DRAFT FINAL

IDA PAPER P-2551

THE ROLE OF THE OFFICE OF THE SECRETARY OF DEFENSE IN THE DEFENSE ACQUISITION PROCESS

Volume IV
Appendix C: Interview Summaries

Barbara A. Bicksler
Thomas P. Christie
David R. Graham
Herschel Kanter

February 1991

Prepared for
Office of the Under Secretary of Defense for Acquisition

INSTITUTE FOR DEFENSE ANALYSES
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INSTITUTE FOR DEFENSE ANALYSES
Contract MDA 903 89 C 0003
Task T-A6-797

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PREFACE

This study was requested by the Office of the Under Secretary of Defense for Acquisition to support the Defense Science Board (DSB) Task Force on Acquisition Streamlining. The study describes the processes within the Office of the Secretary of Defense (OSD) for overseeing major acquisition programs and budgeting, and assesses the extent to which these and other oversight activities delay acquisition programs.

This study was conducted under contract MDA 903-89C-0003; task order number T-A6-797, Acquisition Streamlining.

The authors thank the OSD officials who provided data and answered questionnaires on more than 50 programs for this study. Approximately 25 interviews were used in preparing this report. The authors thank the interviewees for their time and for sharing their experience and insight. The DSB study was a large undertaking requiring careful cooperation and coordination. The authors gratefully acknowledge the members of the tri-service team, who worked hard to establish an effective team of government and contractor personnel. Particular thanks go to Captain Bruce Pieper, USN, Colonel Joseph Bailey, USAF and Carol Gardenier of the Army Materiel Command. Valuable comments were provided throughout the project by Philip Major, Vice President for Planning and Evaluation, Institute for Defense Analyses.

Finally, we thank Mitchell Robinson and Terri Walsh for computational support, and Teresa Dillard who coordinated the schedules of the study team and provided excellent secretarial support.

FORWARD TO VOLUME IV

To complement the fact finding on individual programs, the Institute for Defense Analyses conducted a series of interviews with current and former senior officials in the Office of the Secretary of Defense (OSD), the Joint Staff, and Congress. The interviews provide a functional perspective of the oversight process within each of these organizations. The individuals were asked four broad questions, intended to focus on their particular functional area:

- the impact of the OSD/Joint Staff/Congressional oversight process on program schedule and funding;
- the value added of the function and recommendations for improving the effectiveness of the oversight process, within OSD, the Joint Staff and in other layers of oversight (e.g., the Services and Congress);
- the primary reasons for the length of the overall weapons acquisition process today; and
- recommendations for improving and streamlining the process.

This appendix provides a summary of each of the interviews conducted, identified by organizational name only.

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GLOSSARY

ADM	Acquisition Decision Memorandum
C^3I	Command, Control, Communication and Intelligence
CAIG	Cost Analysis Improvement Group
CICA	Competition in Contracting Act
COEA	Cost and Operational Effectiveness Analysis
DAB	Defense Acquisition Board
DAE	Defense Acquisition Executive
DARPA	Defense Advanced Research Projects Agency
DDR&E	Director, Defense Research and Engineering
DEM/VAL	Demonstration/Validation
DMR	Defense Management Review
DOD	Department of Defense
DPG	Defense Planning Guidance
DPRB	Defense Planning and Resources Board
DSARC	Defense Systems Acquisition Review Council
DSB	Defense Science Board
FSD	Full Scale Development
FYDP	Five Year Defense Plan
GAO	General Accounting Office
IG	Inspector General
JROC	Joint Requirements Oversight Council

LRIP	Low Rate Initial Production
OSD	Office of the Secretary of Defense
OT&E	Operational Test and Evaluation
PA&E	Program Analysis and Evaluation
PBD	Program Budget Decision
PEO	Program Executive Officer
PI	Program Integration
POM	Program Objective Memorandum
PPB	Planning, Programming and Budgeting
PPBS	Planning, Programming and Budgeting System
R&D	Research and Development
SAE	Service Acquisition Executive
TEMP	Test Evaluation Master Plan
USD(A)	Under Secretary of Defense (Acquisition)

OFFICE OF THE UNDER SECRETARY OF DEFENSE (ACQUISITION)

OVERSIGHT EFFICIENCIES

1. OSD Value Added

Program Integration (PI) provides the Under Secretary of Defense for Acquisition (USD(A)) with an independent assessment not provided elsewhere in USD(A). PI also acts as the executive secretary for the Defense Acquisition Board (DAB) and manages the Defense Acquisition Executive Summary reports and review meetings. The organization provides affordability analyses -- analyses of the future affordability of the military investment program -- and other independent program analyses.

PI signs Program Budget Decisions (PBDs) issued out of USD(A). Programs are often changed during the budget reviews. The out years of the Five Year Defense Plan (FYDP) are painfully optimistic. Bringing these plans in line has played a role in program schedule and funding changes. PI makes sure that the Deputy Secretary understands the impact of budget decisions on programs. This was not necessarily true five years ago, and has been a benefit.

PI acts as an independent advisor to the USD(A) with respect to program affordability and program feasibility. In doing so, PI can hold up programs. PI must do this, because the Directorate, Defense Research and Engineering (DDR&E) has a built in conflict of interest and a tendency to become advocates for programs. (Action officers from Services who push for their own Service programs, and civilians in the Command, Control, Communications and Intelligence (C^3I) community.) The USD(A) staff needs to act as an appellate judge rather than a cheerleader. PI also tries to discipline the system and enforce Acquisition Decision Memoranda (ADMs).

OSD value added is to set policy, which includes streamlining existing practices, and to discipline the process -- the real key. The USD(A) is trying hard to do this, but still gets a lot of pressure to break his own rules. Programs that aren't ready for the DAB are being turned back -- today, about 50 percent of the programs.

2. DAB Process

Mr. Betti has improved DAB administration by issuing ADMs within 48 hours. This is important for streamlining, but more importantly the ADMs accurately capture what was decided during the DAB. Mr. Betti has also cut down the number of briefings that the program managers must give before the DAB.

3. New Directives

The newly drafted 5000.1, 5000.2 and 5000.3 describe and clarify acquisition policies and procedures. The documents describe the interrelationships between the DAB, Programming, Plannning, and Budgeting (PPB), and requirements generation processes. They also describe how affordability targets should be incorporated into the DAB and PPB decision making. New program starts begin at Milestone I, not at Milestone 0 as was previous practice. The chairman oif the Joint Requirements Oversight Council (JROC), as a member of the DAB, prioritizes proposals for new starts, and the USD(A) decides which to fund within the top line. If the top line was stable, it would be the first step toward stability for individual programs. The process should have more business like, event driven contracts. 5000.1 does not represent a new approach -- not a pipeline philosophy.

The rewrite of 5000.2 is a "how to" manual. The manual tries to eliminate as much advocacy as possible. Forty to 45 directives were subsumed in 5000.2. This is an important step toward reducing the large bureaucracies that had been created around many of these directives, and preventing further bureaucracies from growing. Without going through PI, functional organizations cannot add supplements to the new directives. PI, acting as acquisition management integrator, will provide major value added. The manual provides the program manager with a needed guidebook.

Execution of 5000.1 will depend on the discipline demanded by the Secretary of Defense, the Deputy Secretary, USD(A) and the Comptroller. Having procedures in one place will make it easier to enforce discipline, but it won't guarantee it. The new directives reflect what is required by statute and what is minimally essential.

MACRO-LEVEL MANAGEMENT

1. Program Realism

One root cause of program problems is a lack of realism. Programs tend to have success oriented schedules and unrealistic requirements at the front end.

2. DAB-DPRB Interface

Two major problems face the USD(A): the Department of Defense (DoD) can't afford the programs in the acquisition pipeline and the requirements process, the "front end" is broken. Both of these issues relate to affordability and realistic planning. The current administration is addressing these problems through the Defense Management Review (DMR): streamlining; integration of DAB and Programming, Planning and Budgeting System (PPBS); and simplification of regulations.

In the past, the DDR&E had been interested in both what weapons DoD buys and how we buy them. Mr. Betti has been more interested in how we buy, than in what. However, the USD(A) wears two hats: one is to manage the acquisition system -- how we buy; the other is to advise the Secretary on programs and budgets. The USD(A) should play a major role in linking the two processes.

PI will play a larger role in integrating the DAB and PPB processes in the future. When push comes to shove, the PPB roles. USD(A) will do stronger affordability analysis, especially for new starts, and bring affordability considerations to the DAB. These will be based in part on DMR's investment road map. Also, programs will not be approved that are not adequately funded. USD(A) will insist on greater realism in pricing, funding, and budgeting.

3. Overall Time Drivers

DoD is trying to squeeze too much into the top line. The system has a bias toward optimism, because decisions are based on paper products rather than reality. Plans are contingent on success -- for example, no time is allowed for redesign after development tests. Programs are technically complex and can't be expected to be problem free. Every system has built-in problems and risk. We need to realistically plan and budget to realistic cost estimates to accommodate for risk, but the system is biased against budgeting for future risk. The Service's set ambitious requirements in order to justify new starts, then Operational Test and Evaluation (OT&E) holds them to the requirements (rather than testing operational suitability). A new weapon must be significantly better to justify a new start. Finally, DoD does not step back from programs when problems develop, but tries to forge ahead. The system needs to come around to the approach of doing it right the first time--in the long run things will go faster.

A fundamental flaw is the disconnect between requirements and budgets. The Vice Chairman is trying to bring affordability to the JROC by looking at resource constrained requirements.

In sum, the key problems with the process are:

- unrealistic requirements,
- an unrealistic top line,
- success oriented acquisition schedules,
- not budgeting to realistic estimates, and
- not stopping when problems arise and assessing how to fix them.

4. Some Recommendations

- Avoid great leaps forward -- pushing too many technologies too far in each system. A lot of good defense capability has come out of technology push, but some has cost too much, been in development too long, and some we aren't sure how to use operationally. Do trade off analysis to determine a reasonable investment for increased performance.
- Specify programs in terms of mission oriented needs. The acquisition system is biased toward new starts rather than product improvement. In part, setting requirements introduces this bias. Shift the focus toward product improvements or evolutionary acquisition.
- Bring requirements and affordability together. Make the JROC subservient to the DAB.
- Experiment with new concepts, by issuing small quantities to test units. (IFV was developed without doctrine.) This approach allows one to identify development drivers, how to use concepts operationally, reduces changes before the program starts, and can shorten the program acquisition time.
- If good business people were in charge, the system could get rid of some laws and regulations and shorten the process (laws on competition for example).
- Acquisition procedures should not approve programs entailing both new hardware and new software. Such programs have a low probability of success.

OFFICE OF THE UNDER SECRETARY OF DEFENSE (ACQUISITION)

OVERSIGHT EFFICIENCIES

1. DAB Process

The process allows things to be done right, but people screw them up. Take two programs for example: MLRS and DIVAD. Both had similar acquisition strategies, vintage, etc. One was a success, the other a failure. Program outcome is not dependent on the process, per Se. The process is really a reflection of the people.

The DAB process tends to be dictated by the personality of the USD(A). Mr. Betti focuses on technological risk, backup plans, and reducing concurrency. The creation of a new committee, chaired by Mr. Yockey, is also a function of personalities -- for Mr. Betti it is a way of standardizing across the three committees. But the new committee could make it more difficult for programs to get to the DAB. In one sense the committee is representative of more discipline.

Betti has initiated improvements in the system. The ADM approval in 48 hours have been a major improvement. Also, Mr. Betti's ability to sign the ADM is a plus. The ADM reflects Mr. Betti's decision or documents why a decision wasn't made. Directives reflect leadership, rather than vise versa. The revisions in 5000.1 reflect Betti's preferred approach.

2. Documentation

Program managers usually know what is required in a DAB, but it is often difficult to get information from the Services. In the SSN-21 program, the Navy won't report the total program beyond the six year plan. (Total program projections are reported for aircraft programs such as the F-18 and F-14.) In another example, the DAB wanted information in the program baseline on performance parameters for nuclear reactor development, to use as a leading indicator, but the Navy wouldn't provide the information.

In the LONGBOW program, the manpower report hasn't been done right and was kicked back by Force Management and Personnel. The report was not rigorous enough on

maintenance manpower for the Apache, even though the Army was told 6 months ago that the report was not acceptable.

These problems are not due to inexperience, rather proponents try to soft peddle problems, and push the program through review. Documentation deficiencies are generally intentional.

3. Personnel

The OSD staff should play the role of devil's advocate. But this is not always performed well, e.g. the C^3I staff are often program advocates for many joint programs that the Services aren't interested in. However, overall the process has become much more objective in recent years.

One of the best incentives is an emphasis on people -- getting the best, most experienced people in place. Oversight can be reduced if incentives are correct and the system has good people. The political staff is going deeper now, undermining experience and staffing leadership. An important recommendation is professionalizing acquisition and the acquisition work force. Consider Peter Levine of the United Kingdom as a good model.

