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THESIS

AN ANALYSIS OF THE FEASIBILITY OF
CONSOLIDATING CONTRACTING FUNCTIONS
IN HAWAII

by

Charles Cyrus

June 1991

Thesis Advisor:

Rodney F. Matsushima

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An Analysis of the Feasibility of Consolidating
Contracting Functions in Hawaii

by

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Lieutenant, Supply Corp, United States Navy
B.A., Elon College, 1982

Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

This research assessed the feasibility of consolidating the major DoD components' contracting organizations in Hawaii. Six primary factors were used in this analysis: the DoD environment, mission support, personnel costs, administration costs, procurement automation systems, and the vendor base.

This assessment indicates that the DoD component contracting organizations in Hawaii should be consolidated. Consolidation will result in the unification of procurement expertise under one central organization. This pooling of expertise will result in improved efficiency and effectiveness created by the synergism among the procurement specialists. The larger organization will be able to set up centers of excellence, institute upward mobility and trainee positions, have backup personnel for critical positions, and better maintain corporate knowledge. This study recommends that an analysis be conducted to determine the optimum organizational structure and the development of an effective implementation plan.

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I. INTRODUCTION

The Defense Regional Interservice Support (DRIS) Program is a DoD supported organization intended to promote inter-service, interdepartmental, and interagency support within the Department of Defense and among participating non-DoD agencies. The main focus of the DRIS program has been to increase efficiency and effectiveness of operations by identifying and eliminating duplicate support services among DoD components and participating non-DoD agencies without jeopardizing mission readiness. [Ref. 1]

The island of Oahu, Hawaii is a strategic location for major Navy, Army and Air force commands. Due to the close proximity to each other of the DoD components on Oahu, there is a high potential to enhance efficiency and effectiveness by eliminating duplicate support services. A very significant area of study under the DRIS program has been the services provided by the DoD components contracting organizations. A DRIS appointed Joint Interservice Resource Study Group (JIRSG) completed the first consolidation study in 1975. JIRSG studies were also completed in 1980 and 1986. The findings of each JIRSG study resulted in the same recommendation; consolidating DoD component contracting organizations would not result in increased efficiency and mission readiness.

A. OBJECTIVE OF THE RESEARCH

The objective of this research effort is to analyze the feasibility of consolidating the major DoD components contracting organizations in Hawaii and assess the impact of the current and future defense environment on their organizational structure.

B. RESEARCH QUESTIONS

The primary research question is: Will the consolidation of major DoD component contracting offices in Hawaii result in more efficient and effective mission readiness and resource utilization?

Secondary Questions are:

1. What alternatives exist if the current organizational structure is not maintained?
2. What factors will be considered in determining the feasibility of consolidation?
3. How do the recommendations of this study compare with previous studies in Hawaii, Korea and Japan?
4. What is the current political environment regarding consolidation within DoD?

C. RESEARCH METHODOLOGY

The information discussed and analyzed in this study was obtained from various sources. In addition to searching currently available acquisition literature, telephonic and personal interviews were conducted with the DoD components' contracting personnel in Hawaii. The literature sources included prior contracting consolidation studies, Defense

Management Reviews (DMRs) and other contracting related legislation, and DoD directives and instructions. In addition to telephonic communications, personal interviews were conducted with Navy, Army and Air Force contracting personnel in Hawaii during a four-day experience tour.

The information gathered above was used to understand the DoD components current contracting organizational structure in Hawaii and to analyze the impact of the current and future defense environment on this structure.

D. SCOPE OF THE STUDY

This research effort is limited to the analysis of the eight major DoD contracting organizations in Hawaii:

1. Naval Supply Center contracting, Pearl Harbor
2. 15th Air Base Wing contracting Center, Hickam Air Force Base
3. Army Support Command, HI (USASCH, Ft. Shafter)
4. Army Corps of Engineers, Pacific Ocean Division, Ft. Shafter
5. Tripler Army Medical Center
6. Naval Shipyard, Pearl Harbor
7. Naval Facilities Engineering Command, Pearl Harbor
8. Navy Oahu Telephone System Procurement Office (NAVOTSPRO)

The study will focus on possible benefits of consolidation and the impact of a changing Defense environment on the contracting organizational structure in Hawaii.

E. ORGANIZATION OF THE STUDY

Chapter II provides a background of the current contracting organizational structure in Hawaii, previous consolidation studies in Hawaii, Korea and Japan, organizational operating statistics, and automated data processing capabilities of the component contracting activities. Chapter III focuses on effects of contracting related legislation and the changing defense environment on consolidation. Chapter IV analyzes alternatives to the current organizational structure, and Chapter V presents conclusions and recommendations.

II. BACKGROUND

A. INTRODUCTION

This section provides background about the current contracting organizational structure in Hawaii, analyzes previous consolidation studies, and examines the operating statistics and automated procurement systems of each activity.

B. DEFENSE REGIONAL INTERSERVICE SUPPORT (DRIS) PROGRAM

Following the Korean war, the DRIS program originally called the Defense Retail Interservice Logistics Support (DRILS) Program, was established as a voluntary program which focused on encouraging the sharing of logistics support among the Armed Services and other Federal departments and agencies.

In 1973, services under the cognizance of the DRILS program were expanded to include administrative support. As a result of the expansion, the number of categories under the DRILS program increased to 101. The term logistics was dropped and the Defense Retail interservice Support (DRIS) Program emerged. The Defense Logistics Agency (DLA) was designated as the DoD DRIS Program Administrator.

In 1977, the Secretary of Defense tasked DLA with making the program more effective and increasing savings. As a result, a plan was developed forming regional study groups to evaluate the feasibility of achieving savings through the consolidation of services among DoD components located close

to each other. These groups were called Joint Interservice Resource Study Groups (JIRSGs).

In 1981, the new administration was concerned with conveying to the public that funds were being spent effectively and efficiently [Ref. 1]. One avenue was through the Defense Council on Integrity and Management Improvement (DCIMI) which focused on eliminating fraud, waste, and abuse in DoD. The DRIS program was one of ten programs placed under the oversight of the DCIMI.

The major thrust of this action was twofold. First, participation in the DRIS Program became mandatory for all DoD components. Second, interservice support was included in the program, which resulted in the Defense Regional Interservice Support (DRIS) Program becoming the new program name. As a result of the DRIS Program, studies were performed in Oahu, Hawaii in 1975, 1980 and 1986. The focus of these studies was to determine the feasibility of consolidating DoD component contracting organizations.

C. 1974 GOVERNMENT ACCOUNTING OFFICE (GAO) REPORT

Even before the first DRIS Program study, a 1974 GAO report [Ref. 2] recommended consolidating DoD component contracting organizations in Hawaii. GAO concluded that establishing a consolidated contracting office would significantly improve the overall efficiency and effectiveness of contracting functions and result in a reduction in

operating costs. GAO believed the following benefits could be achieved through consolidation:

1. Centralizing management and control functions within one office, which would eliminate duplicate management and supervisory responsibilities located at each contracting organization.
2. Establishing a central location to prevent fragmentation of requirements and retain relevant information such as sources of supply, contractor performance, and past prices that was being maintained by each Contracting organization.
3. Consolidating requirements and making quantity purchases, thereby reducing contract prices.
4. Reducing contract administration costs by eliminating duplicate procurements performed by each DoD component contracting organization.
5. Reducing overall operating costs by eliminating duplications such as personnel, overhead, and common support requirements.
6. Consolidating the legal and technical functions to establish a more experienced negotiation team and enhance competition.

The GAO stated that while coordinated procurement programs were being utilized, there was still duplication of efforts between the DoD component contracting organizations. Coordinated procurement programs are designed to consolidate service requirements when economic benefits exist. GAO stressed that consolidation would eliminate this duplication and possibly provide lower prices through quantity procurements and enhanced competition.

A similar recommendation by GAO to consolidate Army and Air Force contracting functions in Japan and Korea had already been adopted. Final plans were being completed for the Air

Force to perform procurement functions for the Army in Japan while the Army would provide procurement support for the Air Force in Korea. It appears these consolidation actions were very successful and resulted in significant benefits to both services.

