

REPORT
OF THE
DEFENSE SCIENCE BOARD
TASK FORCE
ON
DEFENSE ACQUISITION REFORM
(PHASE II)

AUGUST 1994



**Office of the Under Secretary of Defense for Acquisition and
Technology**
Washington, D.C. 20301-3140

This report is a product of the Defense Science Board (DSB). The DSB is a Federal Advisory Committee established to provide independent advice to the Secretary of Defense. Statements, opinions, conclusions and recommendations in this report do not necessarily represent the official position of the Department of Defense.

This document is UNCLASSIFIED.

**Security review completed 22 September 1994 by OASD (Public Affairs) directorate for Freedom of Information and Security Review
Case number 94-S-3859.**



DEFENSE SCIENCE
BOARD

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-3140

Aug 31, 1994

Memorandum for Undersecretary of Defense (Acquisition and Technology)

Subject: Report of the Defense Science Board (DSB) Task Force on Defense Acquisition Reform (Phase II)

I am pleased to forward the final report of the DSB study on Defense Acquisition Reform (Phase II), which was chaired by Dr. Bob Hermann. As you will recall, the Phase I report of July 1993 firmly acknowledged the need to adopt commercial practices as a way of doing business, and developed a set of reform initiatives designed to accelerate the required changes. Three main ideas were identified:

- the feasibility of moving entire industry segments to commercial practices;
- modifying the requirements process to increase flexibility, in order to allow value and price to replace cost based acquisition;
- adopting commercial practices while still maintaining public trust.

The thrust of the Phase II effort was to further define these areas by examining specific industry segments, identifying specific combatant commands for increased responsibility in the requirements process, and further identification of the barriers to the adoption of commercial practices.

The Task Force concludes that:

- mature jet engines, microelectronics, software, and space systems can and should be procured and supported in a fully commercial environment;
- USACOM and CENTCOM should be given increased technical cadres to further their capability to participate in the requirements process; and
- it is feasible to eliminate many of the barriers to adoption of commercial practices without sacrificing the public trust in spending public funds.

To do this would require that DoD acquisition be governed by the same body of laws and practices that cover the civil-commercial marketplace.

I believe that implementation of the Task Force recommendations will provide a sound basis for evolving a new process for acquiring adequate defense capabilities, with state-of-the-art technologies and industrial processes, at affordable prices, in the quantities needed. I recommend that you review Dr. Hermann's letter and the Recommendation Summary (p. 8), and forward the report to the Secretary of Defense.

Paul G. Kaminski

Paul G. Kaminski
Chairman



OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-3140

DEFENSE SCIENCE
BOARD

29 AUG 1994

Memorandum for Chairman, Defense Science Board

Subject: Report of the Defense Science Board (DSB) Task Force on Defense Acquisition Reform (Phase II)

Attached is the Phase II Report of the DSB Task Force on Acquisition Reform. The Task Force, as a result of comments received on the 1993 report, chose as its objective to provide recommendations which ease and encourage DoD to acquire its goods and services from the commercial sector in the way that commercial sector operates.

A primary area of focus was the further definition of pilot industry initiatives, particularly in jet engines and microelectronics. Our conclusions are:

- it is feasible and desirable to evolve towards the use of commercial business practices to procure and support mature jet engines but, not at this time, in the R&D phase of acquisition. The next step should be a funded government-industry program to transition current contracts and programs to a commercial practice basis.
- the recent internal Air Force study on streamlined acquisition of microelectronics provides an excellent approach for the electronics sector and should be extended to the whole of DoD.
- the software acquisition policy recommended by the DSB Task Force on Software provides the basis for commercialization in this industrial sector.
- the NRO-Industry Panel studying the use of commercial practices in the DoD space industry looks promising and should be brought to the point of actionable recommendations.

Another area of focus was the improvement of requirements generation and technology application at two Unified Commands. USACOM and CENTCOM have agreed to serve as Pilot Commands. They also plan to increase the technical cadres available to them in order to increase their capability to participate in the acquisition process and capitalize on the application of technology to fielded systems.

Finally, major emphasis was placed on further developing commercial acquisition practices for both the public and private sector which would permit the integration of the defense and commercial industrial bases. The Task Force, and most other thoughtful observers, believe this is an essential objective for the security and well being of the nation. The Department has already ruled in favor of the use of commercial specifications and is working to use its regulatory flexibility to further align DoD business practices with commercial practices. We make several recommendations which advance this process.

The Task Force notes that several (two important) areas need further study; particularly the application of commercial practices to large R&D programs, and the logistics implications of commercial acquisition. Of course, cost accounting practices, (from standards through auditing) still require attention as was noted in the Phase I Report.



Robert J. Hermann
Chairman

TABLE OF CONTENTS

FINAL REPORT	1
I. INTRODUCTION	1
II. PHASE II	2
III. SPECIFIC FINDINGS, CONCLUSIONS & RECOMMENDATIONS ..	3
A. Industrial Sectors	3
B. Increased Command Responsibilities	4
C. Commercial Practices	5
IV. RELATED ISSUES/FOLLOW-ON ACTIVITIES	7
V. RECOMMENDATION SUMMARY	8
Appendix A	
TERMS OF REFERENCE	A-1
Appendix B	
TASK FORCE MEMBERSHIP	B-1
Appendix C	
COMMERCIAL PRACTICES PANEL REPORT	C-1
Appendix D	
JET ENGINE COMMERCIAL PRACTICES PANEL	
FINAL REPORT	Published Separately

**FINAL REPORT
OF THE
DEFENSE SCIENCE BOARD TASK FORCE
ON
DEFENSE ACQUISITION REFORM (PHASE II)**

I. INTRODUCTION

The changes that have taken place since the fall of the Berlin Wall accentuate the fact that the time for meaningful comprehensive acquisition reform on a government-wide basis is now. This is made evident by the unprecedented challenges facing the country today, especially in the area of national security. Down-sizing of the defense budget and the associated industrial and technological base is continuing.