MACRO-LEVEL MANAGEMENT

1. DAB-PPB Interface

The DAB-PPB interface is an important issue. The DAB chairman should play an active role in the PPB process. DAB decisions shouldn't be made in a vacuum -- decisions should take resources into account when approving an acquisition strategy. The USD(A) has the responsibility to make the connection -- to look at the broader picture when making DAB decisions.

2. Incentives

A fundamental improvement in the process requires changing the incentives of program managers. There is an intense competition for resources and the program manager's job is to sell his program--to keep it alive. Incentives should favor analysis. Betti should be able to fire program managers if there is a cover up. Consider AMRAAM. Hughes and Raytheon said a 72 month full-scale development phase (FSD) was needed. The program office thought 80 months. The Air Force signed a fixed-price contract for 48 months. This is an example of what happens in the competition for resources. There have

been 4 program managers for AMRAAM and all have made 4 stars. (Note: Service incentives are strong to keep a program manager's tenure short--each man comes in and carries the water for a while and then disappears back into the fold.) program managers need incentives to develop a realistic plan.

Bob Everitt, in a Defense Science Board (DSB) panel, provided charts contrasting incentives between commercial and DoD program managers. Ideally you would have a program manager in on the ground floor to take the available technology and develop a realistic plan. The incentive to make the plan realistic would be the fact that the program manager is going to be there to manage the program for 5 or 10 years.

OFFICE OF THE UNDER SECRETARY OF DEFENSE (ACQUISITION)

OVERSIGHT EFFICIENCIES

1. Oversight

OSD oversight is an anachronistic term. If it means management, then it is OK. If it means looking in from the side, then it is a problem.

2. USD(A) Organization

Godwin wanted Program Analysis and Evaluation (PA&E) as part of USD(A). The Cost Analysis Improvement Group (CAIG) should be working for the DAB, not the PPB process. PA&E still holds a lot of power that should be in the hands of the USD(A). In general, OSD doesn't work together to make streamlining work to an optimal degree.

The USD(A) staff does not support him very well on either program stability or satisfaction of requirements. Take the P-7 as a case study: The Navy needed an airplane with LRAACA for upgrading the P-3. The real issue was that aircraft needed to get there sooner. The torpedo solution stuck at heart of P-3 community. Godwin told the Navy that they were overextended and urged them to review their whole aviation program, but other parts of OSD assured the Navy that the issue would be worked out through the Defense Planning and Resources Board (DPRB). In the end $1.3B was spent on a program that was cancelled and never went to the DAB.

Money also needs to be centrally managed. Money should be allocated to the Services after Milestone II. Money for modernization should be allocated in response to acquisition decisions. Under this structure, the requirements people would work for the USD(A). This structure also requires Congress to look at things in a different way.

MACRO-LEVEL EFFICIENCIES

1. Streamlining

Streamlining is not synonymous with speeding up the acquisition cycle. Streamlining results from clarifying tasks, stabilizing funding between milestones, and minimizing the number of people who can interfere with the program between milestones.

Packard focused on minimizing and eliminating layers in the process and forming an unambiguous chain of command. After some point in the process, decisions should be made at milestones. Baselining is intended to do this. But streamlining within a phase, doesn't mean eliminating rigorous reviews at each milestone. (Mr. Betti's "exit criteria" are an attempt to clarifying program goals.)

The Packard Commission and Public Law 99-500 establishing "enterprise programs" which provide the appropriate model for streamlining. What is needed is the discipline to make such an approach work.

Acquisition has two pieces: setting up requirements and procurement (Milestone 1 through 5). People tend to talk more about the procurement piece, when in fact more focus should be put on requirements. The DSB study needs to be put in perspective: 10 to 20 percent efficiency savings in acquiring systems pales in comparison with the costs of buying the wrong weapons.

Field commanders do have the time to identify future deficiencies. There are 187,000 people in DoD labs and 86,000 people in industry who can come up with solutions. Unfortunately these groups only communicate through the Service headquarters staffs, who don't have the needed background to effectively bridge the two -- they are Commanders or Captains. Also, they focus on the next generation platform. For example, the focus on Aegis should be the electronics, not a 30 knot platform.

There is nothing new to be learned about streamlining -- DoD needs to get up the courage to implement.

2. DAB-PPB Linkage and Long-Range Planning

The PPBS generally tackles the wrong set of problems. The process focuses on one plane versus another rather than on defining operational deficiencies. The Joint Staff should be the bridge between the requirements and the staffs. But, Herres didn't think the DAB, USD(A), or Joint Staff should play this role. Instead the JROC reviews the Service Program Objective Memoranda (POMs) -- the Joint Staff still has no effective role in requirements. The process is still a grass roots, Service-up oriented process. Key authorities are left with commenting on other's work.

There is nothing wrong with ending a program at Milestone II. FSD is a good time to reevaluate -- to say you've gotten your money's worth. Some technologies are overtaken by new technologies. Counter stealth now beats stealth, so let it go. This is a fair type of decision, but not one that the process supports. The incentives are to keep

programs alive. Don't lock into a long-range plan. You want stability within milestone phases, but not necessarily at the milestone decision point. (This is the opposite of what we do today -- die of a thousand smaller cuts, rather than one decision.)

In Navy program planning, they tried to keep two sets of books -- the FYDP and reality. It seems that we can't get the system to be honest, so gaming is inherent. There is the fear that if you do realistic planning, you will always get 80 percent of what you request. It is also impossible to plan rigorously beyond the FYDP.

Long-range planning can't really identify specific weapons, but it can be done for the overall force and mission areas -- it is effective in redefining missions, redefining approaches to missions, and reallocating resources. Streamlining doesn't require rigorous long-range planning for acquisition -- which may be impossible because of bureaucratic barriers -- because the needed funding commitment is between milestones, not over the full development cycle. Nevertheless, there is a need to develop an overall program road map that is executable and used to drive DPRB decision making.

The disconnect between acquisition and budgeting is a big problem, and much of the solution is to delegate greater authority to the USD(A).

3. Baselining

The baseline program plan is intended to be a contract between USD(A) and the program manager. The fewer other people involved the better. The Packard Commission felt that once the baseline was signed, only the USD(A) (plus the Program Executive Officer (PEO) and Service Acquisition Executive (SAE)) should have the authority to change it. The Ikle Commission also supported this view, but it has never happened. PA&E, the Service POMs, and the Comptroller all change program baselines. Everyone takes funding out of programs -- no program manager can carry out the baseline.

OSD never accepted National Security Decision Directive 219 or Public Law 99-500 (the legislative provision for baselines) and in fact was one of the reasons why Godwin quit. USD(A) has no authority that can't be overridden in the PPBS process. For example, PBDs have taken a share the pain approach. But the inconsistencies between the PPB and acquisition processes will never be worked out unless the out years of the FYDP and budget reality are better matched.

4. Planning Process

From the OSD perspective, the Defense Planning Guidance (DPG) is filled with "must dos" that the Services can selectively ignore. The DPG should be modified to eliminate "must do's"

OFFICE OF THE UNDERSECRETARY OF DEFENSE (ACQUISITION)

MACRO-LEVEL MANAGEMENT

1. Personnel Experience

The USD(A) staff is subject to qualifications such as in procurement, quality assurance, manufacturing, production and program management. Still, many people in the acquisition process may not be covered by these requirements. More qualifications will be set up in response to the new legislation requirements in the Defense Acquisition Work Force Improvement Act.

2. Acquisition Training and Education

A Director of Acquisition Education Management will be set up for the Defense Agencies and the Services. An acquisition corps will exist in the Defense Agencies. Also, the department will identify critical positions that can only be filled by people in the acquisition corps. This should help lead to more uniform requirements in the Services.

A Defense Acquisition University "structure" will be chartered in a year, beginning in August of 1992. Mr. Betti has already approved a plan for the university. Mr. Yockey is chairing the charter committee. The university structure will take into account the Long Commission recommendations regarding Defense Systems Management College and Industrial College of the Armed Forces. In fact, one consideration is that the Industrial College of the Armed Forces be the core of the structure. Defense Systems Management College will be part of the structure, as dictated by law.

3. Acquisition Corps

The recommendation for an acquisition corps is a good one. This approach will clear out the management structure and increase the number of civilians filling acquisition jobs. Program managers will have worked in the acquisition field and come to their positions with more experience. In an acquisition corps, an emphasis would be placed on setting personnel requirements that do not distinguish between civilian and military personnel.

4. Program Manager Tenure

Despite the law, program manager tenure has not improved. A House Armed Services Committee report estimates that DoD violates the law 89 percent of the time. Half of the time violations are due to reassignment or reassignment associated with promotion; the other half due to retirement.

Enforcement of this and other policies may improve in the future. The new law provides for extensive reporting requirements and has set up an oversight function in OSD. If the Services choose to ignore the law it will be known and known in a timely manner. "What gets measured gets managed."

5. Personnel Retention

Personnel retention is a big issue. An acquisition corps allows the system to train people early and benefit from that training when they are program managers. Twenty-seven years is a critical point in the military system -- at this point an officer's salary is capped.

There are mechanisms by which people can be retained in the system and rewarded. There is authorization to pay selected people 15 percent more in critical positions. Also, the system allows for about 800 double dipping exemptions, which allows military people to be hired back as civilians while receiving their military retirement.

Present policies support giving people in the acquisition process the same promotion opportunities as officers in rated jobs. Currently the promotion rates in the acquisition area are good, but these numbers may be biased because rated officers are part of the acquisition personnel pool.

OFFICE OF THE UNDERSECRETARY OF DEFENSE (ACQUISITION)

MACRO-LEVEL MANAGEMENT

1. Cycle Time

The DSB Task Force study focuses on cycle time. This is an appropriate measure on which to concentrate the analysis. Since the process is multi-variant, many factors such as cost and manpower will be taken into account, as they relate to cycle time.

2. Root Cause Methodology

The key to the study is to develop a root cause methodology that can be used as part of the standard operating procedures in DoD, after the Task Force disbands. A methodology like the process action teams, currently being tested by Task A is an appropriate one. Of course these teams need to be linked to a systems integrator, responsible for coordinating the interrelationships of the individual process groups.

Mr. Betti used the concept of a cross-functional process action team to examine oversight in defense plants. The study looked at oversight functions both within DoD -- such as the Defense Contract Audit Agency and the Inspector General (IG) -- and beyond.

Structures are emerging to perform the role of systems integrator. There is the Defense Acquisition Executive (DAE) and SAE structure. Structures are being formed in the Services to implement total quality management. These groups can provide the essential higher level focus.

3. No Process Owner

A profound problem in the acquisition process is the lack of a clear process owner -- a single person in charge. Even Secretary Cheney is not a clear process owner because of the Congressional role of checks and balances. Mr. Betti is the closest to a single process owner, but even he must rely on the volunteered cooperation of many in OSD and the Services.

Part of what makes a process owner effective is the culture of consensus management. But DoD doesn't have this culture -- it lacks the perspective of common goals and purposes.

4. Implementation

Implementation is key. The Team 3 look at why past recommendation had not been implemented was an excellent idea. A real part of the problem is lack of process ownership -- of everyone being able to buy into a recommendation. The current DSB Task Force faces the same risk.

5. Recommendations

The process of developing recommendations for streamlining is exceedingly important. Since no one is recommending the elimination of key functions -- like the IG or Comptroller -- the task force needs to develop "win-win" recommendations that don't attack one group or another.

A key part of the recommendations will be developing a methodology to get people to support and implement the recommendations. Also if there is no infrastructure (machinery) in place to oversee and evaluate implementation, little progress can be made. Finally, DoD has no feedback look and must set up a feedback link within the system to monitor progress.

6. Coordination Approach

The standard operating procedure in DoD is coordination. On the one hand this approach is good because everyone has input. On the other hand, people comment in their own little box, without benefit or knowledge of other inputs. This approach can often lead to barriers rather than consensus. Structured brainstorming or an Adelphi approach would be reasonable alternative, and suitable for developing Task Force recommendations.

OFFICE OF THE DIRECTOR, DEFENSE RESEARCH AND ENGINEERING

OVERSIGHT EFFICIENCIES

1. Event-Driven Process

The OSD oversight process has increasingly causing delays for programs, in last six months or so. These delays have developed due to pressure from Mr. Betti for programs to meet all requirements (particularly documentation) before proceeding to the next milestone. Mr. Betti is also establishing the process of setting "exit criteria" at the beginning of each program phase, and holding the program to these requirements at the end of the phase. These criteria require proponents to be ready.

The process needs to move toward event-driven vs. calendar-based decision points. The B-2 program adopted the idea of exit criteria three years ago by setting up a system maturity matrix. The matrix related product technology and requirements to production decision points. Jack Krings pushed the idea at the time, and it is an effective concept. The approach provides contractors with the incentives to do things right -- it keys production contract awards to performance.

