estimate of Subcontractor cost and associated fee.

Subcontractor	Delta ECP Cost (\$M)	Delta Fee (\$M)	% Fee	Delta Price
(b)(7)(1,4c), (b)(7)(1,4e), (b)(7)(1,4g), (b)(3) 10 U.S.C. 424				

*The govt and Boeing (b)(7)(1,4c), (b)(3) 10 U.S.C. 424 (the Prime) agreed during negotiations that fee for (b)(7)(1,4c), (b)(3) 10 U.S.C. 424 could be allowed as long as the total additional subcontractor fee remained below \$230M and no additional Boeing Prime fee would be charged on any fee paid to (b)(7)(1,4c), (b)(3) 10 U.S.C. 424