The GAO report concluded by discussing three important issues. First, GAO estimated that consolidation would result in an estimated annual savings in personnel alone of over \$600,000. Second, the major objection to consolidation was the differences in procurement regulations and procedures of each DoD component. GAO did not consider this a valid argument since the procurement regulations of each DoD component must conform to the same DoD regulations. Third, GAO stated that parochial interests had prevented implementation of past recommendations to consolidate contracting functions in Hawaii. After considering the benefits that could be realized from consolidation, GAO recommended that the Office of the Comptroller General initiate a study to determine which DoD component could best assume the responsibilities of a consolidated procurement organization.

D. ANALYSIS OF PRIOR DRIS PROGRAM STUDIES

In 1975, the first DRIS Program study [Ref. 3] was conducted to evaluate the feasibility of consolidating Army, Navy and Air Force procurement offices in Hawaii. The study

was limited to an analysis of the DoD components' major Contracting organizations:

1. Army Support Command, HI. (USASCH, Ft. Shafter)
2. Naval Supply Center Contracting, Pearl Harbor
3. 15th Air Base Wing Contracting Center, Hickam Air Force Base

The study recommended maintaining the existing contracting organizational structure and not consolidating functions. The study cites the following reasons for recommending that each DoD component maintain a separate contracting organization:

1. Differences in response requirements among the services. For example the Navy's procurement lead time for small purchases was 8.3 days, while the Army's was 27 days.
2. The size and nature of local firms would not be conducive to handling the large requirements that would result from consolidation.
3. The diversity of worksites would discourage service oriented contracts.
4. Consolidated requirements would have adverse effects on participation in the small business set-aside program.
5. The major differences in the location and nature of the activities supported by each DoD component.

In 1975, the services were engaged in a coordinated procurement program. At the time of the study, the full potential of coordinated procurement was not being realized, which was attributed to the absence of a formal system of review prior to the procurement process. The study determined that economy and efficiency could be achieved more effectively in the procurement process through formalization of the coordinated procurement program. Formalization would be

achieved through the establishment of a tri-service Joint Procurement Coordinating Board to review service requirements prior to the procurement process. The study concluded that economy and efficiency could best be achieved by formalizing the coordinated procurement program and continuing to operate separate contracting organizations for each DoD component.

A second DRIS program study [Ref. 4] was performed in 1980. This study was an update of the 1975 study and also recommended that each DoD component maintain a separate contracting organization. Basically the same reasons were cited that were used to substantiate the recommendation of the 1975 study.

A third DRIS program study [Ref. 5] was performed in 1986. In accordance with an Office of the Secretary of Defense announcement, the Navy was excluded from the study. The study was limited to:

1. Army Support Command, HI. (USASCH, Ft. Shafter)
2. 15th Air Base Wing Contracting Center, Hickam Air Force Base

The recommendation of the study was to maintain the existing contracting organizational structure and not consolidate. The study cites the following reasons for the recommendation:

1. A consolidated contracting office operated by either DoD component would be less responsive to other services. The study pointed out that the only way to avoid this problem would be to maintain separate offices, thereby eliminating any benefits of consolidation.

2. There was no documented evidence of major duplication of functions by the DoD components' contracting organizations.
3. A learning curve extending for at least one year could be expected that would result in personnel turbulence, lowered employee morale, and decreased customer satisfaction.
4. A high percentage of Army and Air Force commercial contractors are small business firms that would be adversely affected by consolidation.
5. There would be a significant cost to set up a consolidated procurement facility.

The study concluded that economy and efficiency could best be achieved by maintaining the current organizational structure. It determined that a review of Single Service Contracting Assignments (SSCAs) on a periodic basis would improve the effectiveness of the procurement process. SSCAs were implemented in Hawaii in 1983 as a means of assigning responsibility for certain procurement requirements to one DoD component.

E. ANALYSIS OF CONSOLIDATION STUDIES IN JAPAN AND KOREA

The Army and Air Force have already consolidated their contracting organizations in Korea and Japan. In Korea the Army handles procurement requirements for the Air Force. In Japan the Air Force provides procurement support to the Army. A Headquarters, Eighth United States Army letter dated 10 January 1986 [Ref. 6], attributes the initial concept of consolidating Army and Air Force contracting functions in Korea and Japan to a 1974 GAO review and recommendation. The

GAO recommendation to consolidate the Army and Air Force contracting functions emphasized two major benefits:

1. Consolidation of contracting efforts would significantly reduce overall overhead costs.
2. Consolidation would eliminate duplicate support services and management efforts among the two DoD components.

As a result of the recommendation, an Ad Hoc Group was established to determine the feasibility of consolidating Army and Air force contracting functions. While this study was conducted under the direction of the Commander in Chief Pacific, the final decision to consolidate was made by the departments of Army and Air force. The initial consolidation plan did not include small purchases. This exclusion was a result of the service's idea that maintaining small purchase operations was essential to continuing a high level of support for their customers. Eventually small purchases did become part of the consolidation process.

During the initial transition phase, there were many procedural conflicts that were a direct result of differences in Army and Air Force service regulations. These conflicts were identified and corrected during early stages of the consolidation process. Satisfactory performance and customer support was reported throughout the transition phase.

The consolidation of Army and Air Force contracting activities in Korea and Japan resulted in the following recommendations:

1. Consolidation of contracting functions of DoD components should be a phased process in order to:

- a. Minimize the amount of disruption to personnel.
 - b. Ensure operational readiness is maintained at the highest level possible throughout the transition period.
 - c. Train personnel to function effectively in their new environment.
2. The DoD component that will be supported should retain a contracting specialist in the consolidated office to assist in procurement problems that may arise.
3. Feedback reports should be reviewed to ensure all procurement requirements are treated equally regardless of origin.

The consolidation of contracting functions in Korea and Japan were both successful, but for different reasons. In Korea overall cost savings was not the goal, but three other major advantages were achieved. The consolidation process established one contracting organization for the Koreans to do business with, eliminated the differences in Army and Air Force procurement practices, and eliminated competition between The Army and Air Force for limited sources of supply.

In Japan, unlike Korea, cost savings was the driving force behind the decision to consolidate contracting functions. When contracting functions were consolidated in Japan, Pacific Air Force Procurement Center Japan (PPCJ) was assigned procurement responsibilities for Army and Air Force requirements. A 1976 PPCJ After Action Report [Ref. 7] referred to the Air Force and Army procurement consolidation in Japan as highly successful. The report estimated the annual savings to be \$1,304,643. It also said the problems encountered were resolved between PPCJ and the Army customer.

F. ANALYSIS OF CURRENT CONTRACTING ORGANIZATIONAL STRUCTURE

This research effort focuses on the eight major DoD component contracting organizations in Hawaii. These eight contracting organizations consist of four Navy, one Air Force and three Army activities:

NAVY

Naval Supply Center Contracting, Pearl Harbor

Naval Shipyard, Pearl Harbor

Naval Facilities Engineering Command, Pearl Harbor

Navy Oahu Telephone System Procurement Office (NAVOTSPRO)

AIR FORCE

15th Air Base Wing Contracting Center, Hickam Air Force Base

ARMY

Army Support Command, HI (USASCH, Ft. Shafter)

Army Corps of Engineers, Pacific Ocean Division, Ft. Shafter

Tripler Army Medical Center

1. Naval Supply Center Contracting, Pearl Harbor

The Naval Supply Center Contracting organization is responsible for providing contract support to activities within the purview of the Commander Naval Base, Pearl Harbor. The organization consists of 61 civilian and 1 military personnel. In addition, the organization has functional management responsibility for the procurement actions of 28 activities on the island it has issued procurement authority to. There are 63 civilian and 13 military personnel performing procurement functions at these activities. The

Contracting Directorate has issued procurement authority to these activities of varying monetary limits. The FY 1990 business statistics for the organization included 360 large contract awards (>\$25,000) at a value of \$45,499,000 and 50,500 small procurements (≤\$25,000) at a value of \$28,000,000.

2. Naval Shipyard, Pearl Harbor

The Naval Shipyard, Pearl Harbor administers Department of Defense shipbuilding, design, conversion, and facility contracts at assigned private shipyards. In addition, the organization administers overhauls, repairs, alterations, activations and inactivations, and allocates unscheduled overhauls between government and private repair yards. The organization consists of 4 civilians. The FY 1990 business statistics for the organization included 12 large contract awards at a value of \$15,947,370 and 889 small procurements at a value of \$4,491,200.