The approach does have pitfalls, however. For the B-2, Congress has tied funding to matrix, so the matrix is driving the program. The program manager executes the program in response to the matrix, rather than what makes sense. Also, Weinberger was adamant on the initial operational capability and first flight for the B-2. To accommodate this goal, the development program was compressed. The program then experienced a major design change in 1983, but no change in schedule. This sort of action is a formula for failure--suddenly big delays occurred which were hidden from the public for a long time.

An event driven approach requires setting the right criteria initially and responding to it in a sensible way as the program proceeds. Mr. Betti initially tried to establish exit criteria that was fixed, but now realizes that some means to adjust them is necessary.

2. Oversight as a Time Driver

In general, the DAB is not a major driver of time. However, the downside of documentation requirements is that they divert the program manager's attention and add overhead. The question is whether the burden is worth it. Some feel that OSD oversight is indicative of distrust of the Services. But in fact OSD does help to provide uniformity among the Services.

The revisions of the 5000 series attempt to streamline requirements. Also, there is a test and evaluation committee to work out the issues of the Test and Evaluation Master Plan (TEMP) backlog. The committee has developed a new TEMP format (shorter) and review procedures. The Cost and Operational Effectiveness Analysis (COEA) is a hefty piece of work. But, it provides answers that are needed -- it is important to ensure that appropriate alternatives have been considered. Other documents shouldn't be that time consuming.

3. Committee Process

There is a move under Mr. Betti to get the senior USD(A) officials more involved in the committee process. A new committee has been established, headed by Mr. Yockey, to ensure that programs are ready to proceed to the DAB. Many see this as another layer or as doing the committee job, but it may be only a partial layer. The committee is made up only of USD(A) officials -- is not as broad based as the committees -- and could be viewed as part of the USD(A) DAB homework process. It remains to be seen how this will sort out.

In general the committee process works well, but the committees probably don't dig into program issues as much as they should. The pre-briefs have been substantially cut back, so it is harder to get the information needed to dig in. The process is in a period of transition -- trying to find a balance between unburdening people from unnecessary requirements and getting sufficient information for decision making.

MACRO-LEVEL MANAGEMENT

1. Pre-Milestone 0

Time could be cut getting to Milestone 0. It is important to try to gather data and examine this part of the process. Pre-Milestone 0 tends to be rather nebulous and can take a lot of time. Technology push is a national strategic advantage. But the Services are often slow to recognize opportunities. As a result, a big selling process is required. The new 5000.1 will provide a pool of money for needed studies which will help. The Defense

Advanced Research Projects Agency (DARPA) may also be a way to short cut the process since DARPA has a charter to demonstrate new technological capabilities.

2. Milestone I

A lot of tailoring could be done to the milestone process on a case by case basis. The process has some technology demonstration prior to Milestone I. The Army is trying to eliminate the Demonstration/Validation (Dem/Val) phase. The Follow-on-to-Lance program uses existing technology, for example, so there was no need for Dem/Val. More could be done before Milestone I to shorten the Dem/Val phase.

3. Prototyping

The view on prototyping is mixed. The Army is still distraught that it has been recently forced to prototype on two programs and argue that it will stretch out the programs. On the other hand, proceeding to FSD and production before the program is ready has caused problems for lots of programs. Prototyping is a way to show what can and can't be done before proceeding into the later phases. For example, the B-2 has had cracking problems in the deck which might have been found if a prototype had been built. A solution to the problem could have been developed before the program went into FSD; however, it may have been a very timely process. If production is the issue, prototyping production process can be very expensive. A policy on prototyping has no clean answers.

5. Concurrency

Streamlining must be done in the context of some overall philosophy. For example, concurrency can play a big part in streamlining. The B-1 let an FSD and production contract in the same day based on the belief that is less costly to retrofit than to test and redesign based on prototype.

6. Communication

A better flow of information and communications would help move the acquisition process along. Surprises give programs a black mark -- they sow seeds of suspicion and hurt program stability. As a result there is a strong tendency not to reveal bad news. In part this is fueled by a healthy "can do" attitude, but situations can backfire. The A-12 is an egregious case in point. If programs are understood, courses of action can be structured to take care of problems early on. People should not be penalized for raising problems -- it is part of the process.

There is an effort underway to look at the whole idea of information flow: who the USD(A) should rely on for information, how information flows should be structured, formal vs. informal processes. The USD(A) should rely on his staff for this information because the OSD staffs stay up on programs. The staff occasionally makes site visits, but not as many as they should. The Air Force believes that site visits are unnecessary -- OSD should get information from the program manager. There are still a lot of questions and issues to be considered.

7. DAB-PPB Interface

The DAB approves program plans, but later these plans are subject to attack in the PPB process. Many of the problems center more on Congress than OSD or the Services. In the B-1 program, Congress has been a major factor, funding the program a bit at a time. Withholds is another issue, but have not been a problem with this office. However, some offices are less responsible in the use of withholds, and the Comptroller sometimes withholds program funds without notifying USD(A). Mr. Betti has taken steps to address the withhold problem--now Mr. Betti or Mr. Yockey must approve withholds within USD(A).

The Trident is a program that has experienced good stability and has worked well. SRAM II has been funded well but there has been a lot of concern over technical problems. This has resulted in major program reviews, tying up some 20 people. The ACM has been bounced around--due largely to serious technical problems. SDI is the ultimate bounced around program. The President and Congress need to reach some agreement on where to go.

8. Personnel

One problem is the lack of a revolving door for personnel. It is very hard to get the kind of people you want on the staff. Bill Perry's model was to have people in for three years and then return to industry. This is a good approach, but we can't get these people today.

OFFICE OF THE DIRECTOR, DEFENSE RESEARCH AND ENGINEERING

OVERSIGHT EFFICIENCIES

1. OSD Value Added

OSD provides balance in the acquisition system by bringing a different perspective to the table. The Services focus on need and on program survival: marketing. OSD should take a business-oriented approach, focusing on schedule, cost, and program realism: executability. OSD is more open minded to alternatives. If effective, this check in the system is good.

OSD has had a positive impact on many programs. For example, the Army changed the acquisition strategy on the tank program in response to an intensive effort by OSD -- a change that will in the long run benefit the program. The DAE does not always agree with OSD, but it is good to have the OSD view represented. OSD generally acknowledges the need for a program, but acts as devil's advocate.

While there is value added, oversight does add an overhead burden. Sometimes action officers are parochial. Requirements take time from the program manager. But on the whole, the net affect is positive.

2. The DAB Process

Two important areas of emphasis: more business like reviews and more discipline in the process. The Conventional Systems Committee has eliminated the "movies" often shown by the Services in program reviews -- an effort to cut out the marketing and focus on the real program issues.

OSD's influence varies at different milestones. Milestone 0 is a non event, with the least influence. Milestone I is important because it approves the program's structure in development. Milestone II involves significantly more money. Change at this point can really perturb the program. Milestone IIIA is not a big event if the FSD phase has gone well, but there is a tendency for programs to start production earlier than they should. Milestone IIIB commits the big production money to a program. Operational test results have a big influence on the decision.

Program schedules lack realism. The Services tend to be too optimistic about risk, technology, cost and schedule. The Services need to be forced to be more realistic.

Requirements for exit criteria need to be nailed down more precisely and earlier in the program. Exit criteria is being used by Mr. Betti -- was used in the AMRAAM review. When requirements are vague, people disagree about what the requirements really mean, particularly when personnel change and new people are brought into the system.

The CAIG brings a lot to the table -- a good independent costing system. The LH is a good example of CAIG analysis forcing the Army to bring the program costs into line.

The COEA is a mixed bag. The Services tend to take different approaches with different degrees of thoroughness. The Army does the best. One problem is that PA&E has never provided good guidance on the COEA -- on what is expected at MS 0 and I. LONGBOW is an example where PA&E is objecting to the COEA, because expectations were not clear.

Baselines should be used as Service planning documents. They should be done as a management tool, not to meet an OSD requirement.

The TEMP is another document that the Services should use as their own internal planning document. The Army and Navy do to some extent, but the Air Force views the TEMP as an OSD requirement only. More discipline needs to be brought into the test plan process as well.

The committee structure developed by Godwin is a definite improvement over the past. Particularly in weeding through the details and identifying the key issues. However, Mr. Betti is not yet satisfied and has a tendency to get into the details himself.

Mr. Betti is still not fully satisfied with staffing. A "super committee" has been created to review programs before they are scheduled for a DAB. The committee consists of the USD(A) principals and the committee chairman, and is chaired by Mr. Yockey. This group seems to have been created because Mr. Betti doesn't trust the committees enough, but doesn't appear to be a very workable solution.

3. Oversight as a Time Driver

Only about half the programs that come up for committee review are ready to go to the DAB. Oversight does affect time, but usually only in a minor way -- several months. These delays can be avoided by more and early communications between staffs to work through problems rather than wait until the formal reviews.

Program managers don't have much experience with DABs, so each one tends to be a learning experience. The Services might think about how to add some continuity to the process.

Occasionally the DAB will have a more significant impact on program time such as declining a production lot or requiring the schedule to be restructured. But these changes generally have a positive affect on the program in the long run.

Many test issues are worked out in the oversight process. This should not be the case. Operational testers focus on realism and like full-system testing. Developmental testers focus on test scheduling, types of tests, and how to get the information that is needed.

The amount of effort that goes into oversight generally depends on how healthy the program is. If a program is in trouble, there is a lot of oversight and a lot of time. For example, the Army PLS program signed up to a liability threshold at MS I/II. The program came in at 1/3 of the threshold. It was decided, after pouring through the details, to let the program continue as is. This is an example of lots of oversight that probably consumed 2 to 3 months of the program manager's time. But in the end, the decision was a good one for the program. The AMRAAM was another example of value added by OSD -- putting pressure on the program manager and contractors to take positive corrective action on the program.

There is a tendency for the Services to blame a lot of oversight on OSD, when in fact a lot of oversight requirements are generated within the Services. For example, in the Army some 20 signatures are required on the TEMP before it goes to OSD, where only 2 signatures are required for approval. Similarly with pre-DAB briefs, most of the briefings required are in the Services rather than OSD.

MACRO-LEVEL MANAGEMENT

1. DAB/PPB Interface

Budgets tend to drive things. It is hard to get more money for a program if it was not previously committed. There needs to be a better link between the DAB and the budget process. In particular, new starts need to be better linked to dollars.

Funding is not a factor in DAB decisions, a source of constant frustration to the program managers, who have to rebaseline programs in response to budget decisions that are at odds with DAB decisions.

DoD has no flexibility with funds. The Pentagon should be allowed to move program money from production to research and development (R&D).

The system is out of balance in attempting to modernize the current force structure within the current budget environment.

2. Concurrency

Concurrency is no longer viewed as such a good thing as in the past. Concurrency is very program specific and has to be linked to a level of risk.

3. Recommendations

- Continue the business emphasis. There is still a lot of marketing in the system.
- OSD should get involved with the Services early so as not to derail schedules at the last minute because of surprises. Lately about half the programs have been sent back for more work. Working groups should allow more continual involvement so that expectations can be reconciled.
- The Services should view DAB documents as their own internal planning documents. The boiler plate needs to be eliminated from these documents (though some of that is required by legislation).
- One idea that has been floated is to combine a lot of the review functions, such as testing, contracting, and production, into one organization. For the committees, it would be an improvement to give the committee chair control over the staffs who produce the products -- improving the responsiveness of the staff work.
- PA&E needs to provide good guidance on the COEA. This document should be taken out of the program office and put together from a more objective point of view.
- The testers should be involved in the early Service test plan meetings. TEST issues should be raised early in the program life.
- Get the acquisition strategy on the table early.
- MS I should get a lot of emphasis. Right now Mr. Betti is putting more emphasis on MS IIIA and IIIB, trying to stabilize the test designs and inputs.
- Lack of continuity in personnel kills the process. This is true at the program manager level, where too many are not prepared to do the job. But it is also true in USD(A) -- there have been 5 USD(A)s in the past 4 years. Each time there is a new USD(A), the Services have to adapt to their style. Mr. Betti is pushing a more business like approach, taking a harder look at programs, asking for more depth and this is cascading down to the Services.

- **In the DAB process, there is an effort to make things more executable and realistic. But, systems are more difficult than ever, so trying to reduce development time will be difficult.**

OFFICE OF THE DIRECTOR, DEFENSE RESEARCH AND ENGINEERING

OVERSIGHT EFFICIENCIES

1. OSD Value Added

Centralized oversight is essential. The Services can't be trusted to develop programs that are best for the country overall, they tend to stake out their mission areas. The Services are very autocratic--lots of decisions don't make sense from a DoD perspective. Betti is focusing too much on process over substance. In the recent A-12 case, heads should have rolled. Even Weinberger changed his view on decentralization because of the B-1 and other embarrassments.

