TRANSITION TO JOINTNESS:
AN ANALYSIS AND APPRAISAL OF CONSOLIDATING SERVICE ACQUISITION PERSONNEL INTO A JOINT ACQUISITION FORCE

by

Jaimy S. Rand, Major, U.S. Army

A Research Report Submitted to the Faculty
In Partial Fulfillment of the Graduation Requirements

Advisor: Lieutenant Colonel Michael Burney

Maxwell Air Force Base, Alabama
April 1999
Disclaimer

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCLAIMER</td>
<td>ii</td>
</tr>
<tr>
<td>ILLUSTRATIONS</td>
<td>v</td>
</tr>
<tr>
<td>PREFACE</td>
<td>vi</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>vii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background and Significance</td>
<td>1</td>
</tr>
<tr>
<td>Definition of a Joint Acquisition Force</td>
<td>2</td>
</tr>
<tr>
<td>Limitations</td>
<td>4</td>
</tr>
<tr>
<td>The Bottom Line</td>
<td>4</td>
</tr>
<tr>
<td>SETTING THE PRECEDENT FOR “JOINTNESS” IN DEFENSE ACQUISITION</td>
<td>5</td>
</tr>
<tr>
<td>THE CURRENT ACQUISITION WORKFORCE AND PROCESS</td>
<td>8</td>
</tr>
<tr>
<td>COMPARISON OF JOINT ORGANIZATIONAL OPTIONS</td>
<td>10</td>
</tr>
<tr>
<td>Introduction</td>
<td>10</td>
</tr>
<tr>
<td>The Unified Action Armed Forces (UNAAF) Structure</td>
<td>11</td>
</tr>
<tr>
<td>Acquisition Personnel Within the Services</td>
<td>12</td>
</tr>
<tr>
<td>The Evolving Joint Acquisition Force</td>
<td>13</td>
</tr>
<tr>
<td>An Organization Serving in a Joint Role</td>
<td>13</td>
</tr>
<tr>
<td>Summary</td>
<td>15</td>
</tr>
<tr>
<td>AN ANALYSIS OF A CONSOLIDATED, JOINT ACQUISITION FORCE</td>
<td>17</td>
</tr>
<tr>
<td>Introduction</td>
<td>17</td>
</tr>
<tr>
<td>Effectiveness of Joint Acquisition Organizations</td>
<td>18</td>
</tr>
<tr>
<td>Ineffectiveness of Joint Acquisition Organizations</td>
<td>19</td>
</tr>
<tr>
<td>Summary</td>
<td>21</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>23</td>
</tr>
<tr>
<td>An Appraisal of Consolidation Advantages and Disadvantages</td>
<td>23</td>
</tr>
<tr>
<td>Recommendations</td>
<td>24</td>
</tr>
<tr>
<td>Summary</td>
<td>28</td>
</tr>
</tbody>
</table>
DETAILS OF PRECEDENT SETTING FOR “JOINTNESS” IN DEFENSE ACQUISITION
Introduction .................................................................................................................30
National Security Act of 1947 .....................................................................................30
Planning, Programming, and Budgeting System (PPBS) ............................................31
Packard Commission ...................................................................................................31
Goldwater-Nichols Defense Reorganization Act of 1986 ............................................33
Defense Acquisition Workforce Improvement Act (DAWIA) of 1991 ......................35
Defense Acquisition Reform .......................................................................................38
Summary ......................................................................................................................40

IMPLEMENTATION OF DAWIA: THE CURRENT ACQUISITION WORKFORCE AND PROCESS ..........................................................................................................44
Army Acquisition Corps (AAC) ..................................................................................44
Air Force Acquisition Corps (AFAC) .........................................................................45
Navy Acquisition Professional Community (NAPC)..................................................46
The Life Cycle System Management Model (LCSMM).............................................48

GLOSSARY ......................................................................................................................53

BIBLIOGRAPHY ..............................................................................................................55
Illustrations

Page

Figure 1: The Joint Warfighting Capabilities Assessment (JWCA) Mechanism ..........34

Figure 2: JWCA/PPBS Linkage..................................................................................35

Figure 3: The Life Cycle System Management Model.................................................48
Preface

With so much attention swirling around the issue of “jointness” along with federal laws that over the last two decades – set the stage for a “joint” acquisition force, I decided to research why the workforce has not transitioned to such a “purple” force. During my research, I discovered that the process has already begun to transition. In effect, process has actually overtaken content in the form of Defense Acquisition Reform.

In other words, the acquisition process itself is incrementally undergoing major reform while the workforce, with no dramatic shift toward a more joint structure, is supporting the procedural changes. Therefore, reference to a “joint” or “purple” acquisition force has begun to fade away over time. The question no longer pervades the acquisition field like it once did after passage of Goldwater-Nichols and the Defense Acquisition Workforce Improvement Act. However, the process of acquisition reform could bring about consolidation of acquisition functions that would ultimately affect the workforce. The question now has become how long will it be before the workforce is a joint organization?

My sincere thanks to my faculty research advisor, Lieutenant Colonel Michael Burney. His mentorship, encouragement, guidance and superb advice greatly assisted me not only in the completion of this project, but in my investigation of professional matters as well. Without his direction, this project would be incomplete.
Abstract

The Defense Acquisition Workforce continues to be blamed for weapons system procurements gone wrong. Common and contentious issues include duplicity of functions across the services, cost overruns, cases of contract fraud, and the magnification of all of these issues by the media. In attempts to “fix” many of these problems, various laws were enacted over recent decades. Laws and regulations designed to make the acquisition process more efficient as well as to “professionalize” the acquisition workforce coincided with a changing strategic landscape and a draw down in the armed forces creating a trend toward “jointness.” This setting provided for the following problem statement: why has the defense acquisition workforce across the services not yet been reorganized into a consolidated, joint organization and would such an organization serve stakeholders better than the current system?

The methodology for this paper included researching precedent-setting steps such as enactment of the Goldwater-Nichols Act, the Defense Acquisition Workforce Improvement Act (DAWIA), and Acquisition Reform initiatives. The methodology continued with research on the current acquisition workforce: the Army Acquisition Corps (AAC), the Air Force Acquisition Corps (AFAC), and the Navy Acquisition Professional Community (NAPC); and the acquisition cycle: the Life Cycle System Management Model (LCSMM).

Next, various joint organizational structures such as unified commands, an all civilian workforce, and an examination of the current workforce as it evolves toward “jointness” were examined and evaluated as potential structures for a joint acquisition workforce. Finally, a
consolidated workforce – regardless of the actual organizational structure – was examined for effectiveness and ineffectiveness.

The analysis and appraisal of a consolidated, joint workforce revealed two concluding points. First, it is clear that absent radical changes in the strategic environment and an accompanied substantial increase in defense spending, the trend toward “jointness,” not only in defense acquisition, but also in defense in general, will continue. This trend will eventually produce a consolidated, joint acquisition force. Such a force however, will only occur in the long term and will possibly be a product of a consolidated military, one without separate service functions and roles. The force’s organization will only incrementally change between now and then. There are a number of steps necessary to implement a joint organization and recommendations to address such changes are discussed in the final chapter.

Ongoing changes within defense acquisition leads to the second concluding point. Trends continuing toward jointness are accompanied by consistent acquisition reform initiatives that serve to streamline processes, remove attention from contentious issues, and hence “substitute” for the formation of a joint acquisition force for the time being. That is not to say that once reform initiatives have instituted definitive procedural changes that wide-sweeping organizational change will not happen. On the contrary, given the trend toward “jointness” it will happen, but only incrementally and only after additional adjustments are made to foster such changes.
Chapter 1

Introduction

With the momentum established by both the Goldwater-Nichols Defense Reorganization Act of 1986 and the Defense Acquisition Workforce Improvement Act (DAWIA) of 1991, why has the defense acquisition workforce across the services not yet been reorganized into a consolidated, joint organization? Would such an organization serve stakeholders (soldiers, sailors, airmen, marines, taxpayers, and workforce members) better than the current system? Where has the concern surrounding these questions escaped to? Some of the answers lie in what events have transpired over the past twelve years.

Background and Significance

After the passage of the Goldwater-Nichols Defense Reorganization Act of 1986 and more so after implementation of the Defense Acquisition Workforce Improvement Act (DAWIA) of 1991, it seemed that the “handwriting was on the wall” and the inevitable would happen: the defense acquisition workforce would become a joint acquisition workforce. This rumor seemed destined to become reality given intense media coverage of duplicative requirements between the services and defense contract fraud stories. The idea of a joint acquisition force was and still is today an unpopular suggestion, especially among military members of acquisition corps in the respective services.
Since enactment of DAWIA, the services are producing more professional (formally educated and trained) defense acquisition employees. However, that has not solved the numerous issues that the defense acquisition workforce gets blamed for. In parallel with progression toward “jointness” is the advancement of technology and increasing capabilities in the form of information technology, precision, range, and lethality that the acquisition field brings to the warfighter.

Such leaps in technical capability coupled with the inability to capitalize on efficiencies related to both interoperability and production signals an ominous sign. The inability of the acquisition field to bring this all together in a succinct, integrated package suggests that a revolution in military affairs is being suspended because defense acquisition leaders lack the understanding of how best to package the acquisition process organizationally. The increasing trend toward “jointness” in the shaping of, responding to, and preparing for the U.S. strategic environment and the possible damaging and pervasive issues reflecting suggestion of perhaps a “broken” acquisition workforce in supporting joint operations therefore merits closer examination.