3. Naval Facilities Engineering Command, Pearl Harbor

The contracting department at the Naval Facilities Engineering Command, Pearl Harbor is responsible for supporting the organization's procurement requirements. The Contracting Department supports procurement requirements for architect-engineering services, including planning and design, construction, utilities, facilities support, construction related supplies, and environmental contract services. In support of these requirements, the it performs two major

contracting functions. First, it is responsible for planning, execution and administration of the procurement. Second, it provides technical supervision to eight supervisory field offices. The organization consists of 123 civilians and 2 military personnel. The FY 1990 business statistics for the organization included 11,038 large contract awards at a value of \$198,189,478 and 1,613 small procurements at a value of \$5,596,806. In addition, there were 762 procurements valued at \$25,800,000 that the activity could not breakdown.

**4. Navy Oahu Telephone System Procurement Office
(NAVOTSPRO)**

The NAVOTSPRO is responsible for supporting the telecommunications requirements of all DoD components on Oahu. This function is accomplished through the administration of an Oahu Telephone Systems (OTS) contract and an AT&T Long Distance Contract. The Organization consists of 6 civilians. The FY 1990 business statistics for the organization included 2 large contract awards at a value of \$20,000,000 and 64 small procurements at a value of \$75,400.

5. 15th Air Base Wing Contracting Center, Hickam Air Force Base

The 15th Air base Wing Contracting Center is responsible for supporting all procurement requirements for the Wing. The scope of this responsibility includes administration of the local procurement program, supporting procurement requirements of all activities under the purview of the 15th Air Base Wing, communications requirements for all Pacific Air

Force activities, and limited support of Air Force activities in the Philippines, Korea, New Zealand and Australia. The organization consists of 44 civilian and 22 military personnel. The FY 1990 business statistics for the organization included 470 large contract awards at a value of \$35,826,126 and 27,000 small procurements at a value of \$22,185,962.

6. Army Support Command, HI (USASCH, Ft. Shafter)

The USASCH procurement office solicits, awards, and administers contracts for supplies, services, construction, and utilities. In addition they serve as the principle advisor to the USASCH Commander on contractual matters. The organization consists of 60 civilian and 1 military personnel. The FY 1990 business statistics for the organization included 438 large contract awards at a value of \$141,130,126 and 40,383 small procurements at a value of \$25,033,226.

7. Army Corps of Engineers, Pacific Ocean Division, Ft. Shafter

The Army Corps of Engineers, Pacific Ocean Division, Ft. Shafter acts as the design and construction agent for the Army and Air Force throughout the Pacific Basin and Asia. In addition the organization provides installation support services, focusing on quality maintenance and repair of existing facilities, the planning, design and construction of new facilities, as well as environmental contract services. The organization consists of 31 civilians in the Ft. Shafter contracting office, approximately 15 civilians performing contract administration functions on the Island of Oahu, and

approximately 50 civilians located at various field offices in Korea, Japan, Thailand, Kwajalein, etc. performing contract administration duties on construction projects. The FY 1990 business statistics for the organization included 322 large contract awards at a value of \$131,530,000 and 5,611 small procurements at a value of \$8,670,000.

8. Tripler Army Medical Center

The contracting activity at Tripler Army Medical Center is responsible for supporting all procurement requirements for the organization. The organization consists of 19 civilians. The FY 1990 business statistics included 184 large contract awards at a value of \$20,132,437 and 10,921 small procurements at a value of \$30,052,325.

G. ANALYSIS OF PROCUREMENT AUTOMATION SYSTEMS

The DoD component contracting activities in Hawaii utilize different procurement automation systems (Appendix A). The Navy's procurement system is called Automation of Procurement and Accounting Data Entry (APADE). The Army uses the Standard Army Automated Contracting System (SAACONS). The Air Force has the Base Contracting Automated System (BCAS).

These automated systems were developed specifically for the service that utilizes them. The systems have increased procurement productivity and provide management with effective reports to help evaluate performance and identify problem areas. A comparison of the systems' capabilities (Appendix B) reveals that each system provides the automation capabilities

essential for procurement organizations to operate more effectively and efficiently. While each system has some unique capabilities, this can be attributed to the different requirements of the services during system development.

H. SUMMARY

This chapter has analyzed key information essential to understanding the contracting environment in Hawaii, including; (1) current contracting organizational structure, (2) previous consolidation studies, and (3) operating statistics and automated procurement systems.

The next chapter will analyze policies and procedures in the defense environment that impact the consolidation of the DoD component contracting functions.

III. ANALYSIS OF THE DEFENSE ENVIRONMENT

The Defense environment has experienced significant changes since the DRIS program studies were performed in 1975, 1980 and 1986 due to a shrinking defense budget, civilian and military personnel manpower reductions, and a general policy of doing more with less. This chapter analyzes several changes in policy and procedures that significantly alter the way the DoD functions. The changes are in response to the Department's objective to improve management of the defense program and preserve essential military capabilities through more efficient use of limited resources.

A. THE DEFENSE BUDGET AND MANPOWER ANALYSIS

A February 4, 1991 Office of the Assistant Secretary of Defense news release [Ref. 11] outlined the FY 1992-93 budget request President Bush forwarded to Congress. This news release provides insight on the current and future status of the DoD budget and manpower end strength. The FY 1992 DoD budget request is for \$278.2 billion. Adjusting for inflation, this means a real decline in the budget of 1 percent below 1991, 12 percent below FY 1990, and 24 percent below 1985. The FY 1993 request is for \$277.9 billion, indicating an even greater decline in real spending dollars (see Appendix E). In FY 1996, the cumulative real decline since FY 1985 will reach approximately 34 percent. DoD

expenditures as a share of America's Gross National Product are expected to fall to 3.6 percent in FY 1996, the lowest level since before World War II and well below the 4.7 percent reached during the defense decline of the 1970s.

Reflecting the reduced chance of global conflict, military manpower will decline considerably in the coming years. By the end of 1995, active military end strength will fall to 1,653,000, 24 percent below its post-Vietnam peak of 2,174,000 in FY 1987. In FY 1995, reserve personnel levels will drop to 906,000, 21 percent below FY 1987. In addition, civilian personnel levels will drop to 940,000, 17 percent below FY 1987. These figures are summarized in Appendix F.

B. THE NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 1991

The National Defense Authorization act for Fiscal Year 1991 [Ref. 8] will significantly impact the acquisition environment by:

- Creating a Department of Defense Acquisition Workforce
- Mandating a 20 percent reduction in the Department of Defense acquisition workforce by the end of fiscal year 1995.
- Providing special pay incentives for officers holding critical acquisition positions.
- Establishing a defense acquisition university.

1. Acquisition Workforce

Chapter 87 of the Act delineates the guidelines for establishing a Department of Defense Acquisition Workforce. The Secretary of Defense is responsible for promulgating all

policies and procedures required to ensure effective management of all personnel in the DoD acquisition environment. This management includes accession, education, training, and career development. The Secretary is tasked to ensure acquisition workforce policies and procedures are implemented in a uniform manner throughout the DoD acquisition environment. The Under Secretary of Defense for Acquisition is responsible for directing the acquisition workforce, subject to the authority, direction, and control of the Secretary of Defense.

The guidelines of the program provide for the appointment of a Service Acquisition Executive for each military department. These acquisition executives are responsible for directing the acquisition workforce within their military department to ensure the policies and procedures of the Secretary of Defense are adhered to. The power of the acquisition executive is subject to the authority, direction and control of the secretary of the military department.

The secretary of each military service, acting through the acquisition executive, establishes an acquisition career program board to ensure the effective management of all acquisition personnel within his purview.

The Secretary of Defense, acting through the Under Secretary of Defense for Acquisition, establishes and implements policies and procedures for the effective

management of personnel holding acquisition positions in the office of the Secretary of Defense and in the Defense Agencies. These policies and procedures include the establishment of at least one Acquisition Corps and the establishment of an acquisition career program board. The Secretary ensures these policies and procedures are uniform throughout the DoD acquisition environment.