The system needs OSD's checks and balances. But, OSD needs to be disciplined. There needs to be strong control of the OSD staff. People should be limited to their area of expertise. (Staffs have deteriorated and contain a lot more inexperienced people, but lots of good people remain too. Every time a good one leaves, the quality of the staff goes down.) Congressional laws have made it difficult to get good people into government. We should have the best people in the country looking at DoD problems.

2. DAB Reviews

The OSD review process has improved. In the late 60s and 70s the Defense Systems Acquisition Review Council (DSARC) reviews lasted 3 hours or more and lots of people were involved. Often the principals came in cold and the reviews failed to sort out the fundamental issues from the minor issues.

Under Godwin things changed. He hated big meetings. Godwin wanted the DABs to be small and the committees to iron out most of the issues. At the committees, everyone had their say. In the DAB, the issues were summarized and everyone tended to be better educated. The DABs were relatively short and focused. Herres was involved then and was a tremendous asset to the process. However, Godwin was not particularly effective because of constant turf battles with the Services and Taft.

3. Committee Reviews

It is hard to keep the committee reviews professional. Often you don't have the people in the reviews with sufficient expertise in the various area -- a key area being software problems. The system should be set up to tap into expertise at the labs, in DARPA, etc. There is room for more expertise in the reviews and a closer emphasis on the division of labor.

MACRO-LEVEL MANAGEMENT

1. The Front End

The goal of a 50 percent reduction in time is ridiculous. To hold the process constant would be a better goal in today's environment. However, there are prospects for reducing some portions of the process.

First, is the front end: time from concept to advanced development could be cut. Part of the problem is that competition begins too early in the process. The technology people should manage this part of the process rather than the procurement people. For example, if a good idea surfaces from the lab it should go to DARPA. DARPA would then hold a competition to develop the idea, and it may take 18 months before a contract award. The initial proposer might not even get the award.

In the early stages, cost should be irrelevant. Awards should be based more on technical issues than the cost. Once the product is well defined, then the emphasis should be on cost. Low cost bidding in the early stages is counter-productive. Only when you have a very well defined product should you have a competition. The proposals should be judged based on merit and experience.

2. Advanced Development

A program should be able to get into advanced development in a year to 18 months. In this phase, time can be reduced by building prototypes that don't have to meet government specs -- keep specs to a minimum. The purpose is to demonstrate feasibility, and it is appropriate to take shortcuts to approve technology. All of the "illities" need not be worked in at this point.

3. Concurrency

Concurrency is valuable in engineering development. The issue is not how much you have, but how you manage it -- manage for efficiency. Concurrency in engineering development gives some continuity to the tooling and production people. There should be a gradual buildup as the program is moving into full rate production. The C-17 produced five test aircraft in FSD. Only 1 will be used for developmental test, the rest recycled for operational test. An important factor here is having the technology in hand before starting FSD. Congress wants more fly before buy, which is more expensive and stretches out the program. It doesn't make sense to build one SSN-21 and wait to complete operational testing before building the rest -- it would be very inefficient. Still, it is important not to leap too fast into full rate production.

The process has to accept more risk and introduce concurrency to shorten the cycle.

4. Transition Between Phases

There are some prospects for shortening the transition from one phase to another. Decision time might be compressed. However this time is not a total loss--work goes on. The decision making process used to drag on, but Betti has improved this with the 48 hour rule on ADMs. Godwin used to have a lot of trouble with Taft, which slowed the decision making process.

Reviews should be event based. Exit criteria should be program specific and reflect a balance of risk and efficiency. Some generic criteria are possible, but we need to use common sense. Generally this is a good idea, but it is not too well defined today. Also, exit criteria shouldn't be all or nothing -- go or no go. If 8 of 12 tests are successes, then move to next phase. There are times when too much rigor may not make sense -- you have to evaluate on a case by case basis, considering risk, economics, and cost. It is important to consider discipline in the system, but too much rigidity is bad as well.

5. New Starts

New starts should entail a high potential for large improvement in capability. The program should always have very clear objectives and we should be confident in engineering development. For example, the Apache offered a great improvement over Cobra -- major effectiveness differences -- night, range, multiple engagement, and less vulnerable. But we are having a terrible problem figuring out why to buy the LH. The LH

is a little less vulnerable and has a lower signature -- perhaps a 15 to 20 percent advantage -- but not as significant an improvement. The question is whether it is worth it.

The system tends to be smarter with product improvements than with new starts. Product improvements have to pass cost effectiveness evaluations -- for example, capability for the Standard Missile, increased several times. New programs tend to be caught up in politics.

6. Congress

Congress has had an adverse affect on programs, particularly through funding instability and withholds. Congress should not be able to make line item cuts. But funding problems also come from the Office of Management and Budget and the Comptroller. Many times DAB approvals get undermined by Comptroller actions in the budget -- often there is no input to USD(A) to stop the actions.

7. Recommendations

- Service requirements can be very arbitrary. Often they do not know effectiveness benefits or costs. The process should do away with requirements and call them "desirements" instead. We should talk with users -- the TRADOC guy may not know.
- Once desirements are collected, there needs to be a disciplined process of tradeoffs: we need to establish a cap on a program. Take ATF as an example: 750 planes will replace the F-15 (the high part of the high/low force mix). The program lasts 10 years. Then, look at the budget, and what we can afford to pay for the plane. It is important to pick the right goals, somewhat tight but not too rigid: 50k wt limit, 2k wt limit for avionics, low observable, supersonic cruise, range-payload, high maneuverability, self sustainability. These goals are the caps to begin the advanced development program.

  Betti believes that requirements should be a Service responsibility. But, requirements are everyone's responsibility. One result of leaving it up to the Services has been 7 percent real cost growth in programs because of a lack of discipline in the requirements process. The budget can't cover the cost growth, so it leads to smaller and smaller inventories. There needs to be much more discipline in determining the cost effectiveness of systems and subsystems. Each feature must pass a cost effectiveness test.

  The process needs more planning -- more emphasis on the front end. The JROC doesn't do cost effectiveness, but it is hard to see how they can validate requirements without it. To adopt this approach takes a lot of dedication by senior people.

Requirements advocates should be able to show what features were left off a system. Usually they can't identify any, because everything they think of is hung on like ornaments on a Christmas tree.

Suppose a system doesn't meet an engineering requirement? Then save for product improvement. $350K for AMRAAM is worth it. The system shouldn't lock into non-critical requirements -- it should allow flexibility.

- OSD staff should be experts on what it takes to do things based on prior program experience: time to first flight, set up and produce the first article, etc. You need analogues to do this. For example, part of OSD's problem with the V-22 program was that there was no evidence that the schedule could be met based on past experience: six flight test articles were planned assuming 25 hrs/mo operation, but 10-15 is the norm. This kind of data base should be available. The process needs something analogous to the CAIG (or the CAIG itself) to provide an independent assessment on schedules.
- Mr. Hicks would recommend strengthening the OSD staff -- a top flight man at top would attract and build a top flight staff.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (C^3I)

OVERSIGHT EFFICIENCIES

1. OSD Value Added

The process doesn't adequately appreciate the role of OSD in acquisition. We need to separate program justifications and requirements from acquisition oversight. OSD's function is to support the Secretary of Defense for "common defense." OSD focuses on what the Services don't do. Each Service has its own interests and can't be expected to consider other Service's needs. The Secretary needs honest information on which to base planning and enforce policy. In the C^3I area, standards and interoperability are of paramount importance.

USD(A) provides a functional perspective with enough detailed involvement in programs to make a technical difference. PA&E and the Comptroller play a role in funding and affordability; Policy a role in planning. But USD(A) has expertise to look at technical issues, and at mission areas and requirements, from a defense-wide perspective. Even under Weinberger, OSD played a critical role in defining programs. Congress looks to OSD on these technology issues--looking for sound explanation and justification. OSD needs to maintain technical expertise to understand risks and explain problems with programs. Congress does not expect the Services to be honest brokers--OSD helps play this role.

2. Testing

Testing has been a major issue. In the mid 80's, the threat led DoD to push the state-of-the-art. That coupled with high concurrency meant that several major programs couldn't deliver what was promised. In these programs we hoped for a leap forward and high leverage, but they were pushing too far. Big test failures in 1987 and 1988 reflected this. In addition, with the introduction of the OT&E directorate, testers have created new tests, especially in areas where no real environment for operational tests exist--moving the goal posts for programs and leading to failures. Several electronic programs have test problems. For example, the SINCGARS test design was not meaningful, so it was redesigned. The GPS failed an operational test because the test criteria was established for

more satellites than were actually in place at the time of the test, even though the testers knew it should take longer with fewer satellites.

We are now getting on track with testing. Testers are working more closely with programs and working harder to set up realistic tests. We have a methodology for designing a meaningful test and examining proposed tests to determine if they are executable. The system now needs to enforce the new methodology.

3. DAB Process

The DAB is more bureaucratic than it has to be. The DAB is so formal and structured that no one says much. The process should not be so intimidating that no one really understands the program. On the other hand, the committee structure is pretty effective and not as confrontational as the DAB.

Mr. Betti is trying to both streamline and improve quality. He has instituted new guidelines for the DAB: more independent analysis, more financial analysis, more contracting analysis. The committees have not been structured to provide this, but they are adapting. The person at the top sets the pace for the committee process and it takes time to adjust. This adjustment process can drag things out.

Recently, about half the programs are being bounced back at the committee level, rather than proceeding to the DAB. The committees are becoming more strict about holding up programs, primarily because of missing documentation and lack of meaningful exit criteria. For example, NAVSTAR Milestone IIIB is being rescheduled for January or February because it was not ready for the DAB due to test problems.

The new committee chaired by Mr. Yockey may also cause the process to take more time.

MACRO-LEVEL MANAGEMENT

1. Program Instability

The biggest problem in acquisition is instability. The Services often point to OSD as the source of instability, but the Services and Congress play a big role also. OSD is blamed with creating instability through funding withholds. But, C^3I uses withholds only to ensure that requirements are met -- as a means to enforce policy matters. Recently, Mr. Betti has taken action against the misuse of withholds. In the C^3I area, the Services are the biggest source of program instability. With respect to Congress, the biggest problems

come when programs are not adequately justified at the beginning. Programs need to have well documented requirements when they move into the big money.

Recently IG and General Accounting Office (GAO) reports have caused instability. These reports are a major source of information for Congress, hence affect funding. Recent reports on early warning programs have been based on old data from testing problems that existed several years ago. The test failure in 1988 has continued to plague the ASPJ program for 18 months. ASPJ addresses the Soviet's pulse Doppler radar. The program has been highly successful against air-to-air threats, but flunked the ground test. In retrospect, DoD should have taken a more evolutionary approach toward ground threats, such as HARM. GAO is still issuing reports on ASPJ's problem, but with no new information.

2. Software Management

Software is a major management issue for DoD. C^3I more than other area pushes the state of the art. The programs contain lots of risk and are very software intensive. But DoD doesn't know how to manage programs of this type. In particular, we are not good at designing an acquisition program that is *evolutionary* -- we tend to always push all the way in one jump. For example, ASPJ, a sophisticated radar designed to work against both an air-to-air and ground-to-air threat, is mostly software. The system is highly successful against the air-to-air threat, but has failed against the ground threat. If our programs were more evolutionary, we would have fielded this program in the air and upgraded it later for the ground. Evolutionary acquisition is an important tool for designing an acquisition strategy.

We need to educate program managers on how to manage software programs. Program managers don't know how to reduce risk in software programs or how to set exit criteria. The B-2 contains on the order of 200 computers. People are managing the aircraft, not the system components. We should be thinking about taking a different approach.

The area of software management needs to be radically changed: better standards, a DoD-wide data dictionary, enforcement of standards, management guidelines, and wider use of software development tools. Software management lacks leadership -- responsibility is spread throughout C^3I, DDR&E, Production and Logistics, and the Comptroller. An Software Master Plan, put together by Research and Advanced Technology, has not yet gone anywhere.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (C^3I)

OVERSIGHT EFFICIENCIES

1. OSD Value Added

C^3I value added is in making joint programs work and guaranteeing interoperability. The Services are platform oriented; joint programs are not a priority. As a result, C^3I has few champions. NAVSTAR GPS was a real success story that OSD helped along. The program manager did a good job, the funding was stable, but now Congress is cutting the program funding. MSE is a success story for NDI.

Joint programs are very difficult: the requirements are different for each Service and they are often the first to go in budget cuts. In the Services, the competition for funds is very tough, and the competition for C^3 probably the toughest. As a result OSD and the Joint Staff are champions for these systems, not the Services. This funding instability wrecks havoc on programs. Some examples:

- In one program the Air Force and Navy are pursuing a similar goal, but neither system is mature. OSD tried to level the programs so that the Navy could catch up.
- In the JTIDS program, the Navy and Air Force could not come to an agreement. The result was that the reluctant Service was required to fund the program. In JTIDS, OSD has the money to parcel out. This may seem like a good approach, but OSD is not set up to manage programs. The Services must provide inputs as to how many terminals are needed. Also, OSD only has the R&D money, not procurement.
- IFF is an international program. Every year the Air Force offers this program up as a cut even though it is a number one requirement for SACEUR. OSD has put the program back in every year. Atwood initially went along with the Air Force, but reversed his position in response to European outcry. The Air Force then tried to go directly to the Europeans to undermine the program.
- The TRITAC program used a disastrous management approach. A joint program office was created and staffed with Service people. Each Service managed part of the program, but the requirements were coordinated in the joint office. Often the Service submitting a requirement was not the one developing the system. The project was not logically divided up.