Definition of a Joint Acquisition Force

Reference to a “joint” or “purple” acquisition force mandates an explanation of how such a force would be organized and what functions it would perform. What did Senators Goldwater and Nichols as well as Representative Mavoulres, the architect of DAWIA, have in mind? Typical of federal legislation in being deliberately vague, no language accompanies either act (or implementation guidance thereof) on what type of structure a joint acquisition organization should have.
One perspective is that all acquisition organizations and professionals are subordinate to the Undersecretary of Defense for Acquisition and Technology (USD, A&T) and hence currently already comprise a “joint” organization. In following this pattern of jointness provided by the Unified Action Armed Forces (UNAAF) model, the USD (A&T) would be considered the Defense Acquisition and Technology Commander in Chief (CINC).

On the other hand, the perspective at the other extreme is that defense acquisition organizations today, regardless of the fact that they are all (directly or indirectly) subordinate to the USD (A&T), are not combined nearly enough in “joint” structure and function. A major reason consistently used to support this perspective is the large number of systems fielded by the different services having duplicity and/or poor to non-existent connectivity between them. This reason is one most used to infer the need to better organize in order to solve many acquisition issues. So in reality, how would a joint or “purple” acquisition force be organized?

A commonly accepted definition for “jointness” is “the art of combining capabilities from the different military services to create an effect that is greater than the sum of the parts. Not all military functions or capabilities need to be joint.”¹ This definition supports a continuum of solutions to answer the question. Solutions range from a consolidated joint acquisition organization under a “CINC” to a separated acquisition force spread across the services, to a combination of the two falling in between.

This paper will discuss this continuum, explain the organizations at extremes, and the reforms and processes that have ultimately changed the attitude on this subject to bring it full circle to where it lies today: in between.
Limitations

Due to time and resource constraints, only applied research was conducted with regard to this issue. However, due to the issue’s sensitive nature with regard to human resource management, the demand for more efficient acquisition, and continuing trends toward jointness, greater time and resources should be devoted to basic research of this issue to explore long-term approaches to transitioning to a consolidated joint acquisition force. Defining how a joint acquisition force would most effectively be organized is a research project in and of itself.

The Bottom Line

It is not necessary to reorganize the defense acquisition workforce across the services into a consolidated, joint organization because such an organization is not currently necessary, especially in light of recent procedural changes introduced as acquisition reform legislation. “Jointness” continues to be injected into defense operations to include defense acquisition. There are advantages and disadvantages of becoming a joint organization at this point in time. Like any other change in a Government bureaucracy, restructuring could not effectively happen overnight. It must come incrementally. Human resources, the most important asset in any organization, must be treated with dignity and respect in order to reap benefits from the investment made in creating the highly educated and trained acquisition workforce currently in place. Additionally, the government must retain credibility and build a stronger reputation to continue to attract a strong workforce for tomorrow’s continuing technology and acquisition challenges.

Notes

Chapter 2

Setting the Precedent for “Jointness” in Defense Acquisition

Numerous legislative and administrative events are responsible for the trend toward jointness not only within defense acquisition, but within defense operations in general. These events are discussed in greater detail in Appendix A. However, a brief overview of the effects of each of these events is discussed in the following paragraphs.

First, the National Security Act of 1947 established not only the Department of Defense (DOD) and the Secretary of Defense with sole managerial responsibility over the armed forces and their operations, but the Joint Chiefs of Staff (JCS) as an advisory body to the National Command Authority (NCA). The formation of the JCS marked the beginning of “jointness” in name only.

One of the next major steps toward jointness was established in the early 1960s by Secretary of Defense, Robert McNamara. He brought the Planning, Programming, and Budgeting System (PPBS) to DOD from his prior position at Ford Motor Company. The PPBS was – and still is – a “user unfriendly” process. One of McNamara’s goals in introducing it was to force the services into greater unity by forcing them to coordinate their respective budgeting issues as they worked through the PPBS cycle.

In 1986 the Reagan Administration injected greater managerial responsibility and accountability into defense acquisition by enacting recommendations of the Packard
Commission. Resulting actions from the recommendations were establishment of a an acquisition chain of command for major weapon system procurements and the appointment of the Under Secretary of Defense for Acquisition (USD(A)) as the lead managerial acquisition authority and acquisition executive within DOD. The USD(A) (which eventually became the Under Secretary of Defense for Acquisition and Technology (USD(A&T))) was also labeled as the Defense Acquisition Executive (DAE).

The greatest impact in the military movement toward jointness was the passage of the Goldwater-Nichols Defense Reorganization Act of 1986. The act was far-reaching within DOD. It established the positions of Chairman, JCS (CJCS) and Vice Chairman, JCS (VCJCS). It placed responsibilities on the people filling those positions to consolidate service positions on various military operations and report them to the NCA through one, unified voice. This was in stark contrast to the requirements established by the National Security Act of 1947. That act required the service chiefs to provide their input on defense operations, independently not collectively, to the NCA. This created awareness for potential for unification and hence consolidation of functions. Within defense acquisition channels, the workforce observed this change and realized its far-reaching potential for consolidation of defense acquisition organizations.

The next and even more focused step toward consolidation of the defense acquisition workforce was the passage of the Defense Acquisition Workforce Improvement Act (DAWIA) of 1991. Given recent enactment of Goldwater-Nichols, legislative interest in the defense acquisition workforce through the enactment of DAWIA heightened tension in the workforce. The new act called for uniformity in both the acquisition process (the Life Cycle System Management Model or LCSMM) and in the training, education, and experience certification
requirements of the acquisition workforce. The law allowed for DOD to delegate responsibility for bringing acquisition personnel to certification by respective service component acquisition executives (CAEs). However, because DAWIA introduced uniformity in both process and human resources, “jointness” and consolidation seemed possible at any moment.

Since passage of DAWIA, numerous acquisition reform initiatives have been legislated through annual Defense Authorization Acts. Although some reorganization has occurred in parallel with acquisition reform, it has primarily occurred as a result of the continuing trend to “right-size” the force. Acquisition organizations take their fare share of the cuts. Acquisition reform on the other hand, has been generally limited to procedural – vice people – changes. Such changes have been far-reaching and beneficial. In general, many former procurement procedures were tightly regulated. Today, acquisition reform has legislatively and incrementally relaxed the rules and the burdensome requirements associated with adherence to them.

In summary, the public policy trend toward jointness accelerated during the last twelve years. This occurred in conjunction with the changes in the strategic environment that created effects of heightened public awareness of seemingly unlimited military spending during the middle 1980’s and subsequent shrinking fiscal resources from the end of the Cold War to the present. These are the factors setting the precedence for jointness across the defense acquisition workforce. These factors are discussed in greater detail in Appendix A.
Chapter 3

The Current Acquisition Workforce and Process

The defense acquisition workforce is common only through implementation of DAWIA legislation and the acquisition cycle it enables: the Life Cycle System Management Model (LCSMM). Each service, given prerogative by DAWIA (discussed in Appendix A), has in fact taken advantage of the flexibility permitted in designing respective autonomous acquisition corps: the Army Acquisition Corps (AAC), the Air Force Acquisition Corps (AFAC), and the Navy Acquisition Professional Community (NAPC). While some minimal level of standardization exists, there are a number of subtle differences between the service acquisition organizations.

Conversely, the LCSMM followed by each service is the same. It is however, tailored by all acquisition professionals to fit the acquisition strategy of each material program, irrespective of whether the program is service specific or joint. This common guideline for program management has only evolved with the publication of the Department of Defense Directive (DODD) 5000 series documents and subsequent acquisition reform initiatives. Prior to that milestone, each service generally followed its own set of rules with the exception of more strict functions such as contracting.

With the release of recent and continuing acquisition reform initiatives, the only consistency across the services with regard to the LCSMM is change. The process has become more joint
through a number of mechanisms introduced by acquisition reform and subsequently initiated and practiced within each of the services. Types of commonality prevalent in emerging acquisition programs takes the form of integrated product/process teams, outsourcing, and fulfillment of legal obligations. In following far-reaching change introduced by recent acquisition reform initiatives and the precedent for jointness as discussed in the previous chapter, this is no surprise. Aside from a proportionate share of downsizing, the workforce that enables the functioning of this process has been largely unaffected. Each service acquisition corps still has distinct differences. Each of the service acquisition corps, the LCSMM, and examples of the tailoring and fine-tuning of the LCSMM process as introduced by acquisition reform is discussed in detail in Appendix B.

In summary, emerging defense acquisition organizations and processes are increasing their momentum toward efficiency and jointness. In following the current trend and due to continuing issues of duplicity and interoperability, consolidation of the acquisition workforce into a joint force will occur in the future as an acquisition reform initiative. Questions remain however, on how such a force would be most effectively organized. A discussion of joint organizational alternatives follows in Chapter 4.
Chapter 4

Comparison of Joint Organizational Options

Introduction

Defense acquisition organizations are evolving into joint organizations. Some examples are the Defense Contract Audit Agency (DCAA), the Defense Logistics Agency (DLA), and the Defense Contract Management Command (DCMC). Precedent-setting legislation, changes in the strategic landscape driving subsequent changes in materiel requirements, force drawdown, and austere military budgets, as well as technological advancements and lessons learned from private industry regarding best practices are all variables contributing to the evolution. How remaining service acquisition personnel would be organized into a joint acquisition force and how soon reorganization would occur are issues that must be researched thoroughly before comprehensive reorganizing consolidation occurs. There are a multitude of ways to organize, but which way provides for the greatest effectiveness to stakeholders?