Such reform can and should be accomplished without eroding our ability to draw on the finest technological capabilities and industrial base. However, present burdens on industry, non-value added requirements, and cost penalizing statutes, policies, regulations, and cultural norms, associated with the current system, limit both the government's buying power and the pool of industrial suppliers.

In Phase I of this study (Final Report, July 1993), the Task Force determined that its primary thrust needed to be the identification of those measures which would reconnect and integrate defense acquisition with the commercial marketplace from which it has been drifting apart. The issues addressed were:

- the major barriers to use of commercial practices, facilities, and equipment;
- the primary sources of excess costs in the current acquisition process;
- the lack of flexibility, reality, and affordability in the current program definition (requirements) process; and
- the need to ensure "public trust" while implementing improvements.

Regarding these priority issues, the Task Force recommended:

- Selecting industrial sectors, important to both the commercial and defense market, as pilot initiatives for the acquisition of systems and services using commercial practices.
- Providing the Unified Commanders (CINCs) a more powerful role in acquisition so as to allow for a closer linking of the military systems

requirements process to operational plans and objectives and cost affordability.

- Adopting commercial practices; moving away from the current cost-based procurement systems. DoD-unique product and process specifications that unnecessarily inhibit the use of products and services from commercial sources must be replaced by commercial style, functional specifications.
- Greater reliance on the tools found in the commercial market to better retain the public trust, including 1) far wider use of competition, 2) market surveys to help judge the fair price of commercial products (rather than the traditional invasive cost-accounting practices), 3) taking advantage of the general regulatory environment that already governs the conduct of commercial business, and 4) developing a better understanding of end product value through the involvement of users in the program definition process.

II. PHASE II

This Phase II study reaffirms that the most important and urgent imperative for defense acquisition reform is the need to integrate defense acquisition and the associated industrial components with the commercial industrial base in order to:

- Give DoD full access to those technologies, products, and processes which are dominated by the commercial market place. Aircraft engines, electronics, software, computer systems, telecommunications, and flexible manufacturing are example areas where commercial technology is equal to or more advanced than military technology.
- Broaden the industrial base upon which the department depends. The current, essentially dedicated and thus isolated, base is eroding, is not attracting capital, is losing technology leadership, is not using the most advanced industrial practices, nor is it capable of the required surge capability for crisis response.
- Become more efficient--save money. Inefficiencies exist in all segments of the acquisition process: program definition, program execution, follow-on support, and the defense industrial base. Acquisition emphasizing commercial practices will enable DoD to stretch its available resources significantly.
- Allow greater integration of the industrial base to make the large R&D and production resources of the DoD more readily available to the U.S.

economy overall; to foster economic growth and industrial competitiveness in the global environment.

This Report builds on the conclusions and recommendations of Phase I with concentration on three broad areas:

- the feasibility and desirability of near-term adoption of commercial practices in specific industry segments i.e., jet engines, microelectronics, software, and space;
- identification of specific combatant commands to be more active players in the system requirements process;
- a more in-depth examination of those commercial practices suitable for use in defense acquisition and of the barriers which inhibit adoption of those practices.

III. SPECIFIC FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

A. Regarding the potential for an entire industry sector as a candidate for commercialization, the Task Force found:

1. It is feasible and desirable to use commercial practices, industry wide, to procure and support mature military jet engine production and support. This conclusion is based on the historic practice of the DoD acquiring selected commercial engines for military application and on the experience of jet engine manufacturers having an extensive history of building similar products for both the commercial and military markets.

However, it is not appropriate, at this time, to use purely commercial practices in the R & D phase of the acquisition cycle for large military jet engines. The requirements for an aircraft system, including the engine, involve a highly integrated effort between the military customer, airframer, engine manufacturer, and system integrator; component development must be accomplished using the same practices.

The Task Force recommends that a comprehensive program be established to convert the military jet engine industry to commercial practices for procurement and support. Details on this issue are contained in Appendix D, published separately as the Jet Engine Commercial Practices Panel Final Report, dated May 13, 1994.

2. The Task Force notes that the Air Force Microelectronics Streamlining initiative, is a major positive effort on acquisition reform and should be extended to the whole of DoD.
3. A separately tasked DSB on Commercial Software Acquisition developed recommendations for commercial acquisition practices. A major conclusion of their report was that DoD could and should use commercial buying practices for most of its needs. It also recommended the formation of a management group for DoD software under the Office of the USD(A&T) and that the office's responsibilities would include:
 - Establishing and enforcing a new software acquisition policy.
 - Creating the terms, conditions and incentives that will maximize the Pentagon's ability to acquire its software using commercial practices.
4. Full commercialization of the government space system program is being studied by an NRO-Industry Task Force. The NRO, as government lead, and supported by an industry advisory group, will provide a report within the next several months on how to transition to commercial practices. Payloads, satellites, launch systems, and control systems will all be considered.