- MILSTAR is another program with terrible problems. The program has a space segment funded by the Air Force with all the Services funding terminals. The satellite program pushes the state of the art. The Air Force has funded the program at a low level (and OSD puts money back in), it has experienced schedule slips, and Congress has cut the program. Congress also has criticized the program design -- an example of incredible Congressional micro management. The program began in 1981 with the first launch planned in a few years. The program is an extremely capable system that has benefitted commercial technology. But a lack of consensus and inadequate funding has led to program instability. Now the program is entering the test phase and Congress wants to kill it.

We don't know how to manage joint programs in the current process. The Services individually fund programs, but joint offices don't really have the authority to ensure Service funding. Sometimes one Service will pull out and cause a contract to fall through. An ideal approach would be to give the joint program office authority over funding and executing the program.

2. DAB Process

The biggest change in the DAB process was the introduction of the committees (that occurred when Godwin was USD(A)). This allowed for a more structured and rigorous review process.

Mr. Betti is improving the discipline in the DAB process. He is proposing more intensive, rigorous oversight -- digging deeper into programs. The committees must ensure that program documentation is adequate and determine the issues to be raised at the DAB. The goal is to resolve as much at the committee level as possible. But sometimes new issues will be raised at the DAB that were never discussed in the committee. This disrupts the process. What is needed is a process in which the options and risks are presented, providing a data base for decisions.

The DMR has had little effect on the process so far. Having the USD(A) sign ADMs, however, has had a profound affect on the process. It has stopped people from going around the USD(A) on ADMs. Also, issuing the ADMs in 48 hours has been a major streamlining effort -- forcing the principles to get through the issues.

3. Documentation

Documents required for OSD should be the program manager's plan for the program -- the documents that the program manager actually uses in executing the program.

If these documents are produced only to meet OSD requirements, they are not useful or meaningful.

MACRO-LEVEL MANAGEMENT

1. Congress

GAO has been issuing reports without OSD/DoD comment. A program was recently in trouble because GAO reported that the contract had not been let, when less than a month later it was -- that information in the hands of the House and Senate Armec Services Committees can affect program funding inappropriately.

Congress gets into all programs and the committee staffs are growing. Programs are being reviewed by the Senate staff, House staff, GAO, Congressional Budget Office, Government Affairs, Commerce, Intelligence, etc. The Congressional staff is much larger than the OSD staff in this area. The DMR has numbers on the request for reports from Congress, which have been growing every year. Many feel that if DoD management was more like industry's, things would improved. But industry management does not have a Congress to deal with.

2. DAB-DPRB Disconnect

The DAB decision process is decoupled from the budget process. DPRB decision making may reverse or upset DAB decisions. Sometimes the Services try to exploit this disconnect. For example, in one program review, OSD argued that the requirements did not compel a program to move forward as quickly (arguing for a schedule slip) and that the program was not affordable. The Service then argued that the DAB did not have the authority to make affordability determinations, that was the job of the DPRB.

In general, the boom and bust cycle of the budget has had more affect on the acquisition cycle than the DAB process.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (C^3I)

OVERSIGHT EFFICIENCIES

1. OSD Value Added

The OSD oversight process has both plusses and minuses for programs. On the minus side, OSD's job is not well defined. People look for reasons to hold programs up. Testing has gotten out of hand. ASPJ is a prime example. One GS-12 can hold a program up for a year.

On the other hand, OSD tries to serve as a buffer with Congress. OSD can get Cheney or Powell to go to bat on program issues. OSD promotes stability in budgets. The Services act as though budget shares are fixed; therefore they resist "national" programs. OSD must watch over these. There is a difference of perspectives. OSD must represent integrated perspective.

2. Funding Withholds

Betti has complained about funding withholds. First he wanted to abolish them, but now agrees to use them selectively. While there have been abuses of withholds, Betti is wrong to clamp down so hard. Withholds can serve a useful purpose to enforce OSD or Congressional policies -- they are an effective management tool to promote program stability, not delay a program. But the horror stories have leaked to Betti. Now withholds in USD(A) require Betti's signature. Last year C^3I withheld about 12 percent of program funds; this year it is down to 3 percent.

3. TEMP

The TEMP has also been a problem. A task force has been formed to look into the TEMP backlog. When they began, 22 TEMPs were overdue; the backlog is now down to 9. There are a number of problems in the testing arena. One, there are disagreements in philosophies on test needs and requirements, which leads to a lot of problems. Second, programs often pass early milestones without a TEMP. If you try begin low-rate initial production (LRIP) without a TEMP, the program comes to a screeching halt. This is a case where the process needs to be disciplined.

MACRO-LEVEL MANAGEMENT

1. DAB-DPRB Interface

A better linkage between the DAB and DPRB processes is needed, but no one has been able to solve this problem. Program managers complain about OSD changing program funding. However, when billions of dollars are cut from the overall budget, everything is perturbed. The result is that agreements reached in the DAB are routinely undercut in the budget. The DAB never looks at affordability, it looks at the merits of each program individually. The DPRB generally doesn't cancel programs approved by the DAB, but it will make adjustments to funding.

In this regard, Services fiddle more with budgets than OSD, maybe about 60-40, and particularly joint programs, cross-Service programs, and national programs at the expense of major platforms. In these areas, OSD becomes the proponent for program stability. JTIDS has always been underfunded by AF -- OSD has had difficulty keeping the program on track.

Comptroller funding policies are another problem. The system is too rigid and does not allow budgeting for likely costs. When cost growth occurs there are problems keeping the program going.

2. Revolutionary Technologies

A big problem in the acquisition process is trying to do too much too soon. The United States wants to maintain a technological lead and has a tendency to push technology too far, too soon. The Services provide costs and schedules that are underestimated in order to sell the programs, but later this causes problems in program execution.

3. Lack of Planning

A major deficiency in the process is planning. Planning is done too late and is worthless. The Defense Planning Guidance is not affordable and not useful. More overall planning, consistent with the expected funding environment, is needed in acquisition.

4. Personnel

Personnel quality is an important issue. More experienced program managers would help program execution. If the program manager can do his job, the DAB won't be

a problem. But there are many barriers in attracting and maintaining qualified people -- emphasis needs to be placed on eliminating these barriers.

5. Enterprise Programs

Enterprise programs seem worthwhile, but they are not functioning as intended. The concept of enterprise programs provides an excellent test case for streamlining.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (C^3I)

OVERSIGHT EFFICIENCIES

1. OSD Value Added

One of OSD's roles is to ensure that the Services are adequately funding programs and prevent them from playing games. For example, OSD had to get involved in the cruise missile program to keep the program on track. OSD frequently has to get involved in joint programs. The Services' priorities change radically from year to year. Sometimes the Services will tell contractors not to talk to OSD, in an attempt to keep information from them. OSD must play a role in stabilizing the system.

MACRO-LEVEL MANAGEMENT

1. Commercial Products

An important way to streamline is to use more commercial products. Civilian technology is way ahead of DoD in many areas. GPS provides a good case study. The personal computer is another. Sun designed a new work station in 2 to 3 years. If a civilian product exists that meets 80 percent of a DoD requirement, then DoD should buy it.

DoD is starting to look harder at the use of commercial products, but a lot more can be done. The bureaucracy is a key obstacle. Commercial products have to go through rigorous test, both developmental and operational, even if they have a proven civilian history. This adds several years before the product could have been used.

There are a number of prime areas for commercial products and incentives. Computers and non embedded software are two. The ATF, for example, has more than 10 million lines of code. Commercial communication satellites is another area. Commercial satellites are available at half the cost of the same military satellite. DSCS is not as sophisticated as sophisticated as many commercial satellites, but has nuclear hardening requirements, which double its cost.

A key problem in DoD is continually adding requirements. The product development cycle in the commercial world is much shorter -- if not companies would go out of business.

2. Streamlining

Streamlining is not a technology or science issue -- it is a bureaucratic issue. There are many examples of streamlining in the intelligence community and in black programs. Now there are fewer black programs, because the process was abused as a way to get around the bureaucracy.

Recently Bill Perry reviewed the acquisition process and gave the Pentagon a D. Improvements to the process won't happen unless the Secretary really takes on the issue, and Cheney has other priorities.

3. Software Management

The Major Automated Information System Acquisition Review Council is the mechanism for approving computers -- a 3 person staff run out of the Comptroller. The reviews are loosely run and in the past the Services could just walk through. There is no major review on the acquisition side.

4. Joint Programs

OSD is not equipped to run joint programs. The quality of the OSD staff is going down both technically and professionally. To manage joint programs would require building a suitable staff. But for many joint programs, OSD plays the role of referee.

MILSTAR is a good example of what can happen. The MILSTAR program began in 1981, and was designated "Presidential." A joint committee hammered out the program requirements and met endlessly to keep the program on track. The Air Force was in charge of spacecraft and the Navy in charge of terminals. Around 1986, the Air Force chief of staff did not want the program any more, so the requirements was changed.

In 1981, the first satellite launch was scheduled for December 1987; now it is TEMPs for December 1992. The major reasons for delay include inadequate funding, technical problems, mismanagement, change in personnel, and changes in requirements. The program is 4 to 5 years late with a 40 percent cost overrun. OSD became the arbiter of Service requirements, but bureaucratic hot points like this are hard to fix.

ASPJ, another joint program, became a total disarray in schedule and funding. The Air Force has now decided not to buy it, even though there is no alternative for the F-15 and F-16. With JTIDS, OSD made the Navy stop their version of the program and accept the Air Force version. There are three separate terminal programs--jointly used but different specs.

One solution for these problems is an acquisition agency. But the Services detest defense agencies. It would require a major upheaval to fund joint programs through a defense agency.

The USD(A) must provide strong leadership, supported by the Deputy Secretary and the Vice Chairman, to make decisions happen. Under John Foster, DDR&E was a powerhouse. DARPA used to have really top notch scientists. People in industry and academia wanted to come to the Pentagon for the experience. Attitudes and pay are now such that it is very difficult to attract top people. Labs have become mundane, make-work places and should be drastically curtailed.

5. Congress

It is very important to build strong links with Congress. Congress will be very supportive of programs that are well documented and justified.

DOD COMPTROLLER

OVERSIGHT EFFICIENCIES

1. OSD Value Added

Comptroller is member of the DAB and the committees, and brings to these groups a money manager's perspective. The Comptroller advises on the long-term direction of the budget, and political and financial prospects for programs. The Comptroller asks what is reasonable, and what can be justified.

The Comptroller tends to bring a pessimistic viewpoint to the table, trying to bring a realist view of the Secretary's priorities and the budget environment. Programs have success oriented schedules that fail to account for slowdowns, failures or glitches, for retest or redesign. The Comptroller not only brings funding reality to the table, but also more skepticism than the OSD acquisition community. This perspective offsets USD(A), which has become too much of a proponent for programs and embrace optimistic plans.

The Comptroller works together with the CAIG in DAB and committee meetings. The CAIG's responsibility is long-range cost estimating -- realistic cost estimates -- while the comptroller focuses on the year-to-year budget. For example, last year the Comptroller felt that it was a mistake for AMRAAM to be in the budget because the program was too ambitious; the Comptroller had a different view of what the funding levels should have been. Sometimes recommendations of this sort come in conflict with what the DAB or committees recommend.

2. Committees

The DAB process needs more discipline to ensure that OSD can process things that come up expeditiously. The committee chairmen don't really have control over the people that they rely on. One proposal has been to bring these people together. But, at the committee level we should get as many independent views from OSD as possible. To bring these individuals together is not necessarily good. The process is better served keeping the views as independent as possible.

MACRO-LEVEL MANAGEMENT

1. DAB-PPB Interface

The Comptroller has been encouraging Betti to schedule DABs so that they coincide with program and budget reviews. This way the Comptroller can have the benefit of the DAB review decisions before the PBDs.

The use of an acquisition road map as a tool to interrelate the processes is questionable. The approach could work for any given program, but a big problem is the lack of realism in the baseline. Even in the early 1980s, when the defense budget was growing,, the Department tended to have a larger appetite than was realistic.

Another problem is that we have lousy life-cycle cost estimates. We are also not good at forecasting technological needs. DAB approval of unrealistic programs has been an equal contributor of the disconnect between the processes. We need to develop program parameters that are believed by the other players. Often the USD(A) staff is too willing to embrace the recommendations of the Services. If a program makes sense -- has a reasonable development and operational test plan and reasonable production rates -- the DAB decisions wouldn't be the basis for cutting programs. More realistic decisions on the part of the DAB would change the character of the discussion in the PPB and minimize the number of changes.