There is a continuum of ideas with a force patterned after the current UNAAF structure at one extreme to a force spread across the services as they currently are at the other extreme. Somewhere in the middle is an evolving joint structure. Outside the bounds of the continuum is yet another option that would serve the purpose of integrating service programs but would not actually be joint.
The Unified Action Armed Forces (UNAAF) Structure

A joint force that parallels the current organizational structure of a functional CINC (the UNAAF model) would fit a recognized pattern. Assuming an appointed civilian can serve as the combatant commander of such a force, then the rationale for forming a joint command seems legitimate. After all, as stated in Chapter One, the USD(A&T) is responsible for all defense acquisition personnel and processes. The question however, of a civilian other than the president assuming command responsibility over both civilian and military members merits further study.

Joint Pub 0-2 establishes the following criteria for a unified command:2

1. A broad continuing mission exists requiring execution by significant forces of two or more Military Departments and necessitating a single strategic direction.”
2. Any combination of the following exists and significant forces of two or more Military Departments are involved:
   • A large-scale operation requiring positive control of tactical execution by a large and complex force.
   • A large geographic or functional area requiring single responsibility for effective coordination of the operations therein.
   • Necessity for common utilization of limited logistic means.”

Sufficient rationale exists to argue that both criteria are not completely satisfied for establishing a joint unified command. With respect to the first criterion, identification of a “single strategic direction” could be easily established given the national focus on the use of the armed forces as well as spending of taxpayer dollars. Such a direction could be expressed in the following terms: to provide timely, efficient, customer-focused, and the most technologically advanced materiel capabilities and services to each of the military services equitably through effective, integrated, and responsive acquisition processes that provide interoperability to the fullest extent possible.

With respect to the second criterion, the USD(A&T) through a unified command structure could assume “positive control” of the execution of “large scale [acquisition] operations.” The
USD(A&T) actually does this now as the DAE and as a milestone decision authority (MDA) on large Acquisition Category I (ACAT I) defense programs. The acquisition process is a “large functional area” that the USD(A&T) is totally responsible for. With a keen perspective on defense acquisition spending that person can provide for a “common utilization of limited logistic means” in the form of acquisition programming dollars, manpower, and time.

Conversely, a major disqualifier of the USD(A&T) as a CINC of a functional command is that a majority of acquisition professionals are civilians and therefore, not considered “forces” of military departments. Functional CINCs, although generally tasked in a supporting role to regional CINCs, are still responsible to lead in a warfighting role if necessary. With the exception of Emergency Essential Civilians (EEC), civilians cannot be ordered to serve in warfighting capacities.

A unified command is created to perform an active role in warfighting. The acquisition role is less direct. It is organized within the services and fits within the service roles in unified commands: maintenance and support to CINCs and their commands. All military entities that are not unified commands exist to support unified commands. This is where acquisition organizations have traditionally and inherently belonged. Because of this role, unlike the CINCs, acquisition organizations are inextricably linked to the PPBS process. Without major change in the PPBS, because PPBS is a two-year calendar driven process that CINCs do not control, it is questionable if the USD(A&T) could attain enough influence over PPBS to perform responsibly as a CINC.

**Acquisition Personnel Within the Services**

At the other extreme of the continuum of organizational structures is an acquisition force spread across the services. This is where the current structure came from. Prior to DAWIA and
Goldwater-Nichols, an untrained, uneducated workforce existed in each of the services. There was no common standard, but each service had the flexibility to interact with PPBS and acquire weapon systems through their own service-unique procedures. To attain this organization would require over twenty years regression. Aside from cases of defense fraud and overspending that continue, sporadically, even today, this type of organization, although very inefficient, worked well during years of unconstrained defense budgets. The legislation and procedures implemented since such times, although associated with drawdown and austere budgets, brought about innovative approaches to working together, overcoming duplicity, and increasing interoperability.

The Evolving Joint Acquisition Force

Somewhere along the continuum between both extremes is a third option patterned after the evolving total force joint structure. It is the current acquisition force with the numerous joint applications and tailored approaches employed in efforts to streamline, reduce acquisition cycle time, and provide real reform. Organizations are a mixture of military and civilian, government and contractor personnel structured within each service and within joint organizations at the JCS, DOD, and Joint Program Office (JPO) levels as necessary. Acquisition functions such as budgeting and testing with the greatest commonality across the services are beginning to consolidate. Many functions will be outsourced, but a certain degree of military independence will be maintained to provide inherent flexibility when required.

An Organization Serving in a Joint Role

Adopting the Acquisition Workforce Personnel Demonstration (AWPD) concept that provides incentives and compensation for the civilian portion of the acquisition workforce
(discussed in Appendix A), an all civilian workforce could be employed. Although no operational experience would be provided because there would be no military members, interface would be available through a career-broadening assignment (where military operators are assigned to an acquisition organization and then returned to the field) program.

Continuity would be strong with an all-civilian workforce. Conversely, mobility would be required on a selective basis to provide for professional development of future acquisition leaders. Functions not inherently governmental would be outsourced. Transition to such an organization - removing the military component - sets a precedent that would be difficult to reverse. Investments made in education and training for military personnel thus far would not be fully realized although may be offset in the long term. Inherent military functions – such as contingency contracting and test piloting – would be removed from the acquisition organization’s responsibilities and retained in the military. Specially trained EEC would provide those functions deemed inherently governmental. Conversely, the military would need to integrate such positions from the respective acquisition corps back into the operational force.

An all-civilian organization could provide increased efficiency and enhanced interoperability. Simultaneously however, without traditional inter-service rivalry and creative competition, a lack in innovative approaches and technologies could be - at least initially - expected. A greater proportion of contracted support could counter such issues. After all, the acquisition corps within each of the services are primarily comprised of civilian personnel. Accompanying contract support however, is the concern for loss of control and hence greater risk to the government and ultimately all stakeholders involved.
Summary

In addition to the historical precedent set for a joint acquisition force, conditions are set for transition in any number of directions. Many joint processes embedded in acquisition procedures, as well as those recently introduced through acquisition reform efforts, are already inherent in joint staffs. In many ways, the acquisition community may have already surpassed many joint staffs by imposing more joint procedures on its own organizations than the quantity and quality of those used by joint staffs. On the other hand, many of the joint procedures recently imposed for utilization across the defense acquisition community actually compensate for a force that is too large, cumbersome, geographically separated, and inefficient to be compatible with a centrally-located joint staff and associated subordinate organizations.

A regressive acquisition force is extreme and costly, although satisfactory to each of the services. On the other hand, an all-civilian acquisition force would reflect the true direction of the trend toward efficiency, continuous and growing expertise, and interoperability. There are inherent risks with every organizational option. What would be the most effective? Given the current strategic environment and defense spending constraints, there is no question that the unity of effort, centralized planning, and decentralized control characteristic of joint organizations would provide the emphasis necessary and the resulting benefits required by stakeholders. An analysis and appraisal of the alternatives are considered in the next chapter.

Notes

1 Suggestion provided by Faculty Research Advisor (FRA), LTC Michael Burney.
3 Suggestion provided by Faculty Research Advisor (FRA), LTC Michael Burney.
4 The AAC is comprised of 91% civilian personnel (from “Army Acquisition Workforce (Personnel).” On-line. Internet, 30 October 1998, Available from http://dacm.sarda.army.mil/workforce/factbook/aawp.html); the AFAC is comprised of 63% civilian personnel (from “DAWIA STATS.” On-line, Internet, 30 October 1998, Available from
Notes

Chapter 5

An Analysis of a Consolidated, Joint Acquisition Force

Introduction

The merits of a joint acquisition force (regardless of organizational design) are enhanced efficiency, reduced cost, and complete interoperability as a minimum. But such benefits would not be attainable immediately. An initial “break-in” period would be required after reorganization to fine tune procedural details attached to organizational change that are not apparent on the surface.

Conversely, there are disadvantages of a joint acquisition organization. At least initially, if not over the long term, they would include a clash of service cultures, an increase in service parochialism, and some stagnation or lack of innovation and creativity from release of competitive pressure between services. Many in the acquisition workforce would feel that a consolidated organization was being forced unnecessarily, causing their distrust of decision-makers saddled with the responsibility of implementing the changes. Disadvantages may be observable immediately in comparison to beneficial changes that could eventually be realized by the change process. These types of initial – possibly evolved to long term – responses are not complementary to such changes. Further, if such a jump is made, it could not be easily reversed and re-expanded if another international environment requiring defense build-up akin to that of
the Cold War erupted. Explanation of the effectiveness and ineffectiveness of a joint acquisition force follow.

**Effectiveness of Joint Acquisition Organizations**

The advantages of consolidating acquisition organizations into a joint acquisition force are many: greater efficiency, less cost, greater interoperability to name just a few. A common acquisition process (in the form of the LCSMM) is already in place and functioning. A workforce with generally common standards is in place and functioning as well.

Senator Sam Nunn noted in the fall of 1996 that force levels were cut by 25 percent and manpower by 31 percent since the end of the Cold War, but that the defense bureaucracy has not been cut proportionately (only 15 percent since 1987). A big portion not cut is defense acquisition organizations at DOD and service component levels. Senator Nunn’s message was that DOD’s reaction and subsequent adaptability to new missions has been too slow. The large organization is duplicative and sluggish and is draining the system of its energy.