B. Regarding increased CINC involvement in the acquisition process:

The Task Force concluded that a major impediment to adoption of commercial buying practices is the inflexibility of the "requirements process" -- that is, the process by which a decision to acquire something is made. The current concept of developing a rigid "military requirement" and handing it off to an acquisition agent to satisfy creates a fundamental barrier to the commercial concept of value-price purchasing and to an evaluation of all realistic alternatives.

In the commercial world, the buyer has an idea of the value of the item being acquired which is developed through understanding the utility of a solution and having considered alternative sources of solutions and competing courses of action. This behavior must be developed by the DoD in order to procure from the commercial industrial base. To do so will require increased participation by the using commands in both the assessing the utility of proposed solutions and in considering alternate courses of action.

Two CINCs, USACOM and CENTCOM, have been identified and have agreed to serve as pilot commands to participate more directly in the acquisition process and provide the end user's judgment of 'value' as value-price trade-offs are made

over the life of a program. They will need modest staff augmentation to provide needed technical support for their participation.

This approach is consistent with the recommendations of the DSB Readiness Task Force which argues for greater CINC involvement with future force readiness, C4I architecture and space asset readiness.

C. The third focus of the Task Force was on the Commercial Practices needed for the evolution to a single industrial base governed primarily by the same body of laws and practices that cover commercial contracting. This includes the extensive legislation that affects all U.S. businesses related to equal opportunity, labor practices, and the deterrents/punishments for fraud and abuse. Adoption of commercial practices is essential.

In examining the commercial practices issue and expanding on the conclusions and recommendations of the Phase I Report, the Task Force noted four major areas which, if appropriate actions were taken, would ensure increased flexibility in the acquisition of needed defense goods and services as well as maximum value for those goods and services. These areas are:

- The increased use of competition.
- The elimination of requirements for cost or pricing data (both for the data and the related cost accounting standards and audits)
- Adoption of commercial specifications as the normal mode and the elimination of military specifications and standards unless absolutely necessary.
- Ensuring the public trust by adopting standard commercial laws and regulations and eliminating the burdensome laws and procedures which focus primarily on abuse, rather than on the governments ability to obtain the goods and services needed to function efficiently.

Regarding these four areas, the Task Force concludes that:

- DoD must maximize competition. Full use of competition would allow for increased flexibility in the identification of alternative courses of action to satisfy military operational needs and also encourage more commercial firms to apply for government business. Expanding the use of competition requires a broader, more common sense definition of competition (such as the 800 panel proposed). Moreover, it should be recognized that competition need not be among identical products. For example, there can

be true, intense competition between quite different aircraft that can meet requirements in different ways, or between manned aircraft and unmanned cruise missiles. By minimizing the barriers that keep commercial firms from competing for government business, competition will also be enhanced.

- The DoD must eliminate the requirement for cost or pricing data and related cost allowability rules, accounting standards, and audits which deter many companies from pursuing the government market and thus can result in increased costs for all participants. The Task Force notes that price analysis (as used in the commercial world) can assist in ensuring a reasonable price for goods for the government.
- Military specifications can and should be eliminated as a pro forma requirement for DoD procurement. The recent decision by the Secretary of Defense to require a waiver to impose military specifications is an excellent outcome. In addition, the work of the Process Action Team on military specifications and standards, which recommended that they be zero-based and that contractor's should be permitted to "buy out" of these on existing contracts, should be implemented.
- The present body of restrictive statutes and regulations, adopted to assure the public that the government acquisition system operates honestly, actually place a restrictive burden on the entire system and result in increased costs, and reduced flexibility and competition. They must be gradually replaced by an alternative basis for assuring the public trust.

By maximizing competition, many public trust issues are solved. In addition, the laws and regulations applicable to the commercial market place do promote financial and ethical integrity in ways that are familiar to the commercial marketplace and encourage sound and efficient procurement practices.

The Task Force identified several other areas which also disincentivize many commercial firms from competing in the defense environment and thus act as a barrier to defense-commercial integration. These include:

- The "mind-set" of the government acquisition community which is risk averse and compliance oriented rather than results oriented. The current system provides few incentives to take risks or be innovative and many incentives to "play it safe" regardless of the costs this entails. An educated work force knowledgeable about the need for change and the payoffs that a

reformed system would have for our fighting forces is required. An education and training program should be adopted.

- The lack of a clear “materiality” standard which, if present, could eliminate the time and money wasted debating very small items between a company and government auditors. The government should consider establishing such a standard.

A full discussion of the commercial practices issue is found in the associated Panel Report at Appendix C.

IV. RELATED ISSUES/FOLLOW-ON ACTIVITIES

In a related area, the Task Force reviewed Defense Mapping Agency acquisition reform initiatives and applauds the Agency’s efforts to be a lead Defense Agency for reform. Further, it recommends that the Director, DMA request waivers to any restrictive and impeding DoD regulations. DoD officials, receiving these requests should provide the necessary relief measures, make public the procurement improvement achievements, and implement similar measure for the Services and other Defense Agencies.

Regarding the issue of Readiness, the Task Force firmly concludes that burdens imposed by the current acquisition system limit the government’s buying power and the pool of potential suppliers by deterring many firms from doing business with the government. Further, they jeopardize the financial health of those who are willing to contract with the United States. Simplification, overhaul, and streamlining of the system are required to prevent erosion of our technological and industrial base - and ultimately the readiness posture of our forces.