One area where planning could improve is with system replacements. Here there is not enough realism in the process either. The R&D program has more system replacements than can realistically be funded in the out years. The Department needs to lay out a more orderly plan for modernizing the program. This is an area where the USD(A) should play a role.

The USD(A) has two roles: to determine the best acquisition strategy for each program and establishing a long-term modernization program. To accomplish these tasks, the USD(A) needs to set a rate for modernization and tailor development money to this rate. The development budget would set the base line for prioritizing programs. We may make choices to accept obsolescence in some areas and modernize in others. The USD(A) needs to track and understand the age and modernization needs of the program and advise the Secretary on these issues.

While the USD(A) plays a role in planning the modernization program, he should not have responsibility for the procurement and R&D accounts -- they should remain the

responsibility of the military departments. What the Service is not able to do is the long-range planning -- that is where the USD(A) should play a role.

The Comptroller is responsible for advising the Secretary on broad funding issues for the department as a whole. The Secretary needs someone outside of the acquisition community to provide advice on the acquisition program from a "budget" perspective. Acquisition is not independent enough from the military departments to be objective on programs.

2. Congress

Linking DoD strategy with Congressional goals is another issue. The five year budget summit is an attempt to try to do that. In 1987-1988 the two year top line worked -- Congress came through in 1988 with what was asked for in 1987. Under Weinberger, the approach was to ask for more than we could get. This wrecked havoc on the acquisition process. The only way to make an agreement with Congress stick is to have a realistic acquisition plan. We are attempting to negotiate such an agreement today.

3. Concurrency

In the Comptroller's view, the goal of acquisition is to build something that works. Sometimes too much emphasis is placed on keeping the program moving which results in a tendency to rush programs into production. There are tradeoffs to be sure--sometimes it is cheaper to incorporate mods rather than stop to fix problems. But the acquisition community can become obsessed with efficiencies, which leads to a game of catch up. Not enough emphasis is placed on test and redesign. Now we are looking more at prototyping, which is really a substitute for developmental and operational testing. More time needs to be put into Dem/Val -- into testing and redesign.

A fifty percent reduction in the process makes sense as a way to understand the process. Streamlining acquisition can same money as well as time. We need to develop a long-range acquisition process and be willing to stick with it. We need to place more emphasis up front in the process and then produce a system quickly once it is designed. Today the process tends to go about it backwards -- rushing the important front end part and stretching production out.

4. Multi-year procurement

Multi-year procurement saves money and improves quality. If you sign up a prime contractor for a 4 or 5 year contract, it gives the prime more leverage with subcontractors: more bids, better prices, also better quality. The biggest benefits have come from the subcontractor level rather than the primes. Also, buying fewer systems at economic rates could be combined with multi-year procurement.

But sometimes DoD tends to jump in too soon, before we are ready with a program. Then multi-year procurement reduces financial flexibility. The Comptroller often takes the rap for being against multi-year procurement.

DOD COMPTROLLER

OVERSIGHT EFFICIENCIES

1. DAB Process

The real discipline in the system comes when it must meet with the real world--Congress. DABs and POMs don't go anywhere. The DAB looks at programs one at a time and lacks critical analysis. The USD(A) staff tends to take on a cheerleading role. The meetings are orchestrated; the system is cooked. The DAB needs to be more arms length in its review of programs.

The role of the Comptroller is to be the honest broker for the Secretary -- to ask the question of realism.

2. Process Improvements

All improvements have lengthened the acquisition process. For example, Betti's desire to tie the request for proposal to the DAB decision will extend the process 6-9 months. Each set of improvements have fostered internal institutions that do not go away when the next reforms are put in place. The system needs to get rid of some of the overhead in the review process.

3. CAIG Reviews

The CAIG piles money on the table. Design to cost is a goal, but the costs are set too high. The CAIG's main mission is to avoid cost overruns; therefore estimates are set very high. Lehman knew how to manage programs -- issue a management challenge. Lehman set cost ceilings on programs; either they were procured for a certain cost or not at all.

MACRO-LEVEL MANAGEMENT

1. Program Funding

If you look at classic good programs, it is generally the case that money is no object. With lots of money, a program is able to fund multiple parallel paths. If you want

to do it fast, bury it with money. Polaris-Poseidon gave back 15 percent of the money. We can't afford to do this across all programs.

3. Investment Road Map

The problem with an investment road map is that the plans are unrealistic. All programs tend to fit into whatever road map is laid out. You need realistic schedules and funding to develop a realistic road map. Having enough money and realistic schedules will help programs get through the process faster. The acquisition process seems never ending because we are always trying to fix something.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (PROGRAM ANALYSIS & EVALUATION)

OVERSIGHT EFFICIENCIES

1. CAIG

The Packard Commission expressed a sentiment to move the CAIG into USD(A). But, it is better for the CAIG to be independent of USD(A): independence is important. The CAIG is in PA&E because it is an analytic organization and doesn't manage programs.

The CAIG has not affected program schedules. The CAIG does look at program schedules somewhat, but the real issues that arise are often over program definition. The CAIG tends to blow the whistle on programs that are proceeding without real content, programs that do not have their act together. For example, in the NAVSTAR program there is a big issue over how many terminals will be bought. Part of the question is uncertainty over the changing force structure, part due to the Services buying commercial variants, and part a battle over what platforms to use the system on.

2. COEA

The COEA scenarios should be used for assessments. The document can be a problem for the program manager, but it is better for the Service analytic community to prepare it. For example, in the ASAT program the COEA took a broad mission approach and was helpful for the Army. The original program goal was too ambitious, and the COEA led to real changes in the characteristics of the system, which improved the program in the long run. APL and CINCSPACE participated.

MACRO-LEVEL MANAGEMENT

1. Concurrency

Concurrency is often raised as an important element in streamlining the acquisition process. Concurrency is praised when it works, but concurrency decisions often reflect the lack of discipline in the system as a whole. Concurrency is a policy choice, which should be made on a case by case basis: one can't say concurrency is good or bad across the board. It is necessary to be aware of and evaluate the risks when choosing concurrency,

and accept the problems that may arise because of the risks. Trouble starts when the facts don't warrant concurrency and it is done anyway, or when problems arise and we forge ahead rather than change the approach.

We tend not to understanding the economics of concurrency very well. Concurrency can actually cost more, which may in some cases be appropriate. Program schedule is a decision: concurrency is one policy choice.

Several examples illustrate where concurrency may be beneficial. Consider Apeds. For security reasons, this program was forced though the process. You could argue the Army has too little concurrency in its anti-armor programs. Or consider GM's Saturn program, recent press reports say it has not leaped ahead of the competition. More concurrency might have been beneficial.

2. Reducing the length of the acquisition cycle

The DSB Task Force goal of reducing the length of the acquisition process is a good forcing function within which to examine the process and identify non-value added steps. But we shouldn't be wedded to a fifty percent reduction in project time -- in the end we may decide that some areas should be lengthened. Mr. Rittenhouse is focusing on the problems the acquisition system causes for itself, a good way to identify non-value added and indecision. America's strategic advantage is that our weapon systems are significantly better: in terms of quality and cost. We must optimize both.

3. DAB-DPRB Interface

The interface has improved in the last ten years, but remains a problem. Dick DeLauer tried to improve the coordination by having acquisition reviews that made correlated with the budget cycle. But there are times when people try to take advantage of the disconnect and play the processes against each other. The problem can be managed if the principals involved in the process dedicate themselves to making the connection. The problems can be kept in bounds, but there is a limit as to how well coordinated these two processes can be

One element of disciplining the interface is the Department's reaction to major budget cuts, an ongoing issue. On the one hand we can hit weaker programs harder and leave healthy programs untouched, or we can allow "death from a thousand cuts," which has tended to be the approach (albeit the less desirable one).

One suggestion, to improve this disconnect, is to give the USD(A) responsibility for the procurement and R&D accounts. But this approach would likely Balkanize the department further. It isn't possible to determine the investment budget without knowing what the overall forces should look like. Another bad idea is to give each mission area a fixed percentage of the budget. These budgets should change over time in response to changing circumstances. The investment plan should come from the Secretary and Deputy Secretary with input from the USD(A); but the USD(A) should not have responsibility to do this on his own. The USD(A) should, however, put together a core program that he would defend in the planning and budget debate.

4. Investment Road Map

The DMR recommend a plan to create a program projection -- an investment road map -- which looks at the fiscal implications of the Secretary's decisions over the next 20 years. With this projection as a baseline, the Department can roughly determine whether the program is affordable. The road map also helps to clarify the program and policy decisions, and illuminate the big trends. For example, an earlier exercise examined the affordability of SDI. The results showed that in the decade of 1995 to 2005, SDI was affordable because offensive modernization programs would be largely completed. This analysis highlighted a shift from offensive to defensive priorities in the strategic area.

Long-term investment planning should contribute to affordability determinations and provide a context for decision making. In turn this would help execute individual programs and promote stability. It would help diminish the internal tendency to attack programs an unaffordable, when in fact they are not.

But planning is not a cure-all: the process needs discipline. Presently there is no organized way to decide when to begin a new program. Programs tend to get started late, which leads to haste in the early stages. The SSN-21 is suffering from this problem today. Still, a road map might provide a way to recognize when new programs are needed -- allowing programs to be started earlier and take the needed up front time. The process should devote more time to preliminary studies, which are relatively cheap compared to the FSD and production bill. A road map might also provide a context to make modification and P^3I decisions more systematically. P^3I is today less systematic than it should be. (The Milestone V idea is also a good one -- it closes the circle on a system by formalizing the determination of whether the system has reached the end of its useful life.)

5. Process Structure

Overall, the structure of the acquisition system has limited effect on how it operates. The keys are the people and their incentives. We need to create proper incentives and enforce the change in order to change outcomes. The principal players in the process have the ability to make something happen if they want to.

6. Black Programs

The proposition that black programs are more efficient may not be supported by the facts. There are some black programs that are far behind schedule. On average, these programs may not come out any better, but the variance is much greater: great successes and scandalous failures.

7. Funding Stability

Steps should be taken to stabilize funding at the program level. Multi-year procurement provides strong incentives for stability and should be done even if it is only a break-even proposition (currently 12 percent savings must be demonstrated). Another good approach is milestone authorization. OSD had the opportunity here and dropped the ball. Milestone authorization is a way to encourage Congress to take the long-run view as well. The Department should identify programs that are ready for milestone authorization and manage them well.

8. Recommendations

- Discipline is a key factor in any process. Whatever the system, the rules must be enforced in a meaningful way.
- The process needs a more thoughtful approach for new starts: when debating alternatives, what are real requirements.
- The system also needs an output oriented view toward setting goals ó6 we should kill the term "requirements." Set goals in terms of militarily useful performance standards not engineering standards. Is the new system substantially better than the alternatives, given cost? One problem with Betti's exit criteria is that they focus too much on engineering standards.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (PROGRAM ANALYSIS & EVALUATION)

OVERSIGHT EFFICIENCIES

1. DAB and CAIG

McNamara had no DAB. The DSARC was set up by Packard in 1969 or 1970 to insulate the Secretary from contentious issues. The DAB have represented a fundamental shift. Godwin's committee structure has moved decision making one level down. The chairman of the CAIG used to go to the DAB, but instead goes to the committee meetings and only occasionally to the DAB.

The process has experienced a proliferation of CAIG-like functions like OT&E, WSIG, and Production and Logistics. Many of the staff products are not well done. The process is not focused toward decisions. The committee is supposed to integrate, but it is not set up to do that. In fact, the CAIG used to perform a lot of these other staff functions. The CAIG is not loved, but many think the CAIG does a better job because of its history of involvement in programs.

If the CAIG holds up a program, it is usually only a matter of a few weeks, months at the most. The CAIG process rarely holds up programs, partly because the CAIG will provide the costs itself if there are no inputs from the program office.

2. The Staff Process

The OSD staff process has become terribly fragmented. Also, the staff process has a rough time with close calls on program issues.

The committee structure has no one in charge of integrating all the fragmented views. The DDR&E staff tends to see themselves as proponents, taking on the role of technologists. They lack the necessary global perspective and tend to view the PPB/budgeting process as accounting drills that are not substantive in context.

MACRO-LEVEL MANAGEMENT

1. Program Costs

Cost estimates are often not what we budget against -- we tend to budget against contractor quotes. The problem is that the system will not allow budgeting for risk or for contingencies. The Comptroller is against risk dollars. This is a big obstacle for realistic budgeting.

Programs are jerked around a lot in the later states of Milestone I and also at the end of the programs -- there are problems producing programs at economic production rates.