In following Senator Nunn’s suggestion and by using an effective and functioning framework, it is possible for a joint acquisition force to follow any of the options except the regression option. With regard to the unified command structure, command channels are already present: the USD(A&T) would be equivalent to a functional CINC, but responsibilities as a CINC would require modification as the USD(A&T) does not plan for and conduct warfighting operations. With regard to the evolving joint acquisition force, numerous changes would be required, but could be done incrementally as the process has occurred thus far. With regard to the all-civilian force, continuity, consolidation, and streamlining could be gained at the expense of continuous operational expertise.
Consolidation of common functions such as budgeting, contracting, testing, and military disposal activities among others could provide tremendous cost savings as all of these functions follow procedures that are broad and not service-specific. This activity could apply in varying degrees to any of the alternatives discussed with the exception of the regression option. Calculated savings of such consolidation is unknown but is worth investigating in future studies as the workforce incrementally moves toward jointness.

If centralization of such common activities proves effective, outsourcing is another question to be investigated and applied to each of the alternatives. If the functions are inherently governmental and cannot, for reasons of national security, be contracted out, then this becomes a moot point. Conversely, outsourcing is generally ten to twenty percent less costly than if performed by government employees.

Ineffectiveness of Joint Acquisition Organizations

Many could easily claim that the effectiveness of joint acquisition organizations is more than countered by the ineffectiveness of them. As previously discussed, with the onslaught of acquisition reform initiatives, numerous processes clearly associated with jointness have already been implemented. With such change came minor and temporary organizational arrangements that exist for the purpose of completing a process or producing a product. Permanent reorganization at this point in time would drive additional change and frustration to the personnel running the acquisition process. Potential for numerous issues impacting on human resources and their subsequent performance of the acquisition mission dictates that such a change at this point in time is unnecessary.

During this time of fiscal austerity it would be imprudent to further consolidate what has traditionally been treated as inherently service-unique functions. The intent of Congressman
Mavroules when drafting DAWIA was not to centralize or isolate the acquisition field. He believed doing so during declining budgets would cause players to be less rational – the exact opposite of his objective with regard to the new legislation.³ It is also interesting to note that the Packard Commission considered formation of an all-civilian acquisition workforce as a means to streamlining defense acquisition. The commission chose not to recommend such an organizational structure because the operational expertise brought to the process by military acquisition workforce members was too important and vital to the acquisition function.⁴

Measuring the effectiveness of a consolidated acquisition force at the present time is difficult. Even though there is some commonality between the respective service acquisition corps, there are many outstanding issues that would need to be resolved in order to create such an organization. For example, each service has a different quantity of personnel in their respective acquisition communities and each has different requirements for their military and civilian members. There would be questions that would require answers from DOD such as: Should membership by service be proportional to military acquisition spending or to force end strength? Do the sizes of the acquisition corps require adjustment? In addition, civilian mobility requirements vary across the services as does time in service and operational experience requirements for military members. These differences would require reconciliation before consolidation. Addressing such issues has potential for initial conflict between the services before they reorganize and hence, initial consternation and distrust among the members of the newly formed unified organization.

Many career fields are utilized across the phases of the LCSMM. Many of them are not service-specific and hence could be consolidated. Consolidating some and not all functions could serve to disrupt the progress currently being made by consolidating some of the same
functions in integrated product/process teams and within joint program management offices. Additionally, it is difficult to prove whether the physical removal of personnel performing such functions and consolidating them into a joint organization would still provide the same level of effectiveness recently introduced by such process multipliers. Forcing one change right after another seems counterintuitive and could disrupt the very processes that were recently changed – and rightly so – for the purpose of enhancing efficiency. Over time such a change could be positive, but from a current perspective, would sacrifice recently attained progress for a new organization that is experimental at best.

Summary

There are numerous advantages and disadvantages to both: consolidating acquisition personnel into a joint acquisition force and consideration of how such a joint force would be organized. For the present time however, the evolving joint acquisition force is currently packaged as the best solution for all stakeholders. It provides for adequate, incremental, non-radical but necessary change. In the long term, one of the other organizations – such as an all-civilian workforce – could replace it. Such a change would be more acceptable at a time in the distant future where all armed forces become consolidated into one service.

Transition to a joint force now, although possible, would be ineffective. There has been so much incremental change introduced into defense acquisition over past decades that one more – albeit major – would seem to follow the trend. Conversely, the magnitude of the consequences of such a major undertaking could produce an effect opposite to the one intended. There is no doubt that some – at least initial – service rivalry and discrepancies over priorities and contributions would result. In addition however, introducing such a drastic change could result
in demise of the professional acquisition workforce as it exists today, by driving away the workforce that DAWIA legislation authorized millions of dollars to educate and train.

Some day the workforce will be joint. Many say it already is, many think much more can be done to make it more joint in nature. There are underlying questions at each incremental step toward jointness regarding how much consolidation is adequate and conversely, how much is detrimental. Defense leaders are struggling with these issues as the joint acquisition force evolves. Numerous topics for further study arise from this subject. They include: how best to organize a joint force (not necessarily in following the current framework); whether the effectiveness of transitioning to a joint force counters the immediate and consequential ineffectiveness of doing so and if not, where the break-even point occurs in time; and finally what incentives are necessary to attract and retain the best possible defense acquisition workforce, organized jointly or not.

Notes


2 Ibid, p. 64.


Chapter 6

Conclusion

An Appraisal of Consolidation Advantages and Disadvantages

The defense acquisition workforce across the services has not been reorganized into a consolidated, joint organization because such an organization is not currently necessary. In light of recent procedural changes introduced as acquisition reform legislation, transitioning to such an organization would not serve stakeholders (soldiers, sailors, airmen, marines, taxpayers, and workforce members) better than the current system. The current system is continuously evolving, adapting to more efficient methods while addressing joint requirements as they arise. It is flexible in that it provides for both joint and service-specific programs. Interoperability does need improvement. Driving toward a joint acquisition force is overkill in addressing such an issue. The traditional concerns regarding consolidation that arose approximately twelve years ago has escaped, transformed, and re-emerged in the form of acquisition reform initiatives.

The workforce is making the initiatives work. Such initiatives will continue to be introduced as their effectiveness is tested in smaller acquisition organizations and then shared with the rest of the acquisition community. The problem will continue however, for leaders to decide what is appropriate for all as opposed to just some. So many issues in acquisition are situation-specific that they cannot be applied universally. When future acquisition reform initiatives lead to consolidation, steps will evolve incrementally so that service parochialism is
not a debilitating by-product. To make such a jump now could result in over-dominance by one service, the stripping of the roles of the remaining services, and an overall ineffective joint force when it is needed the most.

Consolidation to a joint force will happen eventually. The force already fits a structure similar to that of a functional unified command. The “softening” of regulations from acquisition reform initiatives has provided the same flexibility and ability to tailor programs and processes on ad-hoc bases, for the period of time necessary, as joint regulations allow the joint force commander to do. The question that remains but that is too difficult to predict is what the joint force will ultimately look like.

Consolidation cannot come quickly, it must be incremental to be effective. There are too many interim steps to be completed. Centralized management systems for acquisition programs and for the acquisition workforce itself – both military and civilian – must be created. Decisions must be made regarding whether civilians provide continuity within a given specialty and hence should “grow” within an organization or whether they must provide a broad understanding as their contribution and move between assignments much like military members currently do.

The key to providing the best for all stakeholders involved – whether organized as a joint force or not – is flexibility. There is no fear that a formally organized joint acquisition force will be implemented immediately because a trend is set for an incremental approach, an approach often followed in public policy-making. To drastically change the organization over a constrained period of time would be too radical and could risk national defense.

**Recommendations**

Given the current posture of the U.S. post-Cold War national defense and the evolving strategic landscape, in order to maintain a cutting-edge robust force, the process of stewarding
the trend toward a joint acquisition process and force must include a number of interim steps. First and most importantly, maintain flexibility. Although flexibility is inherently inefficient, it is the key ingredient of jointness. Acquisition reform has removed the rigidity formerly inherent in defense acquisition and has placed it on the path toward progress. Continued maintenance of recently injected flexibility measures along with continued introduction of a steady stream of initiatives to sustain it, will enable transition to a joint force when the time is right.

Across the service acquisition corps, there are several critical areas that require standardizing. First, for civilians the intent of signing a mobility statement must be revisited. Civilians have traditionally brought continuity to defense organizations. With regard to acquisition organizations, this is especially important given the timeframes necessary to complete acquisition of many weapon systems or even to progress between milestone decisions. If military members continue to be reassigned in accordance with normal rotations (except for those under program management charter to maintain for longer periods of time), the need for consistency remains. Civilians provide that level of stability necessary for weapon system procurement. Mobility should be permitted, but not required. It should be permitted however, within a program hierarchy so as not to lose continuity. Movement can be permitted outside a program hierarchy once transition to a replacement with adequate institutional knowledge with regard to a program’s history is in place.

For military members, some services like the Army and Navy require a minimum number of years of operational experience prior to entering the acquisition field. Conversely, the Air Force does not. The Air Force does however, unlike the Army and the Navy, provide opportunities for career-broadening experiences that provide for exposure of acquisition personnel to operational assignments. This is an outstanding opportunity that serves to refocus the acquisition specialist
on the key system and performance parameters that operators are interested in. The services collectively need to merge these requirements. All services should require a standard level of operational experience prior to entering the acquisition field and all services should provide opportunity for career-broadening assignments. After all, military members bring operational experience to the acquisition field. Military members without such experience fulfill the same role as civilians. To maintain balance and strong ties to the stakeholders and their needs, the workforce requires both military and civilian membership.