The Phase I and interim Phase II reports on Defense Acquisition Reform identified the problems facing the DoD acquisition community and the barriers to more efficient and effective acquisition, and provided recommendations as to how the acquisition process could be improved. The Task Force notes, however, that several areas need further study, particularly commercialization of the R&D and follow-on logistics portions of defense acquisition, the implementation of the new role of pilot commands, industries, and defense agencies in reform initiatives, and the accommodation to price based competitive procurements (including price analysis tools) which would allow the defense industrial base to operate and account in a truly commercial fashion.

The Task Force offers, with full consensus, its availability to assist the Department in these needed efforts and in any other acquisition reform activities that might be considered.

V. RECOMMENDATION SUMMARY

Principal Task Force recommendations are summarized as follows.

- **Pilot Industries**

DoD should establish a comprehensive plan and program to convert procurement and support of mature military jet engines to commercial practices. Waivers should be sought to the various laws, regulations, standards, and specifications which restrict full conversion to these practices.

The USD(A&T) assume responsibility for all software acquisition for the DoD.

The recommendations of the Air Force study on microelectronics streamlining should be adopted and extended to all of DoD.

- **Increased CINC Capabilities**

The Secretary of Defense and the Chairman, Joint Chiefs of Staff should provide increased technical capabilities to USACOM and CENTCOM (as pilot entities) for evaluating new technologies and developing joint user needs in a more flexible requirements process that seeks to emulate the commercial value-price process.

- **Commercial Practices**

DoD should take those actions necessary to allow its supporting industrial base to be governed by the same body of laws and practices that cover the commercial world.

DoD should encourage the use of commercial practices and specifications through incentives, education, and training, using market forces and price analysis instead of "cost or pricing" data.

Appendix A
TERMS OF REFERENCE



ACQUISITION AND
TECHNOLOGY

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010



DEC 22 1993

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference--Defense Science Board Task Force on
Defense Acquisition Reform (Phase II)

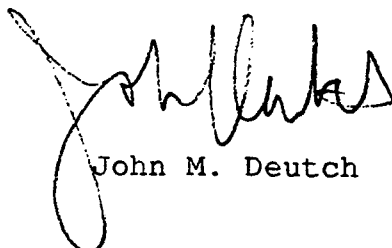
You are requested to initiate Phase II of the Defense Science Board (DSB) Task Force on Defense Acquisition Reform. Using the Phase I report as a baseline, the Task Force should:

- Further define the elements of pilot industry initiatives for jet engines and a segment of electronics, both involving entire plants. Define the relationship of these initiatives to programs participating in the Section 809 Defense Acquisition Pilot Program. Develop a set of acquisition practices that would be appropriate for both public and private application and recommend an execution strategy for putting these practices in place.

- Further define the elements of pilot initiatives in improved requirements generation process and advanced technology insertion for two unified commands. Identify the candidates and provide a detailed plan for reform in these two areas, a projected timeline, and action items to support execution.

- Assess the DoD review comments on the Phase I report and recommend disposition.

The Under Secretary of Defense (Acquisition and Technology) will sponsor this Task Force. Dr. Robert J. Hermann will serve as Chairman of the Task Force. Mr. Jay F. Dutcher of the Office of the Director, Acquisition Program Integration (API) will serve as Executive Secretary. Mr. John V. Ello will be the Defense Science Board Secretariat representative. The Office of API will provide funding and other support as may be necessary. It is not anticipated that this Task Force will need to go into any "particular matters" within the meaning of Section 208 of Title 18, U.S. Code, nor will it cause any member to be placed in the position of acting as a procurement official. An interim report should be provided by March 1994 and a final report completed by July 1994.



John M. Deutch



Appendix B
TASK FORCE MEMBERSHIP

APPENDIX B

Defense Science Board Task Force on Defense Acquisition Reform

(Phase II)

Membership

Dr. Robert Hermann, Chairman	Ms. Joan Habermann
Dr. Anthony Bronzo	Dr. George Heilmeier
Mr. Robert Cattoi	Mr. Page Hoyer
Mr. George Donovan	Gen. Edward Meyer, USA (Ret.)
Adm. Leon Edney, USN, (Ret.)	Mr. Ralph Nash
Mr. Robert Everett	Mr. Philip Odeen
Mr. Robert Fuhrman	Gen. Bernard Randolph, USAF (Ret.)
Dr. Jacques Gansler	

Executive Secretary

Mr. Jay Dutcher

DSB Secretariat

Mr. John Ello

Advisors/Support

Col. Dan Abbott	LtCol. Bill Goetz, USAF
Mr. A.J. Beauregard	Capt. Jack Hawxhurst, USN
Mr. John Booth	Lt.Col. Dennis Kirlin, USAF
Mr. Edward Burke	Mr. Rodney McDaniel
Mr. Thomas Christie	Capt. David Mosby, USN
Mr. Bud Durante	Mr. Gene Porter

Appendix C
COMMERCIAL PRACTICES PANEL REPORT

Commercial Practices

The Phase I report of the DSB Task Force on Acquisition Reform stressed the urgent need to integrate the defense industrial base with the commercial industrial base. The report pointed to four primary reasons that integration is essential.

