

**IDA FINDINGS ON THE USE OF THE LEAD SYSTEM INTEGRATOR PROGRAM
STRUCTURE FOR THE ARMY'S FCS PROGRAM¹**

Statement for the Air-Ground Subcommittee of the Senate Armed Services Committee

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I was the study director for the Institute for Defense Analyses's 2004 review of FCS program management. IDA performed this review at the request of then-Acting Secretary of the Army Les Brownlee and the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics).

The IDA report provides a snapshot of the program in mid 2004, and it describes eighteen substantial actions we identified as necessary to manage the program effectively. Our recommendations included actions to address risks associated with the topics of interest for this hearing: the Army's employment of a Lead System Integrator and the ethical programs associated with FCS. I have submitted an extract from our report for the record.

The Army's Employment of an LSI for FCS

Let me begin with three observations on the rationale for employing an LSI for managing FCS:

- The Army established a Lead System Integrator for the FCS program in order to capitalize on industry expertise in structuring, integrating, and managing complex development programs.
- The Boeing-SAIC team was selected to act as the LSI because of its experience in technical management and program integration. Boeing has considerable experience in integrating other large complex programs, including the NASA

¹ This statement is based on the IDA study report for this task. David R. Graham, Amy A. Alrich, Richard P. Diehl, Forrest R. Frank, Anthony C. Hermes, Robert C. Holcomb, Dennis O. Madl, Michael S. Nash, J. Richard Nelson, Gene Porter, David A. Sparrow, and Michael D. Spies, *IDA Review of FCS Management*, (Alexandria, Virginia, Institute for Defense Analyses, IDA P-3929), August 2004.

International Space Station since 1997, and the Missile Defense Agency (MDA) Ground-Based Mid-Course Defense (GMD) program since 1998.

- In DoD's view, an LSI is legally equivalent to employing a prime contractor that is focused primarily on system engineering, system integration, system planning, and control of the family of systems production.²

Our overall findings were that the LSI concept has worked satisfactorily in other contexts, and we discovered nothing to indicate such an approach cannot work for the FCS program.

At the same time, we found that the Army's use of an LSI for FCS involves some significant management challenges.

- The underlying challenge is that the successful execution of the FCS program requires ongoing strong, independent Army involvement to address design and development issues that are fundamental to the Army's future. At the time of our review, the Operational Requirements Document and Key Performance Parameters were being revised in parallel with FCS program development. There were also major technical risks that would require down-stream adjustments in program plans and expectations.
- The Army had the formal processes in place for overseeing and engaging on these issues with the FCS program. But, we saw potential weaknesses in the execution of the FCS management structure.³ The FCS employs the "One-team," which inter-mixes government and industry experts in IPTs co-chaired by government and LSI officials, and relies heavily on Boeing's management information system for information and analyses. This creates inherent tensions in the roles of Army participants - teammate vs. customer representative, and in the roles of industry representatives - teammate vs. representative of corporate management and stockholders.
 - From the contractor's perspectives, there are tens of billions of dollars at stake in upcoming decisions regarding the composition of FCS units to be fielded, as well as the capabilities that will be assigned to each element of FCS.
 - Boeing LSI personnel also face thorny dilemmas in the "one team" construct: The LSI is intended to act as a neutral party in assessing program tradeoffs and in offering advice. Thus, in theory, the LSI should not have a financial

² Acting Under Secretary of Defense (Acquisition, Technology, and Logistics) letter report on DoD's use of Lead Systems Integrators, 31 March, 2004. DoD indicates that an LSI is legally equivalent to a prime contractor.

³ The Army's formal framework includes the UA Board of Directors (BoD) to support FCS execution, assist in building interfaces between FCS and other Army acquisition activities, and to protect the Army's corporate interests in the FCS program. In 2003, the Army established the TRADOC Futures Center. The Futures Center provides an Army focal point for defining FCS capability needs and for arbitrating those major requirements decisions that have broad Army implications.

stake in developing and building the individual elements of the system; rather, it should recruit and oversee the best of industry. Boeing, however, has a large financial stake in the future of the program.

- On the government side, many staff are dual-hatted as IPT members while performing their governmental responsibilities, including oversight of contractor cost and schedule performance, setting user requirements, conducting operational and live fire testing, and establishing system architectures.

Given these internal tensions, we felt the government faced the risk of becoming too heavily reliant on its industry partners. Success with the FCS program requires a strong cadre of “smart buyers” on the government side, who are looking out for the Army’s interests, and are equipped to counter-balance corporate incentives in order to keep the FCS program focused on delivering an integrated and effective Unit of Action.