2. Investment Planning

An important trade off is between the acquisition of systems and the operation of systems. It is not obvious that we should manage our defense programs around our investment programs. The arms race has fueled the focus on the investment program. Now it may be better to focus on matching operation and support and force structure to the variety of possible contingencies.

3. Personnel

The quality of people in OSD has declined -- it is an organizational problem. This is frustrated by the nature and authority of political appointees and career staff. The political people do not stay around long, but have a tendency to go deeper on issues.

4. DAB/PPB Interface

There is a real ambiguity in how the department handles resource allocation issues. In reality the DAB does not have much authority. Decisions on rate and timing mostly get handled in the PPB. And many decisions are made at the 11th hour in the Comptroller's office.

5. Improving the Process

In order to improve the process we need to assess why the process is the way it is today: the pressures, the strengths, whether they can be compromised, whether they can be defeated, who are the allies or reform, who are the enemies. The department has not reconciled whether it wants a centralized DoD or a loosely coordinated organization. The power lies in the military departments and in Congress. The question is what objectives the power plays serve.

A significant improvement would be to concentrate authority and responsibility, increasing the authority of the people in the process.

OFFICE OF THE DIRECTOR, OPERATIONAL TEST & EVALUATION

OVERSIGHT EFFICIENCIES

1. Testing

In many people's mind, testing slow things down. But once it becomes an integral part of the process, it will speed things up. The system still needs to adapt--many hope that testing will not uncover problems. But sliding through a test will always come back to haunt a program. As the process adjusts, people will know what to expect in operational testing and will have done things to prepare for it earlier in a program, at a time when it is less costly. It is important look at the big picture rather than a small piece of the picture.

The testing function is late in the development cycle, but early enough to find problems and correct them before it is too late. But the testing function can be introduced earlier into the program -- at Milestones 0 and I -- when it is a lot cheaper to make changes. The operational flavor needs to occur much earlier in the cycle -- early operational assessments. Mr. Betti is moving in this direction.

The TEMP is first approved at Milestone I (in 5000.1 and 5000.2). At this point the program is already beginning to face up to operational issues: setting down the operational characteristics that will be tested and the resources needed for testing. (Sometimes targets take as long to develop as the system itself.) At Milestone 0 and I we should be looking at how the program fits within the systems we have, its targets, C^3, and how it fits in the operational environment. Later the specifics can be defined.

The TEMP should lay out program and make initial evaluations prior to LRIP. At Milestone II you can define the number of articles that you would use during the test (helping to define what to do in LRIP), that are needed to prove out the production process, and that are needed to validate the ability to build up a production process.

OT&E is often left out of the Test Integration Working Groups. This should be changed. The forcing function for testing is the TEMP, but the TEMP has become a load document for many things, such as requirements, threat, etc. Mr. Betti is addressing the issue of making the requirements and threat people identify those things early on -- the test people are then left to identify the testing needs. The Services tend to approach the TEMP

in different ways. The Navy really follows the TEMP. The Air Force uses the TEMP only as an OSD requirements. The Army is going out of its way to use the TEMP.

Systems are now being delayed because sponsors know they won't pass the tests. Also, many complain that the testers have changed the rules. Operational test is in a transitional period. For new programs, operational test is adequately involved. Most of the problems are from programs currently in development that have been faced with change. (Operational Test & Evaluation was created in 1983 and staffed in 1985.) Operational test should not be a final exam -- it should contribute to getting programs into the field earlier and better.

There will always be the question of how much testing is enough. This will remain a matter of judgement. Testers are always accused of wanting too much testing. But the tug of war over these issues usually results in a good compromise. The important thing is to debate the issues early, not in Milestone III when it causes havoc.

3. Program specific testing issues

- The BSY/1 was bought before any were tested.
- The BSY/2 and SSN-21 both had decent acquisition strategies.
- The SQQ-89I is the model of instability. It was created by everyone: the Navy Staff, OSD, Congress.
- The DDG-51 is a good program with a lot of early testing of the individual subsystems.
- The ADCAP program has had a painful testing experience and is going through an additional stage of follow-on testing. This is a result of a communication problem: the program was not designed to run against the threat.
- SEA LANCE has been cancelled by the Navy, but Congress is putting it back in.
- FAADS LOS-F-H has had a painful process. The program does well on effectiveness, but is a failure on suitability because of reliability. The Army is trying to fix these problems.

You need to look beyond when the program has been fielded to determine the impact of testing. It may pay off to slow down to fix program problems before large numbers of systems are produced. DoD pumps lots of money into fielded programs to make them work. There is a debate between initial operational capability and full operational capability as the end point from which to evaluate.

4. TEMP Task Force

The TEMP Task Force has issued an interim and final report. But the Task Force went beyond simply establishing guidelines for the TEMP. The group had meetings for the senior people in the test community and the DAB committee chairmen as a beginning of a communication process between the two communities. There was also a meeting where the program managers and the PEOs attended. Next year, the intelligence community will be invited.

The Task Force reported out to the SAEs and Mr. Betti and found a lot of support to improve the process. The test community has made a lot of progress, but there is still a long way to go.

MACRO-LEVEL MANAGEMENT

1. Streamlining

When Costello was appointed USD(A) he promised to cut acquisition time in half. One area where a contribution was made was to reduce the time needed to place contracts early in the program. The time was a year or more, but we have made significant reductions. This is important for the psychology of a program--there is no sense of urgency if we cannot get the program underway.

2. Program Stability and Commitment

Part of the reason that programs take so long is a lack of stability and program commitment. DoD is trying to field state-of-the art technology and we are bound to run into technical snags on programs. If these technological problems lead to a change in commitment on the part of OSD and Congress, the program will get hung up. DoD needs to commit ahead of time to ride through technical problems. Too often the commitment on programs is luke warm and technical problems give excuses for those not sold on program to begin with. DoD and Congress need a clear joint commitment on certain programs that are important enough to stay with--that is the way to accelerate the process. The Skunk Works took this approach: dedicated, faith in leadership, given needed resources.

3. Time Drivers

Four key drivers of the acquisition process are: technology, threat changes, lack of commitment, and budget crises.

4. Four Communities

Four communities are involved in the acquisition process: the requirements community sets operational needs; the intelligence community defines the threat; the acquisition community oversees program management (in translating requirements into specifications for a system); and the test community. The process needs good communication among these communities. We often hear the complaint that testers change the rules, but more often than not it is a result of poor communication. These communities tend to get together at different points in the process, often operating in their own world, which leads to instability. The communities need to get together to set criteria for tests and to respond to changes in the environment. Some recent transitional problems have occurred because of changes in the threat -- OT&E is required to test against the current threat. Some steps to force these groups to work together might be beneficial.

5. Event-Driven Process

The process needs to be event driven rather than calendar driven. Contracts are calendar driven, but a program needs to be built on a series of events. Matching the two is a real challenge.

6. Concurrency

Views on concurrency vary. Some view it as a way to streamline the process, but concurrency requires a healthy scrub. On paper concurrency looks great, but it can cause major problems. There are both good examples and disasters involving concurrency. We should try to determine the characteristics of successful concurrent programs.

7. Program Manager Incentives

The program manager should be graded on a broader set of criteria. Typically the program manager is judged on managing the contract, containing cost overruns, and keeping the program on schedule. But that is only part of the process. A system must work and fit within other system. Operational test is done in an integrated environment. Often the program manager cares only if his black box meets the specs, not whether it works as an integrated system. This aspect of programs is not emphasized like it should be, and delays full operational capability for a system.

From a total quality management perspective, it you are paying the program manager to get as many systems out as soon as possible, that it the wrong perspective. C^3I programs must interact and integrate within systems -- a big problem for these programs is

interoperability. For example, the ATACMS missile works fine but the problem is in target acquisition and C^3I. The program manager did his job, but the system is not fully effective. Operational test will ultimately have the most influence on the program, although resisted in the short run. The end-to-end "system" testing requirement is a relatively new concept. The program manager needs to understand and make these links. The program manager should be judged on how the system actually performs, not just whether it gets fielded.

As well as correct incentives, program managers also need to be kept abreast of changing requirements, changing threat, operational scenarios, etc. and continually update the TEMP in response to these changes.

OFFICE OF THE DIRECTOR, OPERATIONAL TEST & EVALUATION

OVERSIGHT EFFICIENCIES

1. OSD Value Added

In an unmotivated organization, you need oversight. The Services don't have a bottom line, so there is no accountability, particularly in the long term. The system tends to focus on short term measures of performance, and the Services define their own measures. It is necessary to devise checks and balances in this kind of system. OSD oversight disciplines and steers the process.

As events change, OSD also provides the priorities. The Services will never give in to each other, so someone has to broker the process from the outside. OSD represents the needs of the Joint Staff -- the role of the JROC, in the DAB process, is to prioritize. OSD is doing a better job of prioritizing than we used to. Bob Herres began to use some of the Joint Staff power for the first time. He began to execute the discipline that only Joint Staff can create an operational need. CINC requirements come through the Joint Staff. The role the Joint Staff plays depends on personalities. Herres took a big step. [Herres also had the idea of funding Milestones 0 and I out of a separate pot of money that would be controlled by USD(A) and the Joint Staff. The amount would be a percent of the budget. Programs would have not production money up front, only once the production decision was made.]

MACRO-LEVEL MANAGEMENT

1. Streamlining the Process

The only example of successfully reducing product development times has been the Japanese in the auto industry. It can be done, but it requires a fundamental change in the process. Shooting for a 50 percent reduction in time is a good goal. Otherwise solutions tend to focus on cosmetic changes -- operating the way we were before, but tightening our belt.

If you want to streamline the acquisition process, somebody has to make money by doing it. Streamlining can be done if it is directly related to profit. Once the immediate urgency of an issue goes away, the focus returns to short-term efforts. Long-term

improvements derive from basic incentives. If something is profitable, it creates a life of its own.

2. Discipline

The processs lacks discipline. Under Weinberger, individuals believed their positions of authority gave them the right to change the rules or ignore the rules. Jim Ambrose (Army) was a prime example. DABs were conducted without documentation requirements or the necessary people. Even Mr. Costello would allow the system to skip things. Steps in the process can't be overlooked without justification. Officials should act as agents for the public and ensure proper approaches, otherwise players adopt an entrepreneurial approach--anything goes. Outside of technical problems, management leadership would improve things a lot even within the current system. The Services are not going to discipline themselves, OSD needs to do this.

"Policies" often stretch out time -- firm-fixed price development contracts is an example. These contracts were not issued by a well though out process, but by edict. Later, Eleanor Spector's office developed a model to test the financial aspects of a system -- provide a decision making tool to determine whether these contracts were a good idea or not. If the contractor can't do the job, the best thing is to get it over with. But when firm-fixed price development contracts start to go sour, the incentives are to slow it down--hope lightning will strike and solve the problem.

3. Entrepreneurial Incentives

It is possible to run a bureaucracy in entrepreneurial style. For example, an initiative in OT&E resulted in a $1.4 billion program to invest in test and evaluation facilities. The program element was assigned to OSD, but a participatory process was designed for the Services to decide how they would spend it. Through this process, the Services determined the national priorities for testing and enforced them. This sort of thing can be done, but you have to relinquish power at the top and to provide the proper incentives. In this case, the Services realized they would be better off in the future, participating in the process at the DoD level.

The system needs parallel techniques for streamlining -- for prioritizing dollars, programs and people. A participatory management style is at odds with the command and control environment of the military. But acquisition is really outside of this, so other mechanisms can be used. For example, a participative group to make decisions on investment could work. The group would prioritize a pot of dollars and determine whether

there should be a study vs. prototype vs. something else. A line would be drawn before production dollars. With this sort of a system the Milestone 0 and I process could work as it was intended to. Packard supported the idea of funding from milestone to milestone rather than from year to year.

4. Concurrent Engineering

Streamlining is time oriented, but may cost more up front. This is difficult to sell to Congress. Technological education needs to go on -- to make people understand the value of modeling and simulation rather than the real thing. One way to streamline is with true concurrent engineering -- having the manufacturing and deployment people involved up front. Many times concurrent engineering doesn't go this far. We need to recognize when to give up performance for increased reliability or producibility. Testing has to be recognized as an important part of development, rather than an impediment. The process needs to create a synthetic competitor--needs to establish a par against which to test.

5. Competition

The process needs to recognize that the program managers are the taxpayers agents--how should they be rewarded? In reality only industry can be rewarded -- the right incentives and motivation needs to be injected into the system. One area of improvement is a more realistic approach to competition. Competition in the early stages of a program is good. But often competition occurs among people who are not competitors. There are no bounds on competitors. The government needs to qualify people -- this is possible to do, but requires judgement, which the government doesn't like. Qualifying the competitor is very valuable. DoD needs to accept that profit is good and should be linked to streamlining -- to getting a job done quickly. Now many incentives are in the opposite direction -- it is more profitable to take longer.