The Secretary of Defense is responsible for identifying in regulations those DoD positions which will be designated as acquisition positions. The designated positions should include at a minimum all acquisition-related positions listed in Appendix C. The Secretary will also designate acquisition related positions located in management headquarters activities and in management headquarters support activities as acquisition positions.

The Secretary of Defense ensures career paths are identified for civilian and military personnel who desire to pursue careers in the acquisition environment. This process includes education, training, experience, and job assignments required for civilians and military personnel to attain senior level acquisition positions.

The act requires that no requirement or preference for a military member is used in the consideration of individuals for acquisition positions. The exception to this is a Secretary policy permitting a certain acquisition position to be designated as a military position. For this policy to be

utilized, it must be determined that the military member is essential to the performance of the duties of the position or that some other compelling reason exists. By 15 December of each year, the Under Secretary of Defense must submit to the Secretary of Defense a list of acquisition positions that have been restricted to military personnel, along with a recommendation concerning their continued status.

The Act provides significant opportunities for civilians in the acquisition environment. The Secretary of Defense is responsible for ensuring that civilians are given the opportunity to acquire the education, training, and experience necessary to make them competitive for senior level acquisition positions. In addition, the Secretary must ensure management of the acquisition workforce results in a significant increase in the proportion of civilians in critical acquisition positions. This increase in the civilian acquisition workforce must occur for each fiscal year from October 1, 1990 through September 30, 1996.

2. Reduction of Acquisition Workforce

The twenty percent reduction in the defense acquisition workforce mandated by the act will significantly impact consolidation of DoD acquisition functions. The act requires the Secretary of Defense to take action to reduce the number of personnel (military and civilian) in the Department of Defense acquisition workforce. Beginning at the end of FY 1991, there must be at least a four percent annual personnel

reduction in the acquisition workforce (The reduction is based on the number of personnel in the workforce at the end of the prior FY, starting with September 30, 1990). This personnel reduction will continue through fiscal 1995.

3. Defense Acquisition University

The Act requires that no later than October 1, 1991, the Secretary of Defense promulgate regulations for establishing a Defense Acquisition University. The regulations promulgated by the Secretary shall include:

a. Operation of the program under a charter developed by the Secretary of Defense.

b. Establishment of a university mission to achieve the objectives of the Secretary of Defense including:

(1) Achieving efficient and effective utilization of acquisition resources through the coordination of DoD acquisition education and training programs and developing them to enhance the careers of individuals in the acquisition environment.

(2) Developing education, training, research, and publication capabilities in the acquisition arena.

c. Establishing appropriate lines of authority and accountability for ensuring attainment of the program mission.

d. Establishing a framework for the educational development of personnel in the acquisition arena.

e. Creating a centralized mechanism the Under Secretary of Defense for Acquisition can utilize to control the allocation of acquisition resources.

4. Special Pay

Another major result of the Act is special pay for certain officers holding critical acquisition positions. Army, Navy, Air Force, and Marine corps officers are eligible if:

a. They are members of an Acquisition Corps selected to serve or serving in one of the critical acquisition positions designated by this act.

b. They are eligible to retire or are assigned to a critical position for a period that extends beyond the date on which they will be eligible to retire.

The amount of incentive pay may not exceed fifteen percent of the annual base pay the member is receiving at the time he enters into the written agreement.

C. DEFENSE MANAGEMENT REPORT (DMR)

In July 1989, the Department of Defense completed an analysis, requested by the President, of actions needed to improve management effectiveness within the Department. The focus of the recommended actions was to improve the performance of the defense acquisition system and to provide for more effective management of the DoD and its defense resources. Implementation of the recommendations would occur in the form of Defense Management Report (DMR) initiatives.

These initiatives were developed in two parts, FY 1991 DMR initiatives and FY 1992 DMR initiatives. Implementation of the DMR is a vital element of the Department's objective to streamline and restructure the military services to sustain and improve our defense capabilities while operating with limited resources. [Ref. 9]

DoD's strategy to achieve management improvements is based on centralization of policies, procedures, standards, and systems while decentralizing their execution and implementation. The result has been organizational changes that have significantly enhanced the department's operational effectiveness. In addition, DoD is reducing the overall cost of operations by eliminating excess infrastructure and redundant functions as well as initiating common business practices. There has been significant streamlining of management structures, and consolidation of numerous common functions within DoD.

An April 1991 DoD update of FY 1991 DMR initiatives [Ref. 10] estimates DMR 1 (FY 1991) and DMR 2 (FY 1992) initiatives will result in substantial savings and personnel reductions within the DoD. The DoD estimates DMR 1 and 2 will save the Department approximately \$70 billion from FY 1991 through FY 1997 and result in reductions of 50,327 civilian and 43,945 military personnel. These savings through better management will enhance the ability of the Department to maintain essential defense capabilities with limited resources.

This section identified DMR initiatives that outline the DoD strategy of improving efficiency and coping with reduced funding through consolidation and streamlining. The following section presents specific DMR initiatives that will impact the defense environment.

1. Streamlining Contract Management

Historically, the DoD contract administration services (CAS) have been divided among the three military services and the Defense Logistics Agency (DLA). As a result of a DMR initiative, all DoD CAS have been consolidated into a single organization within the Defense Contract Management Command (DCMC) under DLA. The consolidation process will eliminate the differences in handling contract administration that existed among the four agencies. The process will enhance professionalism in CAS, increase the focus of attention on CAS, and provide the opportunity to present industry with a single face regarding contract management issues.

There will be an estimated reduction of 1,027 work years, attributed to the decision to decrease the number of regional offices from 10 to 5, and to streamline the remaining offices. This process will result in an estimated savings of \$255 million between FY 1991 and FY 1995.

2. DoD Financial Systems

An analysis of the FY 1991 budget reveals that \$50 billion of the \$90 billion in the Operations and Maintenance accounts are budgeted and justified separately from the

weapons systems they support. Approximately 50% of the DoD budget is not reflected in the costs of the weapon systems associated with the support efforts. As a result, senior level decision makers are not aware of the real costs of the different weapons systems. This realization has led to concern that the DoD should realign costs with outputs.

The focus of the DMR initiative is to implement a financial management system that will allocate support costs effectively. Effective allocation would result in a significantly high portion of the Department's costs being reflected in the cost of developing and deploying forces. DoD's primary output is the operations of its military forces. Consequently, to the highest degree possible, all the costs of operating these forces should be reflected in the costs of the Department.

Financial systems utilizing cost per output for support areas provide senior level decision makers with valuable information. This information is vital for measuring the efficiency of support activities and the progress of each unit in improving productivity. This type of financial system offers the advantage of providing all levels of management a focus on the cost associated with operations, or production of specific outputs. This enhances managers' abilities to operate the Department's businesses and enables customers to be charged for the products of each supporting unit.

Implementation of this type of financial system will ensure an effective allocation of costs within the DoD.

The unit cost concept will be implemented with the establishment of a new Defense Business Operations Fund (DBOF) on October 1, 1991. The DBOF will be established as a revolving fund and will finance supporting units. The fund will include in FY 1992, in addition to those activities currently financed through the Stock and Industrial Funds, Contract Management activities and activities listed in Appendix D.

Under the DBOF concept all Defense Appropriations for equipping and operating the Military Forces will be provided to the organizations that are responsible for managing those forces. Support services will be provided on a reimbursable basis and support organizations will not receive direct appropriations. This concept will ensure the support services are real requirements the customer is willing to pay for and that all overhead costs of the support organization are directly related to outputs they produce. All costs will be allocated to specific outputs and the funding of the support operation will come from product sales to customers.

This approach provides a method of consistently allocating costs between activities and enables the activities to control the level of support they receive. While customers of base support organizations may vary the level of support they receive, they must share in the allocation of fixed costs

such as road maintenance. Each of the business areas will reimburse other supporting organizations for services they receive. All material prices will include all costs associated with providing the material, including costs reimbursed to other supporting organizations, depreciation, and the cost of military personnel.

Military Personnel costs will be financed through a Military Personnel Revolving fund, which will be funded by reimbursements from each supporting and operating organization to which the military members are assigned. The Military Personnel Revolving Fund will recover all the costs required to support the military member as distinct from his unit.

Prices charged by both the DBOF and the Military Personnel Revolving Fund activities will be established and stabilized in the budget process. This will provide stability to customer programs and assurance to the Congress that programs will not be jeopardized by price changes during execution.