We advocate three actions to strengthen the Army’s ability to shape the FCS program:

1. A corporate Army process for identifying and resolving key FCS decisions.
2. An Army institutional capability to develop independent, corporate Army perspective on FCS cost, schedule, and performance issues. We recommended five specific responsibilities for the organization assigned this job:
 - Independent assessments of cost, schedule, and performance
 - Support for FCS Program reviews
 - Support for TRADOC Quarterly Futures Reviews
 - Assessments of the “One-team’s” management information systems
 - Strategic risk assessments with associated contingency options for FCS to enable the program to continue to adjust as development matures
3. Army test activities that continue their collaboration in support of the Army’s FCS development efforts, but in a way that ensures their independence.

Ethics

The IDA review examined Boeing’s ethics initiatives in some depth, looked briefly into the ethics programs in the other companies involved in FCS, and considered government workforce ethics issues as well. My comments today will focus on Boeing.

In the two years prior to the IDA review, Boeing had commissioned a series of external reviews to address some serious ethical problems unrelated to the FCS program. Such violations led to Boeing’s debarment from the Air Force’s EELV program. One review, “The Boeing Company: An Assessment of the Ethics Program,” was performed

by the Ethical Leadership Group at the request of the Air Force.⁴ Former Senator Warren Rudman performed two additional ethics reviews at the request of Boeing.⁵ R. William Ide, a former president of the American Bar Association, conducted a third review that focused on Boeing's legal department.

These external reviewers found Boeing's ethics activities to be under-strength, integrated too closely with the business and operating units, too narrowly focused, and not sufficiently aggressive in addressing issues. The Ethical Leadership Group noted that more than 90 percent of Boeing employees participating in their study were aware of the Boeing Ethics Hotline; however, a significant percentage of those same employees also felt that complaints would not be acted upon thoughtfully, in a timely manner, and worse, would subject the complainant to retaliation.

In response to the recommendations of these reviews, Boeing management took many steps to strengthen needed enforcement mechanisms, provide stronger awareness of the company's commitment to ethical behavior, and strengthen the mechanisms for reporting and investigating potential violations. (These are detailed in the IDA report.)

Boeing has, in particular, realigned its corporate structure to increase the independence of corporate governance functions, including establishing:

- A Senior VP for Internal Governance (reports to CEO and separately to the Board's audit committee)
- An Integrated Defense Systems Compliance Review Board – chaired by the President of Boeing
- Direct reporting lines for all Ethics Advisors to HQ VP for Ethics

With these and other actions, Boeing makes a strong case that they are making every effort to “win back the trust of their customers”; IDA did not, however, audit execution at Boeing so we can only report on these actions and the formal processes that Boeing has put in place.

Our report recommended three additional steps for the Army to help ensure that ethical issues would not harm the FCS program:

1. The Army should adopt a policy of “Trust but Verify” with regard to the ethics programs of the FCS industry participants.
 - In the case of Boeing, the Army should take advantage of planned future Air Force surveillance activities. As part of an administrative agreement to address Boeing's prior problems, Boeing will hire a Special Compliance

⁴ Ethical Leadership Group, Wilmette, IL, October 2003.

⁵ Paul, Weiss, Rifkind, Wharton, and Garrison, LLP, “A Report to the Chairman and Board of Directors of the Boeing Company Concerning the Company's Ethics Program and its Rules and Procedures for the Treatment of Competitor's Proprietary Information,” (Washington, DC: November 3, 2003) and “A Report to the Chairman and Board of Directors of the Boeing Company Concerning the Company's Policies and Practices for the Hiring of Government and Former Government Employees,” (Washington, DC: February 26, 2004).

Officer, approved by and reporting directly to the Air Force. Boeing also will agree to a follow-up independent audit in 30 months after the agreement takes effect.

- The Army also should task the Tier 1 subcontractors, through Boeing, to assess lessons learned from the Boeing independent reviews and, where relevant, adopt these lessons learned in their own operations.
2. We recommend that the Army should also require all contractors to screen current employees who have government backgrounds for possible FCS conflict of interest exposure. Relevant disqualification letters also should be obtained. The Rudman report recommended careful screening of future hires. Boeing agreed to do this, but we were also concerned about risks associated with those already hired before the Rudman review.
 3. A comprehensive personnel-tracking program should be implemented within FCS to help manage conflict of interest exposure for all program participants; it should be geared especially toward containment of proprietary information within the FCS “firewall.”