6. Commercial Products

Commercial products is an area that should be given a lot more attention. Commercial products should be considered up front -- to determine whether requirements might be altered to make use of commercial products. For example, in the case of Mobile Subscriber Equipment--why not use a commercial product? Basically it is a cellular telephone. This is a case where minor modification of requirements could match military use with civilian technology.

7. Congress

Congress must take the lead in acquisition reform -- set the incentive for streamlining. DoD policies tend to support what they think Congress wants. The DoD/Congressional relationship doesn't need to be as adversarial as it is. Congress is guilty of micro-management, but generally they micro-management what is not being managed.

JOINT STAFF

OVERSIGHT EFFICIENCIES

1. JROC Value Added

The role of the JROC is to validate requirements in terms of desired capabilities -- not in terms of a specific system to achieve the capability -- or in terms of deficiencies in existing systems.

2. Milestone Review

Review the DoD phased acquisition process and milestone review procedures with a view toward returning to basic principles. The process is circumvented far more often than adhered to, and has become encumbered to such an extent that it is not possible to comply with its spirit and intent. This is the process David Packard installed in the early 1970s; we can and must find a way to make it work.

MACRO-LEVEL MANAGEMENT

1. Streamlining

The acquisition process does not need streamlining as much as it needs discipline. The discipline has to be applied to the Secretary, the Deputy Secretary and PA&E, especially the later.

2. DAB-PPB Interface

The acquisition system is an "exquisite management system" that is event-oriented, i.e., proceeding from milestone to milestone, but the PPBS is calendar-oriented, requiring annual funding without regard to decisions made by the DAB.

The primary problem with the process is in OSD and the PPBS, since not only the organization, but also the system requires an annual funding cycle. This process creates incentives for the program manager to ask for more funding than he needs, because of the expectation that funding will be cut in the Budget Review. Additionally, the program manager spends half of his time being a program advocate to ensure program funding. The

system would be vastly streamlined if the program manager could depend on a steady funding stream from milestone to milestone.

To achieve true streamlining, the PPBS and DAB cycles for acquisition have to be meshed to provide event-oriented funding. This will require a change in the way Congress looks at program funding and a change in the way the Secretary, through the DPRB, puts together an annual or biennial budget. The acquisition process is sound, but OSD, the Services and Congress must follow it.

The USD(A) should have a "pot of money" for concept definition and another for concept development that only he controls and allocates.

3. Concept Definition

Concept definition is the most crucial step in the acquisition cycle and failure to have an adequate concept before proceeding beyond Milestone 0 is the principal cause of downstream failures. Systems tend to lack rigorous concept definition and validation before proceeding to production. If you examined 50 programs, you would find half of them had a concept that was constantly evolving as the program was in its developmental stage. Time and money spent on concept definition will lead to time and money saved downstream.

There is an ingrained habit of engineers to "tinker" with a program to make it perfect or, at least, better. No engineer ever wants to allow a program to go forward as long as he thinks he can improve it. The tinkering has to be cut off at some point in order to get a system into production.

4. Life-Cycle Costs

Life cycle costs should start with first production and should not include R&D costs or those associated with concept definition, validation or development.

5. Regulations

Review Federal Acquisition and Procurement Regulations and DoD amendments and supplements with a view toward simplification and efficiency. They are no doubt too complex.

6. Milestone Budgeting

Review methods and approaches to the milestone budgeting concept. The Brown-Schlesinger Report suggests milestone budgeting. In its full form it means major surgery and a considerable change in the way we do business with Congress -- and not likely to be any more popular than a line-item veto. However, a hybrid approach could solve the problem. Disasters are formed when systems are in the concept formulation and validation phases, yet not a great deal of money needs to be committed when these phases are initiated (Milestone 0 and I). We should examine applying the milestone budgeting concept for the first two phases of the acquisition process (concept exploration and concept demonstration/validation) while retaining the traditional programming/budgeting procedures for the more costly phases of full scale development and production (Milestones II and III).

7. Streamlined Chain of Command

Layering is a systemic problem that the Packard Commission sought to eliminate with its four-level limitation in the program management chain (DAE, SAE, PEO, and program manager). Each Service has indeed made significant change to its management chain and is in compliance with the letter of the implementing directive. However, the problem of excessive lateral and staff review (if not supervision) has not gone away. The issue should be reopened within each department and examined to find out what should be done.

8. Personnel Development

Professional career development for procurement and acquisition management personnel needs comprehensive review. Each of the three Military Departments has unique needs, but some common principles transcend the uniqueness. Both military and civilian career paths should be reviewed in each department with a view toward establishing comprehensive programs to build professionalism, without sacrificing the essential interaction with and influence of the operational community. (The Services place far less emphasis on the career development, education and training of its acquisition managers than it does on its "war fighters".) This is not a hard problem to fix.

JOINT STAFF

OVERSIGHT EFFICIENCIES

1. Oversight

A major oversight function is to scrub realism into program schedules and cost. There is a perception that the USD(A) staff are proponents for systems. The function of the staff should be as independent assessors and to help solve program problems.

There are checks and balances in every system, but you don't want the checks to be burdensome. For example, the Defense Acquisition Executive Summary is designed as an early warning system, not a decision making tool. You have to consider the unintended consequences of actions. In the DAB, Betti is emphasizing risk management. This is having unintended consequences and burden for the program manager, because it has caused the committees to begin to do more digging on programs.

A key task is to discipline the process -- this is part of streamlining

2. JROC

The main view of the JROC is to ensure that the military perspective is integrated into the process. The JROC is becoming more and more involved in major milestone decisions and in trade offs

MACRO-LEVEL MANAGEMENT

1. The Requirements Process

The current system starts at Milestone 0 with a system specific solution. A major issue is when the requirements system ends and the acquisition system begins. The DMR attempted to get requirements to play a role throughout the process and also to push Milestone 0 further into the process. This is somewhat controversial, but pushing Milestone 0 encourages the process to look at alternatives such as mods, P^3I, jointness, etc.

In the new 5000.1, requirements are truly mission oriented with the intent of forcing a broader range of concept studies. To this extent, you are lengthening the front end of the acquisition cycle.

The DMR recommended a Concept Direction Study Fund, but no such fund was established. The military departments fund studies themselves. But the purpose of the fund was to give the USD(A) a voice in the early part of the process. It is a fundamental issue: who should have a major role in determining the weapons of the future -- CINCs, Service Chiefs, both? The military is very concerned about maintaining their role in setting requirements. But in the new construct, OSD can develop mission needs as well as the Services, CINCs, Chiefs, etc.

2. Process Drivers

Cost/performance/schedule trade offs drive the process. The system has never made good assessments of the trade offs -- we need to groom and train people to do so. The new 5000.1 intends for the JROC to make these assessments at each milestone.

The date of initial operational capability also drives the process -- it drives concurrency and high risk schedules. In FSD the program is not undergoing fine tuning, but major changes. The fundamental issue is setting requirements that are reasonable. Now requirements tend to be quantum leaps from the original system, rather than manageable increments.

The leadership will set the incentive structure for the process. The new 5000.1 tries to head the process in the right direction, but changing the course of an institution must be done in small degrees. One focus of the new 5000.1 is on risk management and fly before buy, which can translate into longer schedules. Change cannot be institutionalized in the short run -- Mr. Betti needs to stay around awhile to have an impact.

3. DAB/PPB Interface

The DAB, PPB and requirements processes need to be better linked than in the past. "Affordability" is a key issue to address: what it means, who's perspective, what context. We don't do affordability assessments well.

4. Investment Road Map

The process needs long-range investment area analyses. The department needs to look at the long-term resource implications of the current investment account. The purpose is not to be precise, but to illuminate issues down stream. J-8 has done this sort of analysis, and has made tough calls in the process. USD(A) should lay out the acquisition options -- obsolescence, age, etc. -- and do an assessment of the current program as a basis

for decision making. The framework provides a basis for looking at new starts and for resource allocation, identifies areas of emphasis, and can be useful in industrial base issues.

CONGRESS

OVERSIGHT EFFICIENCIES

1. Contracting

While cutting out time is one approach to streamlining, efficiencies are also important. Contracting is an area where great strides can be made to increase the professionalism of the work force, reduce oversight, and allow people to exercise their authority.

The "process" is a time consumer, not a time driver, but it is still worth trying to gain whatever efficiencies are possible.

MACRO-LEVEL MANAGEMENT

1. Process Time Drivers

Rules and regulations are not key drivers in the process: technology is the primary driver. In building weapon systems we have a tendency to bite off more than we can chew. That has a big impact on the length of the process.

2. DoD Budgeting

DoD comes to Congress with a negotiating budget, not a realistic one. This is a key driver of funding instability. The more realistic DoD's budget, the less likely that Congress will tinker. This proposition held up in the 2 year Rose Garden agreement. Congress stuck to the top line in the second year and individual programs were tinkered with less.

Two year budgeting is a big issue. The French debate their budget for 5 years into the future and tend to be within 3 percent of its projections in any given year. One reason may be that public support is less volatile there than here.

A change in the Graham-Rudmann laws could have an impact on realism in DoD budgeting. Under the new change, if sequestration is required, it will be applied to those accounts whose budgets have exceeded the targets.

3. Milestone Authorization

Milestone authorization was a back door way of getting program stability. DoD has not been forthcoming with authorizations and has breached every program. As a result Congress has rescinded this. What happened was that the milestone dollars were built around unrealistic overall budgets, so DoD had to breach the goals in order to adjust programs within the budget.

If DoD plays games with the tools -- like milestone authorization and multi-year procurement -- Congress will not take the Department seriously. The view on the Hill is that DoD cooks the numbers so much, that you don't know what you have.

4. Congressional Legislation

The requirements on individual programs have grown significantly in recent years -- evidence of the overall distrust that Congress has of DoD. Also the 1980s has been a big decade for policy legislation governing the acquisition process.

CONGRESS

MACRO-LEVEL MANAGEMENT

1. Congressional Legislation

A lot of legislation has come out of Congress in the last decade: Competition in Contracting Act (CICA), documentation requirements, program manager experience, independent IG, etc. In some cases these requirements have had an impact on time lines. The significant increase in the defense budget in the early 1980s and the spare parts horror stories fueled this area. There was a perception at the time that oversight was not keeping up with the increase in budgets.

The independent Inspector General was set up in 1981. In late 1983, CICA was passed along with a lot of reporting requirements, many of which have been repealed. In 1984, the change to CICA was the most significant legislation. In 1985, allowable cost became an issue and the Dingle investigations led to lots of oversight hearings. Technical data rights was the focus of acquisition legislation in 1988. This year the law includes a clause against whistle blowers, among other issues. All of these requirements and regulations cumulatively impact programs.

The CICA has not been successful in grappling in the R&D area or with professional and technical services. A new two stage process has been introduced in the area of technical services to better respond to these requirements. It is true that CICA is inappropriate in some areas, but the law has more flexibility than DoD uses. DoD needs to exercise the flexibility it has, and if necessary, demonstrate to Congress where more flexibility is needed.

2. Budgeting

The process has a built in inertia for more oversight on individual programs, largely the responsibility of the members. It doesn't seem possible that the process can change. In 1987, the Rose Garden agreement led to a consensus on overall budget shares, which led to greater stability in the process. Stability on individual programs can be achieved when there is consensus on milestone funding and baselining. Rather than try to make stability work for all programs at once, we need to do so for a smaller subset of programs.

There is yet to be a real consensus on overall defense budgets. The process is still operating on a day-to-day, event driven basis.

3. Program Optimism

It is a big game in DoD and Congress to get programs up and running. This fuels optimism on individual programs in an effort to make programs "sell." What is needed is a better articulation of mission needs -- a DoD view from the JROC and the DAB at the front end of the process.

4. Process Incentives

The system works the way it does for a reason -- you have to understand the forces behind the system. In order to change the process, we need to replace the benefits people get from the current system or eliminate them in their entirety. Despite the difficulty, there is significant possibility for change in the process.

DoD needs to be involved in improving the relationship between the Department and Congress -- DoD needs to give Congress the tools to change the process. Congress will work with DoD if the Department can make a case against counter productive legislative requirements.

5. Defense Enterprise Programs

DoD has not taken these programs seriously and they should be repealed. Part of the problem was that Congress did not do enough follow-up oversight, but DoD never really supported the program. In the end it seemed that the program managers had more work and reporting requirements, so there was nothing in the program for them.

Enterprise programs were not intended to be model programs. They were intended to be used for a few programs

6. DAB/DPRB Interface

The DPRB is looking at all parts of the budget, not just major system acquisition. DoD needs to come to agreement on a set of priority programs, and agree to fund those programs. The USD(A) should not, however, have more authority on resources than the DPRB, as some have suggested.

It is possible to get stability for a set of programs, but we need to recognize that there is volatility in the environment and in the process. Leadership will not come from Congress, DoD needs to focus its own thinking and exercise leadership.

The USD(A) has a wide range of focus -- he needs to pare that down and focus on a few major issues to be effective.