1. To give DOD access to those technologies, products, and processes dominated by the commercial marketplace. Electronics, software, computer systems, telecommunications, and flexible manufacturing are example areas where commercial technology is far more advanced than defense technology.
2. To broaden the industrial base on which the department depends. The current, essentially dedicated and thus isolated, base is eroding, is not attracting capital, is losing technology leadership, is not using the most advanced industrial practices, and does not have the required surge capability for crisis response.
3. To become more efficient; i.e., save money. Inefficiencies exist in all three segments of the acquisition process: program definition, program execution, and the defense industrial base. Acquisition emphasizing commercial practices will enable DOD to stretch its available resources significantly, buying more defense capability.
4. Finally, greater integration of the industrial base will make the large R&D and production resources of the DOD more readily available to the U.S. economy overall; to foster economic growth and industrial competitiveness.

The various bills now before the Congress will provide some modest progress toward the required integration, but much more needs to be done. This issue deserves the continued priority attention of DOD leadership. Given the continued steady decline of the Defense budget and especially the procurement account, we must make early and significant progress integrating the defense and commercial industrial bases. Failure to do so puts our national security at risk because we will be unable to buy the quantity or quality of weapons and equipment our forces need to maintain our current military advantages.

Obstacles To Integration

There are three primary barriers to commercial firms entering the DOD market:

- The requirement for cost or pricing data and related cost allowability, rules, accounting standards, and audits. Many commercially oriented firms are not willing to incur the costs, time, and risks required to respond to these requirements which range from creating a new and separate accounting system to adhering to onerous travel regulations.
- The myriad of restrictive statutes and regulations that deter companies from entering the market out of concern for their complexity and legal risks (possible criminal penalties) or the cost of compliance that impacts the competitiveness of their commercial products.
- The "mind set" of the government acquisition community which is risk averse and compliance oriented rather than results oriented. The current system provides few incentives to take risks or be innovative and many incentives to "play it safe" regardless of the costs this entails. This is a formidable problem given the size of the community, its decentralized structure and geographic dispersion.

The Panel Goal - An Integrated System

The Commercial Practices Panel's long-term goal is a fundamentally different acquisition system, shifting to a single, integrated industrial base primarily using commercial buying practices. In the panel's view, a sound "commercial" acquisition system for the Defense Department would have the following characteristics:

- It would be governed primarily by the body of law and practices that cover commercial contracting. These include extensive legislation affecting all U. S. businesses related to EEO and labor practices as well as laws designed to deter and punish fraud.
- Like private industry, DoD would buy different types of products (e.g., petroleum, computer software, or complex weapons systems) using different practices, depending on the nature and maturity of the market, the type of item being purchased, and other unique characteristics of the market for the item.

- Successful suppliers would rely on quality products and reliable performance as well as competitive prices to win business.
- The defense market would be subject to the vigorous competition and rigorous negotiations that are normal to the purchase of commercial goods and services.
- Competitive procurements would be the rule, using market forces and price analysis instead of "cost or pricing" data and unique statutes and regulations.
- In those rare cases where suppliers are subject to audit, the auditors would use generally accepted accounting principles and rely on data provided by advanced, activity based cost accounting systems.
- Since taxpayer dollars are involved, the new system would give appropriate attention to the issue of public trust.

In essence, the government would buy products and services much as a large commercial company (Ford, GE, or Boeing) buys components and end items. The only exceptions would be for a few types of items where the government is the only buyer (e.g., nuclear submarines) or where very large, complex, and long-term developments are undertaken (e.g., F-22 aircraft). These cases would be handled by variations to the commercially oriented system, rather than using a totally separate system.

Such a system can be created without foregoing widely supported socioeconomic goals. Set aside programs could be used or special incentives provided to give small or disadvantaged firms an advantage against larger, more established companies. This issue is discussed in more detail later.

The Need For Incentives

Acquisition reform will be successful only to the extent that real and verifiable incentives drive the process. At present the incentives undermine sound practices and the thrust of true reform. Employees in rule-based bureaucracies tend to be risk-averse. They know that "you cannot get fired for following the rules." Deviating from the rules and regulations or waiving regulations that could be applied creates a career risk with no compensating reward.

Bureaucratic inertia adds to the problem. You can find considerable agreement to the proposition that many acquisition regulations are unnecessary on certain contracts. A particular regulation or practice is usually based on a specific, historical problem which may bear little relevance to the contract at hand. There is usually a bureaucratic process to waive a regulation. But it takes time and effort, a significant deterrent in itself, and the potential for career risk lurks in the background.

The complex regulatory environment provides the government buyer with a form of "insurance" against excessive prices or profits. However, the system does not reveal the "cost" of this insurance or permit the buyer to make a judgement as to its value. The best program managers and contracting officers would like the flexibility to use their best business judgement to buy better products at better prices. Contractors would like relief from regulations they see as burdensome and expensive to implement. The key is to use these two objectives to create incentives that strengthen the industrial base supporting DoD and produce better, less costly equipment and services.

When the government buys a product today, the cost of the "insurance" is included. But it should be possible to price them separately, so that the government can decide whether the "insurance" is worth the price. Contractors could be asked to bid separate prices for the product and for the waivable regulations. If they really find the regulations burdensome, the price difference between a product with regulations and the same product without regulations will be substantial.