3. Finance and Accounting Systems

On January 15, 1991, the Defense Finance and Accounting Service (DFAS) was established as the single finance and accounting organization for DoD. The objective of the organization was to strengthen the overall effectiveness of financial management within DoD. The new organization reflects an effort to preserve force capability and minimize overhead and support costs. Consolidating the finance and

accounting centers operated by the military services standardized financial and accounting information, policies, and procedures and operations. It is estimated the consolidation will result in a savings of approximately \$110 million throughout FY 1995 and \$310 million through FY 1997.

4. Consolidation of Automated Data Processing (ADP) Operations and Design Centers in DoD

Historically, computer systems have been developed on an as needed basis within each DoD component. As a result there are computer systems designed to meet similar requirements in each service, such as the different procurement automation systems utilized by the Navy, Air Force, and Army. As a result of a DMR initiative, the Secretary of Defense has approved the consolidation of ADP operations and design centers in DoD. The focus of the consolidation is to reduce many of the separate Service and Defense Agency ADP operations and software design activities in DoD. A significant savings will result from enhanced efficiency, personnel reductions, equipment, software license fees, and maintenance costs. The total estimated savings for FY 1991 through FY 1997 is \$1.191 billion.

5. Intelligence

On March 15, 1991, the Secretary of Defense approved the restructuring of intelligence organizations throughout the DoD to streamline the intelligence organization and enhance intelligence capabilities. The restructuring will consolidate theater intelligence processing, analysis, and production

activities of the combatant commands and components under joint intelligence centers. It will also consolidate Service intelligence activities within single intelligence commands in each Service. This consolidation process will significantly improve the ability to collect, analyze, produce, and disseminate timely, accurate, and insightful intelligence on the capabilities of foreign powers. This initiative has already resulted in the consolidation of intelligence organizations in Hawaii, scheduled for completion by 1 October 1991. The Intelligence Center of the Pacific, Fleet Intelligence Center Pacific, and the 548th Reconnaissance Tactical Group will consolidate and become the Joint Intelligence Center Pacific.

6. Research and Development (R&D)

A major focus of the DMR is to maintain the existence of a strong defense technology base. The focus of the initiative is for DoD to coordinate research and advanced engineering activities conducted in each of the Military Services and their Research and Development organizations. Each DoD component will restructure and streamline their own organizations and promote technical competition among the laboratories. The Navy is responding by consolidating their separate R&D organizations into four Warfare Centers and streamlining their corporate laboratory structure. The Army is reducing management layers in all Army laboratories and reassigning operational control of various elements into a Combat Material Research Laboratory. The Air Force is estab-

lishing four superlaboratories in the areas of air vehicles, space and missiles, command, control, communications, and intelligence, and human systems. Significant savings and enhanced efficiencies should be realized by allowing one DoD component to provide technology to another Component.

7. Commissary Consolidation

On April 13, 1990, DoD approved the consolidation of the Army, Navy, Air Force and Marine Corps commissaries under one agency. The Defense Commissary Agency (DeCA) was created in August of 1990 to take advantage of economies of scale which would provide improved service and lower costs to customers, while reducing the overall operating costs of the government. The consolidation will enable DoD to achieve efficiencies and effective operations similar to those of large grocery store chains.

8. Consolidation of DoD Printing

In response to a DMR initiative, effective 1 October, 1991 all DoD printing and duplicating functions will be consolidated. This process will designate the Navy Publishing and Printing Service as the manager of all DoD printing functions. This consolidation will result in an estimated savings of \$132 million between FY 1993 and FY 1997.

D. SUMMARY

The analysis of the defense environment revealed a new climate within which the Department must function. While the DoD is faced with a reduced budget and manpower reductions,

the expectation of an efficient and effective national defense is more evident than ever before. The procedures and policies outlined in this chapter indicate that the DoD objective in the new environment is to improve management and preserve essential military capabilities through more efficient use of limited resources. This objective will be achieved by reducing DoD manpower end strength, establishing a smaller highly trained acquisition workforce, and eliminating excess infrastructure and redundant functions within DoD.

IV. ANALYSIS: CONSOLIDATION VS. THE STATUS QUO

A. INTRODUCTION

This research provided the reader with an understanding of the current contracting organizational structure and the results of previous consolidation studies. Also, an analysis of the DoD environment was presented to provide an appreciation of the current and future conditions under which DoD contracting organizations must function. The objective of this chapter is to discuss and analyze the feasibility of consolidating the DoD contracting function into one consolidated contracting organization.

B. ASSUMPTIONS

This analysis is based on the following assumptions:

1. This research effort only analyzes two extreme organizational structure alternatives:
 - a. Maintaining the current contracting organizational structure.
 - b. Consolidating all contracting functions and forming one central DoD contracting agency.
2. This research effort is limited to determining the feasibility of consolidation versus the status quo.
3. The scope of the analysis is limited to research data gathered through

a. Informal interviews the researcher conducted with representatives from the eight major contracting organizations in Hawaii during an on-site visit from 4-8 February 1991. These interviews provided the researcher with background knowledge of organizational mission requirements and enabled him to evaluate the perceived impact of consolidation on the contracting environment in Hawaii.

b. FY 1990 business statistics and manpower authorizations the researcher received from each contracting organization. These business statistics contained contained the number of large Contract awards and small purchase requisitions processed.

This data provided the researcher with an understanding of the type and volume of business conducted by each organization. In addition, the manpower authorizations disclosed the number of individuals performing contracting functions at each organization.

c. A review of prior consolidation studies and GAO reports to ascertain reasons why consolidation was not achieved in the past and to determine if these reasons still relevant.

C. ANALYSIS OF ORGANIZATIONAL STRUCTURE ALTERNATIVES

As a result of interviews and a review of prior consolidation studies, the following factors were used to analyze the two organizational structure alternatives:

- DoD Environment
- Mission Support
- Personnel Costs
- Administrative Costs
- Procurement Automation Systems
- Vendor Base

1. DoD Environment

The DoD environment in which contracting organizations must operate has experienced drastic changes in the late 1980s and early 1990s due to the perceived decrease in threat to our national security. Current legislation indicates the DoD environment will experience a reduced budget which translates to a future reduction in manpower. This new environment will require DoD to become more productive, while using less resources. Chapter III presented an in-depth analysis of this new defense environment. The DoD strategy in the the new environment is to improve management and preserve essential military capabilities through more efficient use of limited resources.

An analysis of the DoD environment reveals the current contracting organizational structure in Hawaii is not compatible with the future management strategies of the Department. Consolidations of these functions have been successfully implemented in Japan and Korea. As DoD reduces in size, the pressures to consolidate will continue to increase. It may not be too far in the future when the

decision to consolidate will be mandated not withstanding anybody's desires.

2. Mission Support

Chapter II presented the mission requirements of each contracting organization. If the determination is made to abandon the current decentralized structure and form a new consolidated contracting organization, the new organization must be able to provide a level of support that facilitates the success of their respective missions. The following analysis considers the advantages and disadvantages of each alternative.

a. Maintain the Current Structure

The current organizational structure enables each activity to provide its own procurement support. Prior consolidation studies and interviews conducted during the researcher's on-site visit made clear that the current organizational structure enhances mission support in two ways. First, the contracting personnel at each activity are experienced in providing procurement support for the unique requirements of their customers. This experience has developed over time and the concern is that this type of unique expertise will not develop in a consolidated organization responsible for supporting many different requirements. Second, a high level of responsiveness is maintained at each separate contracting organization. The general concern is that a consolidated organizational

structure would not be as responsive to each organization's requirements, which would result in a degradation of mission support. For example, the 1986 DRIS study cited the concern that one service may not process another Service's requirements as promptly as its own.

A disadvantage of maintaining the current organizational structure is typical of decentralized functions. The manpower authorizations of each activity revealed that the typical structure of each organization consisted of large contract, small purchase, and administration support branches. Each branch may have several personnel performing the required functions. The fact that these specialists are located at different activities prevents a pooling of knowledge and prevents the contracting function in Hawaii from achieving its full potential. For example, if a branch has three GS-9 buyers performing the same procurement functions at separate locations, they may appear to be highly efficient, each attaining its own level of expertise. However, this decentralized structure is preventing them from sharing their knowledge and developing a synergism that would make each of them more efficient. Synergism is the combined action of two or more individuals to achieve an effect greater than that of which each is individually capable. An interview with the contracting Directorate at the NSC Pearl Harbor and a review of the 1974 GAO report validates the fact that this lack of synergism continues to be a disadvantage on Oahu.