Operational experience prior to entry and career-broadening opportunities will provide the operational expertise that is so crucial to the military presence in the acquisition field. Services should not permit return to operational duty on a permanent basis after accession into the acquisition community. Such allowances directly contradict the very formation and investment in a professional acquisition workforce (as enacted under DAWIA) in the first place.

Ultimately, the workforce should maintain a mix of military (to include enlisted support) and civilian members proportionate with defense acquisition budgets consistent across the services. As just discussed, both bring unique characteristics to the table. A proportionate mix between the two in each of the services will make transition to a joint force easier when the time comes. Additionally, balance and proportion provide for “taming” what has the potential to become an unconstrained professional bureaucracy by providing purpose and direction.

To counter the possible effects of the requirement to contain the professional bureaucracy, powerful incentives to draw the best in as well as retain them must be established. For example, funding streams must continue to provide opportunities to attend training with industry, graduate school, and operational assignments in order to draw and retain both military and civilian members. Generally, services have good records in this area. Conversely, to retain long term
and get the most out of the investment in education, training, and experience, other incentives must be offered to retain acquisition community members. Acquisition reform initiatives have provided for the “mirroring” of numerous commercial activities to streamline and cut costs in acquisition processes but have not introduced like measures providing incentives for personnel retention.

Often corporate firms offer individuals financial incentives such as stock options or raises to ensure their expertise is retained. While the military cannot afford or permit additional expenses or favoritism, it could offer other less-protrusive incentives to attain a favorable return on the training and experience investment of acquisition workforce members. For example, require military officers to serve a mandatory service obligation (possibly prolonging careers) regardless of rank achieved, but simultaneously provide proportionate financial rewards for doing so. With civilians, a similar scale (separate from current civil service system rewards) could be implemented for selected acquisition personnel. The ultimate objective is to draw and retain quality people who can mentor younger members while at the same time serve in positions of great responsibility nested in a process that has an inherently longer cycle time than most other military processes. This provides more stability and “bang for the buck” with regard to personnel.

Finally, centralized program and personnel management systems with interface between military and civilian categories as well as between the services is crucial, not just for joint opportunities, but for a common basis of understanding and communication. In 1991, DAWIA mandated that such systems be implemented, but to date, interface has not occurred. There are systems within the services, but they are independent, with different fields and variables, thus requiring restructuring in order to interface on any level. This failure to interface is the most
difficult to accept given the pace of technology and the accompanying pace of reform. This is a requirement that must absolutely be established soon, not just for the purposes of transitioning to a joint acquisition force.

Summary

The “handwriting has been on the wall” since the passage of Goldwater-Nichols for formation of a joint or “purple” acquisition workforce. The concept was strengthened in 1991 with the implementation of DAWIA directing the establishment of a professional acquisition workforce with common standards across DOD. After that the “handwriting” was “erased” and other measures in the form of acquisition reform initiatives were substituted. Acquisition reform continues to evolve today. The concept of jointness has taken the form of process over content in that the LCSMM has been modified, tailored, and adapted with respect to relaxation of regulations and implementation of innovative ideas as opposed to strict consolidation of acquisition functions in a joint acquisition organization.

Regardless of the numerous acquisition reform initiatives being continuously introduced, the progressive trend toward jointness has not ceased. It is not in the best interests of stakeholders to implement a consolidated, joint force now, but it is in the best interests to result in such an organization should the current trend toward jointness, in not only defense in general but in acquisition in particular, continue. Incremental change into a joint acquisition force is a natural progression. Defense acquisition is already joint to some extent but further change, especially in the area of the people – the assets of the entire process – is too radical and would be detrimental to the nation at this point in time.

In the long term, the possibility for consolidation is extremely high. In order to prepare for it, several changes must be incrementally made to support the current trend. First and foremost,
the process and the workforce supporting it must maintain flexibility. The key to jointness as well as addressing service-unique requirements is flexibility.

Secondly, a proportionate civilian and military mix across the services is essential to maintaining program continuity and operational flavor. Inconsistencies with regard to civilian requirements for mobility as well as military requirements for operational experience and career-broadening opportunities must be standardized across the services. Ultimately, the right mix will provide for direction, purpose, and avoidance of a professional bureaucracy.

Third, in order to provide for those making the ultimate sacrifice, the government must proportionately sacrifice by providing adequate incentives to both draw and retain the best military and civilian members possible. Finally, centralized management systems for both programs and personnel are long overdue. Interfaces between systems within each of the services must be implemented and exercised immediately to provide for a common understanding and communication between them, if not for jointness alone.

The idea of a joint acquisition force is far from dead, but acquisition reform seems to have substituted – to some degree – in the meantime. How long will this substitute last? When will a joint acquisition force become an acquisition reform initiative? Only time will tell. We must prepare now for the future.
Appendix A

Details of Precedent Setting for “Jointness” in Defense Acquisition

Introduction

A number of events are responsible for the trend toward jointness not only within defense acquisition, but within defense operations in general. The following events outline the progression.

National Security Act of 1947

The National Security Act of 1947 established the Department of Defense, the Secretary of Defense position, the Joint Chiefs of Staff (JCS) and thus a baseline for defense acquisition management as it is known today.¹ The JCS was collectively responsible for advising civilian leadership on military matters. Each service chief provided input with regard to his service with no concern for any potential for joint efforts. Each JCS member could effectively veto what the JCS body could say collectively.² This structure suggested rewards for parochialism and thus provided no incentive for cooperation. The autonomous nature of service chief attitudes and a general lack of cooperation between them eventually resulted in the organization becoming a collection of mere figureheads that provided independent and often opposing perspectives on how to approach a military operation.³
Planning, Programming, and Budgeting System (PPBS)

Well, the first point...is that I came from Ford Motor Company. I had been President of Ford but I hardly knew the difference between a nuclear weapon and a conventional weapon....a major element of the election campaign that President Kennedy had just won was the charge...that Eisenhower had left a missile gap, that the Soviets had been permitted...to build up a superior nuclear missile force...my first responsibility...was to determine the degree of the gap...it took us about 3 weeks to determine there was a gap. But the gap was in our favor. It was a totally erroneous charge...The problem was ...there was no unity in our intelligence service. The CIA presented one report of Soviet versus U.S. forces, the Air Force presented another...the Air Force report -- and it was not deliberate lying...-- stated that the Soviet force was superior. That report was leaked to...President Kennedy. Kennedy, believing he was speaking the truth, put that forward as a campaign charge against Eisenhower...it was totally erroneous

-Robert McNamara

Secretary of Defense Robert McNamara introduced PPBS in 1962. It is a cyclic biennial process with three phases (planning, programming, and budgeting) to make decisions on policy, strategy, and development of forces and capabilities. Its user “unfriendliness” was part of a design to force the services to work together in rationalizing and allocating their budgets as opposed to competing and hence “stovepiping” requirements. To compound its user unfriendliness, PPBS is calendar –driven while the acquisition process is event driven. So an effort intended to unite the services in fiscal matters 35 years ago strongly impacts the acquisition process today. It is still a disjointed process that must be used to coalesce and integrate weapon system requirements.

Packard Commission

...all too many of our weapon systems cost too much, take too long to develop, and, by the time they are fielded, incorporate obsolete technology.

- The Packard Commission
In mid-1986 the Packard Commission proposed two recommendations to the President which were approved later that year. First, it created a single position within the Department of Defense (DOD) responsible for defense acquisition. The position was initially termed Undersecretary of Defense for Acquisition (USD(A)). With the rapid advancement of technology the USD(A) responsibilities increased and the term soon changed to Undersecretary of Defense for Acquisition and Technology (USD(A&T)).

Second, the Packard Commission created a streamlined reporting chain responsive primarily to the USD(A&T) as opposed to stovepipe organizations within the services. With regard to a program manager (PM) managed program, the PM reported to a Program Executive Officer (PEO). The PEO reported to the respective Component Acquisition Executive (CAE) of his or her service. The CAE in turn reported to the Defense Acquisition Executive (DAE).

The USD(A&T) also serves as the Defense Acquisition Executive (DAE). The DAE became responsible for setting overall acquisition policy and for supervising the acquisition system (to include research and development, procurement, logistics, and testing). The CAE title was also a product of the Packard Commission. Each service would have a top acquisition representative referred to as the service or component acquisition executive (SAE or CAE). Program Executive Officers became responsible for oversight of more than one program (program manager-managed programs). Program executive officers would manage families of or a series of related programs.

An interesting anecdote (and perhaps part of the momentum behind the idea of a “purple” acquisition workforce) was a consideration the commission decided not to recommend. The commission looked at segregating and transitioning all PM responsibilities from the services to a
centralized civilian agency. Due to the “user interface” factor provided by military PMs, the commission decided against such a recommendation. 


The Joint Staff (which now works exclusively for the chairman) and the Joint Requirements Oversight Council...can examine proposals and figure out what makes sense...The Joint Staff is the most capable staff in the Department of Defense and probably the most capable staff in the world today.