Maintaining Public Trust

Taxpayers have a legitimate interest in the effective operation of the government. While they have little expectation that services will be provided efficiently, they do expect them to be delivered reasonably on time. Moreover, they are concerned that suppliers make excessive profits,

prices are too high, and quality too low. The government procurement process must withstand scrutiny from many quarters--the press, Congress, GAO, IG, etc. Does DoD get what it needs, on time, and for a fair price? In an attempt to assure the public that the government acquisition system operates honestly and is open to all bidders, a body of "special" laws and regulations have been put in place. Despite their cost in time and money and the burden they place on the system, they have, for the most part, failed to build the public's trust that the system operates satisfactorily. To better address public trust, several courses of action should be followed.

1. Maximize Competition -- When competition occurs, public trust issues are usually moot. Expanding the use of competition requires a broader, more common sense definition of competition (such as the 800 panel proposed). Moreover, it should be recognized that competition need not be among identical products. For example, there can be true, intense competition between quite different aircraft that can meet requirements in different ways, or between manned aircraft and unmanned cruise missiles. By minimizing the barriers that keep commercial firms from competing for government business, competition will also be enhanced.

2. Minimize Contentious Issues -- The private sector has a "materiality" standard (usually about 5%) below which auditors don't argue. The government's cost accounting standards recognize this issue and the problem of needless focus on minor cost matters. Auditors are encouraged to consider materiality when conducting audits, but this is honored in the breach. A clear materiality standard (e.g., a percent or so or a dollar amount, whichever is smaller) would be helpful. This could eliminate the time and money wasted debating very small items between a company and the government auditor. The cost of resolution is often greater than the cost at issue. While we expect that cost allowability will seldom be an issue in the new system, steps should be taken to eliminate the gray areas--government/industry groups should negotiate away the areas where judgement is required. While it would reduce cost recovery, the reduction in friction and the need for audits would be a good trade. In response to making more items unallowable, the government should relax profit guidelines modestly. Finally, a reasonable, but short, statute of limitations period for audits would reduce the burden of record keeping and the risk of old issues being raised years later.

3. Education/Clarification -- Identify areas of overlap and ambiguity between government and industry, and clarify their respective tasks and responsibilities. Make sure there is a corporate memory--keep some civilian members of the program office for the life cycle of the program so

they remember the tradeoffs and the decisions. That way the government as a customer will know what the requirements were, whether the government got what it wanted, what it paid for, and whether the program met government (customer) expectations.

4. Publicize Successes -- Don't just focus on the problems. Most publicity revolves around overpriced "toilet seats" and hammers. Draw attention to successful innovative programs and, if possible, give them equal press. BMDO's Clementine Program (low cost space probe) is an example of such a success.

5. Articulate Requirements -- The public can better support expenditures if they understand why the Department needs to procure items. A straight forward description of what is needed, what is a fair price (based on market surveys), and any relevant budget constraints would help everyone involved understand the expenditures.

Near-Term Fixes

While we pursue our ultimate goal of an integrated industrial base, we should not ignore shorter term actions that will improve the existing acquisition process. Achieving a truly integrated system may take years, and in the interim significant improvements can be made. There are a number of areas where change is badly needed and where progress can be made quickly, often without legislation. Our strategy should be two-pronged.

- Continue to push for legislative relief in key areas where it is required. The bills currently before the Congress provide some modest benefit, but it is clear that the effort to get true reform legislated will go on for some time.
- In the meantime, DoD should aggressively push for a dramatic simplification of the current regulatory process. Much can be done by the executive branch, and DoD can make a real difference on its own. This will take leadership and persistence, but the payoff will be significant.

A number of areas where fixes are possible are outlined as follows.

Cost or Pricing Data

The requirements (both for data and related cost accounting standards and audits) deter many companies from pursuing the government market and drive up costs for all participants. By expanding competition, the need for such data can be reduced. However, to make a real difference, many more actions must be taken. They include:

1. Maximize use of competitive contracts

Define "competition" more broadly to reduce need of data (per the 800 panel). Revise the FAR definitions if necessary.

Force contracting officers to get an exception to require cost data for competitive contracts (they frequently request data when it is not required).

The Cost Accounting Standard Board (CASB) should waive cost accounting rules on commercial like products (they have broad power to do this). Price analysis can be used to ensure the price is reasonable (see section 3 below).

2. Reduce the need for cost or pricing data on contract modifications

Mods usually require cost/pricing data, even on fixed price/ competitive contracts.

There is now a firm statutory requirement for data if a mod is above \$500K. Raise this threshold significantly and provide waiver authority.

In most cases price analysis can ensure a reasonable price for the mod, thereby avoiding the use of cost or pricing data.

3. Provide more flexibility and better tools for determining a fair and reasonable price

Strengthen contracting officer price analysis skills, the key to sound buying in the commercial sector. This will require training as well as incentives to use price analysis aggressively.

In lieu of cost or pricing data, provide a new approach for determining a fair and reasonable price in the acquisition of commercial items in the absence of competition or an established market price.

4. Reduce friction related to government unique cost principles/ accounting standards

Form joint government/industry panel to minimize "gray" cost allowability areas.

Introduce a modest but clear materiality consideration.

5. Actions to maintain public trust

Use public accounting firms (e.g., as is done with DII audits) to verify that prices and profits are not excessive and are consistent with commercial experience.

Rely more on competitive contracts.

Consider developing materiality standards.