Another disadvantage stems from the competition among the different contracting organizations for experienced and qualified contract specialists. Although the personnel turnover rate is relatively low, when a vacancy occurs it is difficult to fill because of a limited pool of candidates. A consolidated organization maximizes the use of available talent. The increase in size allows the organization to have redundant positions, centers of excellence vice generalists, upward mobility and trainee positions, and better retention of corporate knowledge.

b. Consolidated Structure

Based on informal interviews with the individual contracting organization personnel and a review of prior DRIS studies, it is evident that a consolidated centralized structure could improve mission support. This improvement would occur because of the potential increase in procurement efficiency and effectiveness due to a pooling of the available contracting personnel talent. By consolidating the procurement specialists under one organization, a higher degree of technical expertise could also be realized. Currently, each organization's top management reports that each activity is operating at a high level of efficiency. Unfortunately, management doesn't have a real basis for making these claims. A interview with the Contracting Directorate at NSC Pearl Harbor indicated consolidation of effort could create a synergism and foster even more efficiency.

This difference in efficiency between consolidated and unconsolidated organizations is exemplified by the contracting organization at the NSC, Pearl Harbor. This activity consists of a centralized and decentralized structure. The organization itself provides procurement support to all Navy Department customers on Oahu, including the ships homeported at the Naval Station, Pearl Harbor. NSC Pearl Harbor also delegates levels of procurement authority to various subordinate shore activities. This delegation is primarily for small purchase support. Each of these activities has, on the average, only one or two procurement specialists to make their small purchases. The NSC Pearl Harbor, on the other hand, has at least seven specialists performing their small purchase functions. An interview with the contracting Directorate at the NSC Pearl Harbor revealed that historically the productivity of each small purchase specialist in his organization has exceeded that of the specialist functioning on his own. The Directorate attributes a significant difference in productivity to the synergism that exists among the specialists functioning as a team and because of the economies that accrue from having an adequate number of requisitions in process.

A central consolidated organization is able to improve contracting efficiency by offering more opportunities to combine duplicate or similar requirements. There are many opportunities both in small purchase and large contracting to

combine requirements for supplies and services. This will save money both administratively and contractually because of the associated economies of scale or potential quantity discounts. Interviews and prior studies revealed that the contracting organizations buy the same goods and services from the same vendor base. If two procurement specialists at separate locations are each processing requirements for the same requirement, there is a duplication of efforts present and thus an inefficient use of procurement resources. Some common duplicate procurements that were identified during the on-site visit are services such as: grounds maintenance, mess attendants, and rental and maintenance of equipment.

Interviews with representatives from customer activities and the results of the past DRIS reports revealed that the potential degradation of mission support continues to be the primary concern and biggest perceived impediment to the acceptance of consolidation. The results to date from the consolidations in Japan and Korea run counter to this concern and there is no real evidence discovered by this researcher to dispute that result.

c. Summary

The consolidation of contracting functions in Hawaii would be successful if it equals or exceeds the mission support being provided by the current decentralized contracting organizations. The 1986 DRIS study concluded that the only way to avoid degradation of support was to maintain

a decentralized structure. However, the 1974 GAO report stated that consolidation would bring procurement expertise under one organization and result in improved efficiency as a result of synergism. The consolidation efforts in Japan and Korea validate the GAO's findings. These efforts show that mission support did not suffer. The impact of the consolidation on mission support will depend on management's ability to transition smoothly to the new organizational structure. If this smooth transition is achieved, a degradation of mission support should not occur and a higher level of efficiency will be realized.

3. Personnel Costs

Traditionally, major savings in personnel costs occur when several organizations are combined to form one centralized consolidated organization. These savings occur because of the reduction in direct and overhead personnel as duplicate functions are eliminated. The following analysis considers the impact of each alternative on personnel costs.

a. Maintaining the Current Structure

A review of the total contracting organizations' manpower authorizations indicates that the current organizational structure consists of approximately 476 civilian personnel and 39 military personnel (including the activities granted procurement authority by NSC Pearl Harbor) who perform direct or indirect procurement functions in Hawaii. These personnel perform procurement functions which include:

1. large contract awards,
2. small purchases,
3. contract administration, and
4. administrative support.

Maintaining the status quo or current structure is always a comfortable option, but funding levels are being drastically cut and will continue to be cut in the foreseeable future. Therefore, it is imprudent to think that the current manpower authorizations will remain the same. The 1986 DRIS study indicated that the only personnel cost savings that may be realized by keeping the same organizational structure is the potential savings from avoiding the costs of Reduction in Force (RIF) personnel transfers that could occur if employees were displaced to effect a consolidation. This may not be a valid conclusion for the 1990s because the future budget profile may already forecast the need for RIF actions and a consolidation of the contracting functions may be the only viable solution to the reduced manning levels.

b. Consolidated Structure

There are potential personnel cost savings that could be realized by centralizing and consolidating the contracting function. Due to the small size of Oahu, the eight major contracting activities are located near each other. This point is exemplified by the location of the Naval Supply Center, Pearl Harbor and the 15th Air Base Wing Contracting Center, at Hickam Air Force Base. These two major

contracting organizations are located so close to each other that the bases within which they reside share common gates. While the distances between other locations are not as short, the farthest distance between any two activities is approximately fifteen miles.

In addition, a review of prior DRIS studies, the 1974 GAO report, and data obtained from the contracting organizations' manpower authorizations indicate the presence of duplicate personnel functions in the current organizational structure. These duplicate functions exist in the form of management and overhead positions. An analysis was performed in 1974 to determine the potential savings in personnel costs that could be realized through the consolidation process. The 1974 GAO report estimated a personnel cost savings of approximately \$600,000 per year would result from a consolidation of contracting functions in Hawaii. The limits of this research do not allow for an in-depth analysis of the actual personnel cost savings or the positions that should be eliminated. However, the research does indicate a significant potential for savings does exist.

As indicated earlier, consolidation could potentially result in a more efficient and effective procurement process as a result of synergism. This increased efficiency could also result in reduced manpower requirements. The degree of savings would depend on the level of efficiency achieved as a result of consolidation.

c. Summary

A major decrease in personnel costs would result if the determination was made to consolidate the contracting function. Personnel cost savings would accrue from a reduction in duplicate management and overhead labor costs along with a reduction in direct labor costs due to increased efficiencies. The only personnel cost advantage to maintaining the current organizational structure would be the potential avoidance of RIF costs due to personnel transfers. However, RIFs may be unavoidable due to the DoD budget posture; therefore, this cost avoidance savings may be invalid.

4. Administrative Costs

Every organization must consider its administrative support structure to ensure that it is adequately staffed or the Command's mission will suffer. The contracting organizations' top management claim that administrative costs will increase vice decrease in the short run if consolidation takes place. Management believes this because even if the administrative staffs are reduced, the remaining personnel will require time to learn the new organization's policies and procedures.

a. Maintain the Current Structure

As with personnel costs, management's perception is that the current level of administrative costs will remain relatively constant. The 1976 DRIS study also pointed out

that maintaining the current structure avoids a potential temporary administrative cost increase during the transition period of the consolidation process. The theory is that consolidation would result in employees not being immediately proficient in the methods and procedures of the new organization and thus costs will increase. The study stated that a learning curve of at least one year would result in the event of consolidation. Maintaining the current structure will avoid a decrease in administrative support and the associated cost increases due to inefficiencies.

This was the only reason given for keeping the status quo in this category. The argument is weak because any inefficiencies could be overcome with proper planning and training during the transition period. There will be a period of learning, but it should be relatively short in the administrative category. Also learning costs will be overcome by the potential savings that automatically come with consolidation. A "best practices" study could be conducted to choose the best and most efficient administrative practices being used by all the contracting organizations. These practices should be implemented in the new organization.