-James Locher
Former Staff Member
Senate Armed Services Committee

The Goldwater-Nichols Act is often recognized as the one major event that put “teeth” into jointness. In doing so, first the act established a chairman for the Joint Chiefs of Staff (CJCS) who became responsible for advising civilian leadership of the federal government. This forced the JCS to work more closely in order to provide a well-researched consensus opinion through the CJCS to civilian leadership as opposed to JCS members maintaining more parochial, service-autonomous views as permitted by the National Security Act of 1947. Second, the act created the position of the vice-chief of the JCS (VCJCS) and provided an expanded supporting staff for both the vice and the chief. Third, the act created the unified command structure with geographical and functional areas of responsibility to be commanded by the CINCs.

In 1984 PPBS was modified by inserting JCS activities into the acquisition domain. The JCS became responsible for conducting the Joint Warfighting Capabilities Assessment (JWCA). The JWCA is a forum for evaluating the development and acquisition of "big ticket" weapon system procurements.
The JWCA process provides evaluation from a joint perspective across warfighting domains such as strike, ground maneuver, strategic mobility and protection. The body responsible for conducting the JWCA became known as the Joint Requirements Management Board (JRMB) and two years later was renamed to its present name, Joint Requirements Oversight Council (JROC). The JROC consists of the VCJCS and the service vice chiefs.

After the passage of the Goldwater-Nichols Act in 1986, the VCJCS became responsible for chairing the JROC. Since that time, additional members such as CINCs, Office of the Secretary of Defense (OSD) representatives, various defense agencies, and service representatives have joined the forum in assisting the VCJCS in the JWCA process. The JROC’s assessment process fits into the PPBS during the programming stage.

The JWCA process is continuous, providing feedback to the Secretary of Defense through the CJCS prior to publishing of Defense Planning Guidance (DPG) (during the planning stage of
PPBS) and during the programming stage of PPBS. After evaluation of service Program Objective Memorandums (POMs) prior to the Secretary of Defense’s Program Decision Memorandum (PDM), JWCA input is provided through the CJCS via the Chairman’s Program Assessment (CPA).

Goldwater-Nichols also directed that as chair of the JROC, the VCJCS would submit alternative program recommendations and budget proposals through the CJCS to the secretary of defense via the Chairman’s Program Assessment (CPA).

**Figure 2: JWCA/PPBS Linkage**

Goldwater-Nichols also directed that as chair of the JROC, the VCJCS would submit alternative program recommendations and budget proposals through the CJCS to the secretary of defense via the Chairman’s Program Assessment (CPA).

**Defense Acquisition Workforce Improvement Act (DAWIA) of 1991**

*In the past, we have focused our attention on just two elements: the process and the structure. We amended the laws to tell the people in the acquisition system what policies and procedures they should use to buy the equipment; we amended the laws to juggle the organizations that execute those policies. Although these are obviously critical elements that may need additional focus in the future, it seemed appropriate at this juncture to focus on the third element – the people themselves.*

- Congressman Nicholas Mavroules
In 1991 Congressman Nicholas Mavoulres proposed DAWIA. In response to contract fraud cases and television documentary shows highlighting federal outlays for items such as $600 hammers and $400 toilet seats, Mavoulres suggested a more professional workforce would address many defense acquisition horror stories and chronic efficiency problems. The act established that the Department of Defense (DOD) would obtain a professional civilian and military acquisition workforce. Standards were set on education, training, and experience milestones necessary for personnel to serve in various positions. The government would invest in the formal education and training necessary to establish the force. Up to this point in time, no formal standards – aside from civil service and uniformed military officer requirements - regarding acquisition personnel had been established.

The act outlined milestones for full implementation by October 1993. Policies and regulations for acquisition activities were provided in the form of the Department of Defense Directive (DODD) 5000 series of documents in 1991 linking DAWIA to the Goldwater-Nichols Act in numerous ways. Specifically, the series provided implementation guidance for acquisition processes from the DAE and outlined subordinate responsibilities to include those of the CAEs, PEOs, PMs, and other numerous supporting acquisition organizations. In August 1992 the Defense Acquisition University (DAU) was established as the primary educational source for defense acquisition subjects. By October 1992 services were to implement respective acquisition corps, identify critical acquisition positions, and establish data systems to support service acquisition functions.

Further, DAWIA provided for the structure of the defense acquisition workforce in the following ways:

1. The USD,A would appoint a Director for Acquisition Education, Training, and Career Development and a Director for Acquisition Career Management (DACM).
2. A board would be constituted to advice CAEs on accession, training, educational, and career development matters.

3. Critical acquisition positions were identified as general schedule (GS)/general management (GM) level 14 and above civilians and O-5 level and above military members.

4. Eleven functions also referred to as career fields of acquisition were identified. They included:
   - Auditing
   - Acquisition Logistics
   - Communications-Computer Systems
   - Contracting
   - Industrial/Contract Property Management
   - Manufacturing, Production, and Quality Assurance
   - Procurement/Purchasing
   - Program Management
   - Systems Planning, Research, Development, and Engineering
   - Test and Evaluation

In terms of criteria to enter the defense acquisition workforce, DAWIA established the following provisions:34

1. Civilian members must be level GS/GM-13 or higher, military members must be at the rank of O-4 or higher.
2. Members must have a college degree with a minimum of 24 semester credit hours of business management and at least four years of acquisition work experience.
3. Mobility was encouraged for civilian members (similar to that required for members of the military).
4. Reciprocity with respect to meeting entry criteria and levels of training and experience was required across the services.
5. Military departments could waive and/or require supplements to these provisions.

Although the act required some minimal levels of uniformity across the acquisition workforce, it also permitted a degree of autonomy to the services in establishment of their respective acquisition corps and implementation of personnel requirements. These differences will be discussed in Chapter Three.
Defense Acquisition Reform

“...the first requirement is for the Government to adapt its organization to current national security realities.”

- Senator Sam Nunn

Virtually every activity since the passage of DAWIA and the start of the defense drawdown that serves to make defense acquisition more streamlined is labeled as a defense acquisition reform initiative. There are numerous official and unofficial activities underway within the federal government to make procurement more efficient and in effect, continue to set new precedents for not only efficiency alone, but efficiency by means of “jointness.” The number of initiatives is growing so rapidly that keeping track of changes is extremely time-intensive and difficult.

Due to the propensity for government bureaucracies to grow incrementally over time, there has always been movement to streamline processes in the best interests of taxpayers. With respect to defense acquisition streamlining, sincere efforts were not undertaken until passage of the 1991 Defense Authorization Act. A panel of experts from both government and industry was appointed to study and propose acquisition laws that:

1. Streamlined the defense acquisition process
2. Eliminated unnecessary laws
3. Ensured continued financial and ethical integrity of defense programs
4. Protected the best interest of the Department of Defense
5.

In 1993 the panel submitted a report to Congress which emphasized streamlining, the use of commercial items to the extent possible, and simplification of acquisition procedures. The 1994 Federal Acquisition Streamlining Act (FASA), the 1996 Defense Authorization Act, and reform measures recommended to Secretary of Defense Perry by Process Action Teams (PATs) implemented more specific directives supporting the panel’s recommendations.
were oriented primarily on content of the acquisition process as opposed to personnel involved in
the acquisition process. For example, some of the changes enacted include the following:40

- Emphasis on use of Electronic Data Interchange (EDI) to solicit and award
government contracts.
- Raising of the small purchase threshold to $50,000 (and to $100,000 if in support of
EDI transactions).
- Emphasis on use of commercial items to the extent possible to satisfy requirements.
- Repeal of the Brooks Act (which required procurement of computer equipment
through the General Service Administration).
- Elimination of military specifications and standards.
- Emphasis on performance-based specifications and cost as an independent variable
(CAIV)

Conversely, examples pertaining to the acquisition workforce included:41

- Restructuring of the acquisition organization and workforce (to include a 25 percent
reduction over five years).
- Review of oversight requirements at the highest level of the defense department.
- Institutionalization of integrated product and process development (IPPD) and IPTs to
the extent possible.

Such directives not only serve to “cut the fat” but again could be interpreted as support of
further movement toward “jointness” especially since movement in that direction has steadily
continued – if not intensified – since passage of this legislation in 1996.

Since the passage of initial impacting reform, additional initiatives in support of both
personnel and procedural changes continue to trickle from PATs and various committees within
DOD. The flavor of “jointness” is noticeable in many of them. One significant example
reflective of this is the Acquisition Workforce Personnel Demonstration (AWPD).

The AWPD is a project authorized by the Secretary of Defense to investigate ways to
improve efficiency and enhance the quality and professionalism of the DOD civilian workforce
in general and acquisition support personnel in particular.42 The goal of the plan is to establish
and evaluate a plan to solve long-term performance and related pay issues that have given rise to
problems with the civil service system over the years. The initial proposal from the AWPD PAT
is a revised compensation and appraisal system that takes contribution to the mission – as opposed to performance alone - into account when considering personnel for additional compensation and increased levels of responsibility.\textsuperscript{43} Such an initiative (given mandates for restructuring in 1996, DAWIA provisions for a more professional workforce in 1991, and Packard Commission considerations for an “all civilian” PM force in 1986) resurrects the potential for not only a separate “purple” acquisition force, but possibly one comprised solely of civilian personnel.