Cost Type Development Contracts

The above steps can reduce or eliminate the need for cost or pricing data in a broad range of procurement areas. However, one major challenge remains that requires special attention and different measures. This is the area of large, long-term R&D contracts, especially the development of complex new weapon systems.

- Our past experience using fixed price development contracts was disastrous.
- We can't predict precisely the performance and development problems, time frame, or costs in such programs.
- It may not be feasible to avoid requiring cost data in some select cases, but we can:
 - Minimize the amount/type of data.
 - Reduce the burden on suppliers to provide it.

Such development efforts are largely, but not entirely, unique to the government market. The development of a new aircraft class (e.g., Boeing 777) involves billions of dollars and both market and technical risks. In past years, the development of a new class of mainframe or super

computers also presented similar challenges. Such efforts are usually successful which can be attributed to several factors.

- Technical risk is managed - with most specific improvements evolutionary, not dramatic (though the total new system may be a significantly better product).
- The component developers (e.g., engines or avionics) take a risk developing their product, but they are reasonably confident, based on past experiences, that the market forecasts are sound and they will receive a sound return on that investment (though it may take years~).
- Cost is a reasonably fixed requirement, and requirements are adjusted to keep the new product in an acceptable price range.
- Customer needs are carefully and continuously assessed and prioritized. This significantly reduces market risk.

If we wish to rely more heavily on commercial procurement practice when developing complex systems we must change the way we develop--such systems not just change the acquisition process. The current approach, long-term programs with demanding technical objectives, forces the government to rely on intrusive oversight mechanisms to preclude "excessive" profits and provide visibility into the company's cost structure.

1. A Different Development Approach -- The "end of the cold war" and constrained DoD budgets dictate a different approach to developing major systems. An approach such as that used in the commercial world is now feasible and indeed necessary given the fiscal constraints DoD faces. The key elements of this new approach to developing systems include:

- An incremental approach to enhancing military equipment, with less technical risk and shorter development times.
- Similar, challenging, but moderate risk development tasks for major component suppliers.
- Aggressive use of commercial off-the-shelf (COTS) components to reduce risk and cost and exploit the non-DoD technology base.
- A new, simple process to allow for price analysis for mods for COTS equipment in lieu of cost type contracts.

- Constant involvement of the DoD users (operators as well as the program office) to make sound trade-offs on cost, schedule, and requirements. In most cases none would be seen as fixed.

2. A Different Acquisition Approach -- If DoD shifts to the above development approach, major changes to the acquisition process are feasible. A full move to commercial practices may not be possible, but much of the work could be done (e.g., component development on a fixed price basis). In addition, the work of the integrating contractor could be done in stages and the stages done on incentive type or even fixed price contracts. Adoption of advanced activity-based cost accounting systems would make cost reporting easier and more meaningful and reduce the need for government auditors. In addition, public accounting firms could certify to the reasonableness of the developer's costs/profits - an approach now used in the R&D grant arena as well as to monitor the effectiveness of DoD contractor ethics programs (the DII initiative). This would not be a pure, commercial procurement approach, but it would be radically simpler and less costly, both for government and industry.

Restrictive Statutes/Regulations

The second major impediment is the literally hundreds of laws and regulations that are unique to the government procurement process. Again, they deter companies from entering the market and raise the cost for all players. These restrictive laws and regulations fall in several categories.

- Requirements for cost or pricing data, CAS compliant accounting systems and post contract audits were discussed above. A related area is regulations designed to constrain companies' activities to reduce costs, such as rules on travel expenses.
- Buy America rules, including a 50% U.S. content law applicable to all U.S. suppliers (but not foreign suppliers) and a number of specific laws only applicable to DoD. This latter group is touted to reduce U.S. vulnerability in time of war but in reality is a market guarantee for certain U.S. producers. Its real effect is to raise DoD costs and in some cases deprive it of more advanced technology.
- A variety of laws designed to force the government to only use union labor suppliers in certain sectors (e.g., construction or use of U.S. ships for coastal shipping). Again, the impact is to raise costs.

- Special programs to shift business and jobs to a variety of disadvantaged groups, from minorities to Vietnam veterans. The philosophy is to use tax payer supported programs to proactively further social goals, even though there is usually a cost penalty.
- Laws aimed at preventing fraud or other abuses or to prevent government agencies from dealing with companies or individuals that commit such acts.

Some regulations, perhaps many, can be changed or waived without legislation. For example, travel regulations differ among agencies and are subject to varying interpretations, increasing contractor administrative costs. But others, especially those in the socioeconomic area, would need legislative change. The challenge is to reduce the numbers of laws and regulations and the cost of compliance. In particular, we must find less burdensome, but effective ways to ensure the achievement of the socioeconomic goals. In this area the public and private sectors operate in fundamentally different ways. The government expects affirmative action while non-discrimination is the focus in commercial practices. These differences lead to very different rules and procedures and are a concern for commercial firms.

There are three sets of actions to be taken:

1. Minimize the number and variety of restrictive laws and regulations as well as their impact. Actions include (see ANNEX A for examples):

- Some clauses appear unnecessary--boiler plate--and can be deleted .
- Some duplicate other statutes and should be deleted.
- Raising the small purchase threshold to \$100K would help on the very large volume of small contracts (over 90% of the total number) if most or all unique contract clauses are waived.
- Some clauses can be waived by DoD without legislation but waivers are seldom used. They should be actively encouraged.
- Flow-down of clauses to subs could be waived or limited (this requires legislation), especially on commercial and commercial-like items.