Duplicate administrative requirements within each current structure such as the requirement to maintain pertinent information on sources of supply, contractor performance, and past prices can be consolidated. Maintaining the

current structure offers no alternative except maintenance of separate administrative records at each organization.

b. Consolidated Structure

Consolidation could provide several administration costs advantages over the current centralized structure. As presented above, consolidation by virtue of its nature is going to combine some administration efforts and result in a savings.

However, the two major benefits would be the elimination of duplicate information files and duplicate procurements. Consolidation would eliminate the exhaustive requirement to maintain sources of supply, contractor performance, past prices, and other duplicate information at eight separate locations. Interviews with the Contracting Directorate at the NSC Pearl Harbor and the 1986 DRIS study, agree this advantage alone could result in a significant administration costs savings. The duplicate procurements of supplies and services present in the current decentralized structure would be reduced if the organizations were consolidated. By consolidating requirements the number of procurements processed will be reduced, resulting in an administration costs savings and possibly lower prices to the Government through volume purchases.

c. Summary

While there is a potential for the proficiency of administration support to decrease during the transition

period, an even greater potential exists to achieve an administration costs savings through the centralization of pertinent information files, eliminating duplicate functions, adopting the "best practices" from the organizations, and reducing duplicate procurements.

5. Procurement Automation Systems

Chapter II presented the three different procurement automation systems currently used by the contracting organizations in Hawaii. If the determination is made to establish a consolidated central contracting office, the automated procurement system to be used by that organization will be one of the most difficult decisions that must be made. In Japan and Korea, the determination was made to use the host Service's automated procurement system and restrict the use of the other Service's system.

a. Maintain the current structure

Each DoD components' contracting organizations currently utilize different procurement automation systems (Appendix A). The systems were developed within each component based on Service requirements. While the systems have their own unique capabilities, each has enhanced procurement productivity and has presented management with information that is vital to evaluating performance and identifying problem areas (Appendix B).

An advantage of maintaining the present structure is that the current procurement automation systems will remain

in place and the cost of implementing a single system in a consolidated office will be avoided. In addition, maintaining the status quo avoids the time and costs required to train personnel who will be using the system for the first time. A study should be conducted to determine the feasibility of developing an interface network system that would connect the three primary procurement systems and allow their continued use until a new system is developed or one of the systems is proven to be capable of supporting the consolidated organization.

A disadvantage of maintaining a decentralized structure is the inherent costs incurred to maintain the three different procurement systems. In addition, the systems are periodically modified to reflect advances in technology. Updating the capabilities of three different systems is significantly more expensive than modifying one.

b. Consolidated Structure

A consolidated structure would significantly impact the current utilization of three automation systems. An advantage of a consolidated structure would be the utilization of only one system instead of three. This would potentially reduce maintenance and repair costs and facilitate only having to update the technology of one system.

A disadvantage of a centralized structure would be the initial cost of installing one system in a consolidated procurement office. The system may have to be modified since

it will now be tasked with supporting the requirements of three Services instead of the one it was originally designed for. This modification process could potentially be a time consuming and costly effort. A feasibility study should be conducted to look at all the alternatives available to efficiently use the three automated procurement systems if the determination is made to consolidate the organizations. The consolidations in Japan and Korea, although they involved only the Army and the Air Force, showed that the two services could work together and live with the automated procurement system chosen.

c. Summary

The data gathered indicates that each DoD component has an effective procurement automation system in place to satisfy its current requirements. Consolidation would require an initial cost to modify and implement one of the three systems at a consolidated procurement office. However, in the long run those costs may be negated by the savings from utilizing and maintaining only one system. Two studies should be conducted on the use of procurement automation systems. The first should assess the feasibility of developing an interface system that will allow the use of all three procurement automation systems or some combination. The second study should determine if one of the systems is capable of supporting the total requirements of the consolidated contracting organization.

6. Vendor Base

Interviews with contracting representatives and prior studies revealed the presence of a limited vendor base in Hawaii. If the decision is made to consolidate contracting functions, the impact of such a decision must not hinder the ability of the vendor base to support defense requirements in Hawaii. The following analysis considers the advantages and disadvantages of each decision.

a. Maintain the Current Structure

Prior consolidation studies indicate an advantage of the current decentralized structure is its compatibility to the size of local firms. A large percentage of the vendors in Hawaii operate small businesses that could not accommodate consolidated requirements that require greater capacities.

Two disadvantages of the current decentralized structure are duplicate procurements and the differences in Army, Air Force, and Navy regulations that vendors must deal with. Prior studies and interviews indicate that these create additional work for the vendors. In some cases a vendor may have different criteria for processing an Air Force requirement than a Navy requirement. In addition, it would save a vendor time and money if he could process one requirement for 32 items rather than eight requirements for four items. This efficiency could translate into a better price for the Government. These were two of the main reasons consolidation occurred in Korea.

b. Consolidated Structure

Consolidating contracting functions in Hawaii could provide several advantages over a decentralized structure. An interview with the Directorate of contracting at the NSC Pearl Harbor indicated that the consolidated contracting structure would not eliminate the small business. If combined requirements result in new requirements too large for Oahu, the contracting officer has several options:

1. Determine if it is advantageous to the Government to solicit the requirement on an unrestricted basis.
2. Set-aside part of the requirement for small businesses and place the remainder on an unrestricted basis.
3. Set-aside the requirement for small businesses and encourage small businesses to team with each other.
4. Make multiple awards to small businesses if the requirement is under \$25,000.

The contracting officer has many available options within the Federal Acquisition Regulation. With the capability to combine requirements, the contracting officer has more opportunities to use the options and develop a procurement strategy that meets the best interests of the Government.

The centralized contracting organization will provide one contracting organization for vendors to do business with and eliminate the differences in the DoD component procurement practices. The 1980 DRIS study indicates that consolidation could also possibly reduce prices through high volume purchases resulting from combined requirements.

c. Summary

While prior studies expressed a concern that consolidation would adversely affect the small businesses in Hawaii, interviews with contracting personnel and the options available to the contracting officer dispute that concern. The consolidation of functions should not hinder the ability of Hawaii's vendor base to support defense requirements. A centralized structure would provide the vendors with a single organization to deal with and allow the contracting officer to use more contractual discretion to make the purchases that are in the best interests of the Government.

D. SUMMARY

The objective of this chapter was to discuss and analyze the feasibility of consolidating DoD component contracting functions in Hawaii. To conduct this analysis, key factors were analyzed to answer the question: Should the contracting function be consolidated into one central organization or should the current "status quo" organizations be maintained?

The future DoD environment is the key factor that drives this analysis. The strategies of the DoD and the diminishing DoD budget are not compatible with maintaining the "status quo" structure. The DoD environment itself may dictate that the functions be consolidated.

Based on this analysis, a feasibility study should be conducted to determine the best course of action to be taken with respect to the use of the automated procurement systems.

The study should consider such alternatives as a computer interface system that connects all three systems, use of the best system among the three systems for the consolidated organization, and the use of other systems or the development of a new system.

The other factors analyzed were not as significant as the above two factors but provide relevant information for the decision maker to consider.

The next chapter presents answers to the research questions and the conclusions and recommendations resulting from this research effort.

V. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

The first section of this chapter presents the answers to the research questions. This is followed by the conclusions and recommendations resulting from this research effort. Finally areas for further research is provided for future consideration.

B. ANSWERS TO RESEARCH QUESTIONS

1. Will the consolidation of major DoD component contracting offices in Hawaii result in more efficient and effective mission readiness and resource utilization?

The consolidation of contracting functions in Hawaii will significantly improve mission readiness and the use of scarce procurement resources. Consolidation will result in the unification of procurement expertise under one central organization. This pooling of expertise will result in improved efficiency and effectiveness, created by the synergism among the procurement specialists. The larger organization will be able to set up centers of excellence for peculiar or particularly difficult requirements such as ADPE and services, institute upward mobility and trainee billets, have backup personnel for each position, and maintain the corporate knowledge.

The overall costs of operation will be reduced and resource use will improve as a result of eliminating duplicate management, administrative, and other overhead positions. Because of short distances between commands, the support provided by the new consolidated organization would not be handicapped by distance. On the contrary, the new consolidated contracting organization may be able to provide better services and prices paid for certain requirements simply because of the price break they may be able to obtain from the increased quantities that may be available by combining duplicate requirements.