Another recent and significant reform initiative directed toward jointness is Joint Technical Architecture (JTA). This reform measure was mandated by the USD(A&T) and the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)) in 1996.\textsuperscript{44} Joint Technical Architecture (JTA) is a “minimum set of standards and guidelines for the acquisition of all DOD Command, Control, Communication, Computer, and Intelligence (C4I) systems and their interfaces.”\textsuperscript{45} The purpose of the mandate was to ensure a universal technical architecture is established for all future C4I acquisitions so that jointness and interoperability are no longer issues.\textsuperscript{46} By “cracking the code” through the JTA and through other parallel high-tech advancements, the defense acquisition workforce will receive less exposure for interoperability and connectivity issues in the future, contributing to a reduction in the broad interest and momentum for consolidation into a joint force.

\textbf{Summary}

The progression toward jointness in defense acquisition has been evident from the early ‘60s with the establishment of the PPBS. Since then, the public policy trend toward jointness has continued to accelerate, most prominently during periods of both austere resources and heightened public awareness. During austere resource timeframes, the implementation of
DAWIA and the initiation of various acquisition reform studies coincided with the military drawdown after the breakup of the Warsaw Pact and the advent of a new world order. During periods of heightened public awareness of federal spending, the Goldwater-Nichols Act was implemented at a time when, conversely, the military had seemingly unlimited fiscal resources with which to organize, train, and equip the nation’s armed forces.

The variables involved in driving this trend have major impacts upon key stakeholders in the process. These stakeholders include: 1) the soldiers, sailors, airmen, and marines that operate and maintain the systems acquired and 2) the taxpayers that finance military procurements and which has a right to, reciprocally, national defense. The impact on members of the acquisition workforce is minor in comparison. Therefore, assuming no major changes in the world order, the impact of the many outweighs the impact of the few. Ultimately one would not expect trends to reverse even if the acquisition workforce was defiantly opposed to becoming more of a joint force than it already is.

Given this seemingly irreversible trend, the current state of the acquisition workforce across the services and the accompanying process of acquisition is discussed in Appendix B.

Notes

3 Ibid, p 94.
Notes


10Ibid, p. 23.


12Ibid.

13Ibid.


16Ibid, p. 91.


Notes


29 Ibid.

30 Ibid.

31 Ibid.

32 Ibid.

33 Ibid.


37 Ibid, p. 11.

38 Ibid, p. 12.


41 Ibid, pp. 13-14.


43 Ibid, p. 17.

44 Erickson, James, Dave Loar, Doug McBane, Mike Pavlick, Mike Peek, Nick Tredennick, and Joe Walker, “Impact of Joint Technical Architecture on Navy Acquisition,” Program Manager, November – December 1998, p. 34.

45 Ibid, p. 34.

46 Ibid, p. 34.
Appendix B

Implementation of DAWIA: The Current Acquisition Workforce and Process

Army Acquisition Corps (AAC)

The AAC currently consists of approximately 24,000 civilian personnel and 2,300 military personnel.¹ Military AAC members are accessed in accordance with (IAW) the following criteria:²

1. Must be branch qualified at the company grade level (e.g., in general this means an officer must have approximately eight years of operational experience, must be at least an O-3, and must have commanded and attended an operational branch advanced course).
2. Desired the individual possess a baccalaureate or master’s degree including a minimum of 24 semester credit hours in one of the following disciplines:
   - Accounting
   - Business Finance
   - Law
   - Contracts
   - Purchasing
   - Economics
   - Industrial Management
   - Marketing
   - Quantitative Methods
   - Organization and Management
3. Accessions at the O-3 level enter on probationary status and become members upon promotion to O-4.
4. No return to operational assignment unless released by the AAC.

Military members serve in any of three specialties: Research, Development, and Acquisition (RD&A); Contracting; and Automation. Although no military occupational specialty (MOS)
exists for acquisition-related positions, the Army is beginning to authorize AAC support assignments for enlisted personnel.

The following criteria apply to civilians who wish to become AAC members:

1. Must be an employee currently serving in the grade GS/GM-13 or above.
2. Must be selected for a critical acquisition position.
3. Must have four years of acquisition experience.
4. Must sign a mobility statement.
5. Must possess a baccalaureate degree from an accredited educational institution.
6. Must possess at least 24 semester credit hours from an accredited institution of higher education from among the same disciplines as listed for officers (above) plus the discipline of Organization Management.

The Army Acquisition Career Program Board (ACPB) can waive any requirement. Additionally, education requirements may be substituted with education completed in acquisition-related fields and/or acquisition experience, and/or acquisition training received through a DAU accredited school. Civilians may serve in any of the same eleven career fields identified under DAWIA. Centralized and separate job management systems are maintained for military and civilian AAC members at the Department of the Army (DA) level. Both systems differ from job management systems of the sister services and neither system interfaces with the other services.

**Air Force Acquisition Corps (AFAC)**

The AFAC is comprised of approximately 17,200 civilians and 10,000 military members. Military AFAC members follow entrance criteria similar to that of the military members of the AAC. Primary differences are:

1. Can enter at any level including O-1 (i.e., no operational experience required).
2. Must meet academic requirements as specified under DAWIA.
3. Movement to operational assignment permitted after utilization period is served (if applicable, in reference to training or education). Temporary “career-broadening” operational assignments are available and considered the most appropriate assignment away from the AFAC for career AFAC officers.
The military officers of the AFAC serve in any of five specialties: Scientific Research Development; Developmental Engineering; Program Management; Contracting; and Financial Management.\textsuperscript{10} The Air Force also supports the AFAC with enlisted military personnel.

Criteria for civilian AFAC members are also very similar to those of the AAC. The only major difference is that mobility requirements are enforced selectively based on career field.\textsuperscript{11} Civilian AFAC members serve in 21 career fields that were established prior to the passage of DAWIA.\textsuperscript{12} They are an expansion of the eleven career fields designated by DAWIA. As with the AAC, centralized and separate job management systems for military and civilian AFAC members are maintained at the departmental level but neither interfaces with the other or with the other services.\textsuperscript{13}

**Navy Acquisition Professional Community (NAPC)**

The Navy has approximately 25,000 civilian and 2,000 military NAPC members.\textsuperscript{14} The procrastinator among the services in implementing DAWIA, the Navy’s acquisition management structure is decentralized amongst its system commands.\textsuperscript{15} Military members generally follow the same accession requirements that members of the AAC follow:

1. Must possess operational experience.\textsuperscript{16}
2. Must be O-4 (minimum).\textsuperscript{17}
3. Desired the individual possess a baccalaureate or master’s degree and a minimum of 24 semester credit hours in one of the following disciplines:
   - Accounting
   - Business Finance
   - Law
   - Contracts
   - Purchasing
   - Economics
   - Industrial Management
   - Marketing
   - Quantitative Methods
• Organization and Management; or
• Possess at least 24 semester hours (or academic equivalent) from an accredited institution of higher education in a primary career field along with 12 semester hours (or academic equivalent) from the management disciplines above. 

4. Accessions at the O-3 level enter on probationary status and become members upon promotion to O-4.
5. No return to operational assignment unless released by the NAPC.

There are additional education exceptions for military NAPC members that are the same as those applicable to civilian AAC members. Military officers of the NAPC serve in ten career fields: Auditing; Acquisition Logistics; Business, Cost Estimating, and Financial Management; Communications-Computer Systems; Contracting; Manufacturing, Production, and Quality Assurance; Procurement/Purchasing; Program Management; Systems Planning, Research, Development, and Engineering; and Test and Evaluation. Like the Air Force, the Navy also provides the NAPC with enlisted personnel support.

Criteria for civilian members of the NAPC are very similar to criteria used for the AAC. There are only two major differences:

1. There are ten career fields (same as career fields for military members of the NAPC).
2. The Navy encourages but does not require civilian NAPC members to comply with mobility statements.

As with the AAC and the AFAC, centralized and separate job management systems for both military and civilian AFAC members are maintained at the departmental level but neither interfaces with the other or with the other services. The Marine Corps Acquisition Professional Community (MCAPC) follows the same general requirements for membership and acquisition assignments for both military and civilian members as those established by the NAPC.
The Life Cycle System Management Model (LCSMM)

The LCSMM is the common acquisition process used not only to acquire new weapon systems but to properly demilitarize and dispose of them. In essence the LCSMM is a “cradle to grave” process. It is a thorough yet cumbersome six-phased event-driven process that contains tasks and events that are procedurally and/or legally required to develop and procure materiel systems for the nation’s armed forces.

Figure 3: The Life Cycle System Management Model

As Figure 3 shows, the process has six phases. With the primary responsibility to organize, train, and equip forces, the services are the primary players in LCSMM activities. The activities themselves evolve from the eleven functions (or career fields) identified by DAWIA (Auditing; Acquisition Logistics; Business, Cost Estimating, and Financial Management; Communications-Computer Systems; Contracting; Industrial/Contract Property Management; Manufacturing, Production, and Quality Assurance; Procurement/Purchasing; Program Management; Systems Planning, Research, Development, and Engineering; and Test and Evaluation).

Some of these functions, for example Systems Planning, Research, Development, and Engineering, are currently performed in service-specific roles. This function could include the fielding and training requirements of a new system and therefore require service specificity. Conversely, other functions such as Test and Evaluation or Contracting are not service specific.
but are still organized within the services. Functions such as these that follow pure legal and/or DOD regulations could be the first in efforts to consolidate into joint organizations.

Conversely, throughout the LCSMM numerous functions occur simultaneously and continuously across phases. Because the model is a guideline, application of the eleven functions require focused attention given the inherent differences of each program. This results not only in the tailoring of the model to fit programs, but the application of integrated teams representing cross-service as well and cross-functional areas to direct activities in reducing acquisition cycle time in getting the materiel requirement to the warfighter. This brings about the introduction of LCSMM interface with some inherently joint mechanisms that are already in place.