- Those laws entailing criminal penalties should be screened and wherever possible, civil penalties used instead (e.g., for poor judgment or inefficient practices).

2. More broadly use the compliance approach used for commercial products sold under the GSA schedule including extending it to cover commercial like product sales. Most major companies who are not defense contractors sell products via GSA (or similar) schedules. Since the prices are fixed (and quite competitive) cost or pricing data are not required. However, in most cases they are obliged to comply with socioeconomic regulations (except for a few DoD unique laws, primarily requiring U.S. origin parts and materials; e.g., clothing). Compliance is monitored by periodic surveys or inspections. There are few reporting requirements and in many cases a type of "honor system" is used rather than intrusive compliance reviews and inspections. This approach has encouraged many U. S. companies including some high technology suppliers to sell to the government.

3. Regardless of the actions above, we should address the socioeconomic goals proactively. Some possible ways to meet these goals in an essentially commercial acquisition environment are:

- Broader use of set-asides for small and disadvantaged businesses in lieu of contract flow-down clauses.
- Track pilot programs using voluntary conformance to see if this approach is effective.
- Analyze the cost of compliance vs impact to convince people of the need for change (including DoD's lost opportunities due to non-participation by many fine companies).

Acquisition Culture Issues

The final issue to be addressed is the mind-set and training of the acquisition community. This will take time and great tenacity. The system is resistant to change and steady, long-term leadership and support from senior DoD management is essential if we hope to truly change the system. Actions to be taken include:

1. Use of Process Action Teams (PATs)--a group of acquisition process owners, including acquisition professionals, auditors, and users--to reform various parts of the acquisition process. When the process stakeholders

define the reforms, they are more likely to be accepted by their community and implemented. This approach is working effectively in the mil specs area.

2. Educate the acquisition work force on the need for change and the payoff a reformed system will have for our fighting forces. They need to respond to the legitimate needs of program managers to execute their programs effectively, rather than the narrow compliance oriented requirements of headquarters functional staffs.

3. Provide incentives to take risks. The actions include rewarding acquisition personnel (e.g., via promotions, recognition, or merit pay increases) who take the initiative to eliminate unneeded clauses, appointing a "waiver advocate" in the mode of the competition advocate to make decisions on contentious issues and in general pushing the community to be proactive, and refocusing the range of training courses provided the community to emphasize initiative, experimentation, and risk taking. Most important, DoD leadership must consistently reward, not punish, risk takers.

Commercial Practices Panel Summary

The defense industrial base is shrinking. The dramatic decline in defense budgets is driving many defense companies to consolidate and forcing others out of the defense business. Unique government practices and regulations limit the number of companies willing and able to do business with DoD, and worse, often preclude or delay our obtaining leading edge technologies for our military forces. The development of new technologies in the commercial sector is accelerating, at the same time that DoD's ability to acquire them in a timely and cost effective manner is deteriorating. We must establish new partnerships with our suppliers. The adversarial relationship, "I'll check and recheck everything you do," must be changed to a more customary buyer and seller relationship.

Many of the business practices we have developed over the years to avoid risk carry the baggage of increasing costs and limiting competition. Complete risk avoidance has never been possible, but tools used in the commercial sector to manage and share risk can be used. Likewise, commercial specifications/ standards must be used with few exceptions. Today military specifications and standards often define lower quality material and manufacturing processes than are currently used in commercial industry.

There is one reason and one reason only for reform--to improve our ability to support the war fighting capability of our Armed Forces. The "old" system is not broken in the sense that it failed to produce good equipment. But it created a separate and now isolated industrial base that in many cases has lost its technological edge. Moreover, we can no longer afford its inefficiencies. In an era of declining budgets and force structure we- must maximize the capability that each budget dollar buys. We must scrutinize the entire acquisition process, ferret out non-value added steps, invent dynamic strategies for capturing new technologies in all the material we buy, and get it to the war fighter in half the time.

ANNEX A

Examples of Restrictive Laws and Regulations

The body of the Commercial Practices Panel report proposes a series of actions to minimize the cost of contractor compliance and to facilitate commercial companies selling to the government. Some specific examples are shown below.

Redundant Clauses

1. Under various clauses in FAR 52.203 activities such as kickbacks and improper payment to officials are prohibited. Such actions are already covered by U.S. statutes.
2. Equal opportunity (EO 11246) is covered by the Civil Rights Act.

Clauses Alien to Commercial Contracting

A number of clauses are totally alien to commercial transactions and deter companies from supplying the government market. Yet they seem to have little real impact and are seldom enforced.

1. The flow down of requirements for small and disadvantaged business subcontracting plans and related reporting requirements.
2. Subcontracting in labor surplus areas.
3. Affirmative action to employ disabled and Vietnam veterans, including regular reporting requirements.
4. Drug Free workplace certifications and reporting.
5. Buy American Act and Cargo Preference Act - both require practices that commercial firms do not follow.

Non Legislative DoD Regulations

1. Large numbers of contract data requirements (CDRLs) are costly and should be zero based.
2. The 5000 series acquisition process is designed for traditional multiphased developments. A comparable process for commercial procurements is needed.

Appendix D
JET ENGINE COMMERCIAL PRACTICES
PANEL
FINAL REPORT
(Published Separately)