For example, CINC Integrated Priority Lists (IPLs, initially used in 1986, are lists of needs considered to be high-priority by each CINC. Lists are submitted to the Secretary of Defense and to the CJCS as a means of injecting cross-service, joint, functional requirements with reasonable fiscal constraints, during the programming stage of PPBS. Due to the inextricable nature of the PPBS and the LCSMM and the jointness inherent in PPBS, the Integrated Process/Product Team (IPT) mechanism, brought about by evolving change, has subsequently become an inherent part of the defense acquisition process.

Along with IPTs, other examples of joint mechanisms embedded into the acquisition process are the use of Joint Program Offices (JPOs) and Joint Working Groups (JWGs). Following the JROC pattern, these types of cross-cutting organizations have the common feature of consolidating functional and/or cross-service representation into one (somewhat ad hoc) organization at the program level for the purpose of meeting a common objective. In the case of JPOs, the objective is to successfully meet a materiel requirement within cost, schedule, and risk
constraints. Numerous JPOs form to acquire systems intended for joint use. The precedent exists for additional use of JPOs as warranted in the future. In the meantime, many lessons need to be learned on the intricacies, effectiveness, and drawbacks of JPOs in order to make rational decisions with regard to jointness in future PM organizations.

For JWGs and IPTs the objective is normally more focused and less time-consuming to accomplish. They are examples of JPOs on a smaller scale. However, in either case, the use of joint mechanisms are – although somewhat difficult to organize in many cases – touted as extremely valuable to the acquisition process because all critical resources and efforts are directed toward an objective for an important and specific purpose. This exemplifies the epitome of efficiency in the large, complex acquisition process and associated bureaucracy. As with JPOs however, specific details with regard to effectiveness need broader exposure in order to positively influence decision-makers with interests in pursuing large, joint acquisition organizations.

In summary, the LCSMM is a common blueprint for acquisition of military weapon systems. The LCSMM is event-driven, its phases have no time requirements. Due to the inherent need for efficiency and the links with the calendar-driven PPBS cycle however, the LCSMM process is normally tailored to manage the distinct circumstances of each materiel program. Therefore, concurrent activities and overlap between phases has become a standard approach to system acquisition. The merits of these mechanisms introduces the issue of whether or not immediate consolidation would be detrimental to a system that appears to be functioning smoothly.

On top of this issue is the continuing stream of acquisition reform initiatives. Tracking changes in the management process is a separate task in itself adding complexity to an already somewhat cumbersome process. Program managers are constantly scrutinized for their ability to
balance cost, schedule, and risk in employing the LCSMM. Such evolving – and often conflicting - changes have driven program management activities to a whole new level. They include the juggling of not only LCSMM requirements and its efficiency-inspired procedural changes, calendar-driven PPBS events and related awareness of political attitudes on the acquisition process, its contractors, and specific programs, but potential consolidations and use of inherently joint mechanisms to improve efficiency.

Notes


4Ibid.


12Ibid, p. 300.


Notes

17 Ibid.
20 Ibid.
22 Ibid.
## Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAC</td>
<td>Army Acquisition Corps</td>
</tr>
<tr>
<td>ACAT</td>
<td>Acquisition Category</td>
</tr>
<tr>
<td>ACPB</td>
<td>Acquisition Career Program Board</td>
</tr>
<tr>
<td>ACSC</td>
<td>Air Command and Staff College</td>
</tr>
<tr>
<td>AFAC</td>
<td>Air Force Acquisition Corps</td>
</tr>
<tr>
<td>ASD(C3I)</td>
<td>Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)</td>
</tr>
<tr>
<td>AWPD</td>
<td>Acquisition Workforce Personnel Demonstration</td>
</tr>
<tr>
<td>BES</td>
<td>Budget Estimate Submission</td>
</tr>
<tr>
<td>C4I</td>
<td>Command, Control, Communications, Computers, and Intelligence</td>
</tr>
<tr>
<td>CAE</td>
<td>Component Acquisition Executive</td>
</tr>
<tr>
<td>CAIV</td>
<td>Cost As an Independent Variable</td>
</tr>
<tr>
<td>CINC</td>
<td>Commander In Chief</td>
</tr>
<tr>
<td>CJCS</td>
<td>Chairman Joint Chiefs of Staff</td>
</tr>
<tr>
<td>CPA</td>
<td>Chairman’s Program Assessment</td>
</tr>
<tr>
<td>CPR</td>
<td>Chairman’s Program Recommendation</td>
</tr>
<tr>
<td>DACM</td>
<td>Director Acquisition Career Management</td>
</tr>
<tr>
<td>DAE</td>
<td>Defense Acquisition Executive</td>
</tr>
<tr>
<td>DAU</td>
<td>Defense Acquisition University</td>
</tr>
<tr>
<td>DAWIA</td>
<td>Defense Acquisition Workforce Improvement Act</td>
</tr>
<tr>
<td>DCAA</td>
<td>Defense Contract Audit Agency</td>
</tr>
<tr>
<td>DCMC</td>
<td>Defense Contract Management Command</td>
</tr>
<tr>
<td>DLA</td>
<td>Defense Logistics Agency</td>
</tr>
<tr>
<td>DOD</td>
<td>Department of Defense</td>
</tr>
<tr>
<td>DODD</td>
<td>Department of Defense Directive</td>
</tr>
<tr>
<td>DPG</td>
<td>Defense Planning Guidance</td>
</tr>
<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
</tr>
<tr>
<td>EEC</td>
<td>Emergency Essential Civilians</td>
</tr>
<tr>
<td>FASA</td>
<td>Federal Acquisition Streamlining Act</td>
</tr>
<tr>
<td>GM</td>
<td>General Management</td>
</tr>
<tr>
<td>GS</td>
<td>General Schedule</td>
</tr>
<tr>
<td>IAW</td>
<td>In Accordance With</td>
</tr>
<tr>
<td>IPL</td>
<td>Integrated Priority List</td>
</tr>
<tr>
<td>IPPD</td>
<td>Integrated Product and Process Development</td>
</tr>
<tr>
<td>IPT</td>
<td>Integrated Product (or Process) Team</td>
</tr>
<tr>
<td>JCS</td>
<td>Joint Chiefs of Staff</td>
</tr>
<tr>
<td>JPD</td>
<td>Joint Planning Document</td>
</tr>
<tr>
<td>JPO</td>
<td>Joint Program Office</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>JRMB</td>
<td>Joint Requirements Management Board</td>
</tr>
<tr>
<td>JROC</td>
<td>Joint Requirements Oversight Council</td>
</tr>
<tr>
<td>JTA</td>
<td>Joint Technical Architecture</td>
</tr>
<tr>
<td>JWCA</td>
<td>Joint Warfighting Capabilities Assessment</td>
</tr>
<tr>
<td>JWG</td>
<td>Joint Working Group</td>
</tr>
<tr>
<td>LCSMM</td>
<td>Life Cycle System Management Model</td>
</tr>
<tr>
<td>MCAPC</td>
<td>Marine Corps Acquisition Professional Community</td>
</tr>
<tr>
<td>MDA</td>
<td>Milestone Decision Authority</td>
</tr>
<tr>
<td>MOS</td>
<td>Military Occupational Specialty</td>
</tr>
<tr>
<td>NAPC</td>
<td>Navy Acquisition Professional Community</td>
</tr>
<tr>
<td>NCA</td>
<td>National Command Authority</td>
</tr>
<tr>
<td>OSD</td>
<td>Office of the Secretary of Defense</td>
</tr>
<tr>
<td>PAT</td>
<td>Process Action Team</td>
</tr>
<tr>
<td>PBD</td>
<td>Program Budget Decision</td>
</tr>
<tr>
<td>PDM</td>
<td>Program Decision Memorandum</td>
</tr>
<tr>
<td>PEO</td>
<td>Program Executive Office (or Officer)</td>
</tr>
<tr>
<td>PM</td>
<td>Program Management (or Manager)</td>
</tr>
<tr>
<td>POM</td>
<td>Program Objective Memorandum</td>
</tr>
<tr>
<td>PPBS</td>
<td>Planning, Programming, and Budgeting System</td>
</tr>
<tr>
<td>SAE</td>
<td>Service Acquisition Executive</td>
</tr>
<tr>
<td>UNAAF</td>
<td>Unified Action Armed Forces</td>
</tr>
<tr>
<td>USD</td>
<td>Under Secretary of Defense</td>
</tr>
<tr>
<td>USD(A)</td>
<td>Under Secretary of Defense (Acquisition)</td>
</tr>
<tr>
<td>USD(A&amp;T)</td>
<td>Under Secretary of Defense (Acquisition and Technology)</td>
</tr>
<tr>
<td>VCJCS</td>
<td>Vice Chief Joint Chiefs of Staff</td>
</tr>
</tbody>
</table>
Bibliography


Erickson, James, Dave Loar, Doug McBane, Mike Pavlick, Mike Peek, Nick Tredennick, and Joe Walker. “Impact of Joint Technical Architecture on Navy Acquisition,” Program Manager, XXVII, no. 6 (November – December 1998): 34 - 38.


DISTRIBUTION A:

Approved for public release; distribution is unlimited.

Air Command and Staff College
Maxwell AFB, Al  36112