2. What factors should be considered in determining the feasibility of consolidation?

In determining the feasibility of consolidating the contracting functions, the following factors should be considered by the decision makers:

- a. The DoD Environment
- b. Mission Support
- c. Personnel Costs
- d. Administrative Costs
- e. Procurement Automation Systems
- f. Vendor Base

These factors were discussed and analyzed in chapter four. Based on the analysis, this researcher determined that the DoD environment may be what drives the entire decision process. The budget climate and the trend determined by the

Defense Management Review towards consolidations may already forecast the final decision for the contracting function in Hawaii. Korea and Japan have already successfully consolidated the contracting function and the past DRIS studies provided rather weak reasons why the status quo should be maintained.

3. How do the Recommendations of this study compare with previous studies in Hawaii, Korea, and Japan?

This study recommends consolidating all contracting functions in Hawaii. Consolidation studies in Korea and Japan also recommended the consolidation of contracting functions at each location. The consolidations have been successfully completed and with no reported degradation in mission support. Prior consolidation studies performed in Hawaii recommended not consolidating contracting functions, but maintaining a decentralized structure.

4. What is the current political environment regarding consolidation within the DoD?

The DoD environment has changed dramatically since the last consolidation study was performed in Hawaii in 1986. The current DoD environment can be characterized by a shrinking budget, civilian and military manpower reductions, and a general policy to increase productivity with limited resources.

The DoD's objectives for the future involve improved management effectiveness within the Department and more

efficient use of limited resources. The National Defense Authorization Act for FY 1991 and the DMR are two indicators of the Department's strategies to sustain a high level of operational readiness. These policies and procedures are a clear indicator that consolidation will be one of the DoD's primary tools in achieving its objectives.

C. CONCLUSIONS

1. The defense environment is undergoing significant changes in philosophy that will have a major impact on the manner in which the DoD functions.

The analysis of the defense environment presented in Chapter three made it clear that the DoD will be faced with manpower reductions and a shrinking budget in the 1990s. For instance, the FY 1992 budget request reflects a 24 percent decline below 1985 figures, and active military end strength will drop below post-Vietnam levels by FY 1995. This new environment will require the DoD to alter the manner in which it functions. As the DoD reduces in size, the pressures to consolidate will continue to increase because the consolidated organization can operate with a lower number of personnel assets and at a lower operating cost. If the new organization is capable of providing customer services that is, at a minimum, equal to the current structure, then there is no compelling reason not to consolidate.

2. The current contracting organizational structure in Hawaii is not compatible with the DoD's Strategy for the future.

In response to the changing defense environment, the Department's objectives are to improve management effectiveness and preserve a high level of operational readiness through more efficient employment of limited resources. Chapter III provided a clear indication of the DoD's strategies for preserving vital military capabilities in this new environment. The strategy includes policies and procedures that improve defense management, streamline the management structure, and consolidate DoD component functions in areas where a savings would occur. The decentralized contracting organizational structure in Hawaii is in conflict with this strategy. This is especially true because of the successful consolidations in Japan and Korea.

3. Consolidation could significantly improve the efficiency and effectiveness of the overall procurement process and result in a savings.

As presented in Chapter IV, consolidation of the DoD component contracting organizations in Hawaii could potentially improve mission support and result in a more efficient use of defense procurement resources. The maximum distances between the contracting organizations and the primary commands they support is approximately 15 to 20 miles. This short distance is not an impediment to customer

responsiveness. The consolidated contracting organization's operating cost would be less than the cost to operate the present decentralized organization structures. Combining the requirements from all the DoD components affords the contracting organization the opportunity to attain reduced prices due to quantity discounts and increased competition. A decision will be required on the automated procurement system to be used by the new organization, but an integrated information system has been already been shown to be possible in Japan and Korea. Finally, the success of the consolidation will depend on the thoroughness of the transition plan and commitment of each affected organization's upper management. Plans should start now and appropriate studies conducted in preparation for a possible decision to consolidate.

4. The success of a consolidated contracting organization is dependent on an effective management structure.

Once the new organization is commissioned, its success will be determined by the effectiveness of the management structure. In order for the organization to successfully support its customers and realize the expected cost reductions, the hard work must be completed in the planning and transition phase. Before this consolidation occurs, it would be prudent to conduct some preliminary studies, such as:

- a. A feasibility study to determine how the different Services automated procurement systems could be utilized in the new organization or to determine the best automated system to use in the new organization.

- b. A study to determine the best location for the new organization.
- c. A study to identify the proposed organizational structure and manpower requirements of the new organization.
- d. A study to determine the training requirements that must be accomplished to ensure that the personnel are equipped to work in the new organization.
- e. A study to determine the best course of action and timing of the consolidation action. A plan of action and milestones should be developed and projected year for completion of the transition.

Since it is feasible and prudent to seriously consider consolidating the contracting function in Hawaii, some prior planning is recommended to help alleviate the problems that could occur if the consolidation decision is made in the near future.

D. RECOMMENDATIONS

1. All the DoD component contracting functions in Hawaii should be seriously considered for consolidation.

The current defense environment, closeness of the activities to each other, the duplicative functions performed by each separate activity, and the potential savings in operation costs and manpower requirements make consolidation of all eight major contracting organizations in Hawaii an attractive alternative. In addition, increased productivity, lower prices for requirements and cost benefits that can be attained through consolidation have already been achieved in a similar environment in Japan and Korea.

2. An analysis should be conducted to determine the most effective plan for implementing the consolidation process.

The consolidation of contracting functions in Korea and Japan resulted in the recommendation to use a phased approach for future endeavors. A successful approach consolidated the large contracting functions in one phase and small purchases in the second phase. This phased approach was followed to: (1) minimize personnel disruptions, (2) ensure that operational readiness is sustained at a high level throughout the transition period, and (3) enable comprehensive training of personnel. The consolidation process should be implemented in a manner that maintains a high level of procurement support throughout the transition period.

3. A Study should be performed to determine the organizational structure of the consolidated organization.

The structure of the new organization is vital to the success of the consolidation process. A study should be initiated to ensure the appropriate organizational structure is determined prior to implementation. The organizational structure should be able to provide the appropriate support to the customers while reflecting a reduction in total manpower requirements due to the elimination of duplicate management, administrative and overhead functions.

E. AREAS FOR FURTHER RESEARCH

1. Conduct an analysis to determine the appropriate organizational structure and manpower requirements of the consolidated organization.

2. Conduct an analysis to decide which Procurement Automation System should be utilized by the new contracting organization. This effort should include the analysis of management support capabilities, costs of implementation, and costs of maintenance to determine the most efficient system.
3. Conduct a study to determine the best site for the new contracting organization.
4. Conduct a study to determine the best alternative to be followed to ensure that the transition period causes the least disruption to the mission of the customer activities.
5. Conduct a study to consider alternatives to consolidation that are hybrids between total consolidation of the contracting function and maintaining the current structure.

APPENDIX A
PROCUREMENT AUTOMATION SYSTEMS

ACTIVITY	SYSTEM
Naval Supply Center Contracting, Pearl Harbor	APADE
Naval Shipyard, Pearl Harbor	None (1)
Naval Facilities Engineering Command, Pearl Harbor	None (1)
Navy Oahu Telephone System Procurement Office	None (1)
15 th Air Base Wing Contracting Center	BCAS
Army Support Command, HI	SAACONS
Army Corps of Engineers	SAACONS
Tripler Army Medical Center	SAACONS

Note 1: These activities are not utilizing a procurement automation system.

APPENDIX B

COMPARISON OF PROCUREMENT AUTOMATION SYSTEMS

	APADE	SAACONS	BCAS
Provides Updated Status	Y	Y	Y
Provides Management Reports	Y (1)	Y	Y
Rotates BPA Calls	N	N	N
Has System Security	Y	Y	Y
Maintains Procurement in Database	Y (2)	Y	Y
Provides Suggested Sources	Y	N	Y
Price History File	Y	N (3)	Y
Prints DD Form 1155	Y	Y	Y
Generates Buyer Worksheet	Y	Y	Y
Prompts Buyer into Choosing Clauses	N	Y	Y

Note 1: APADE provides limited management reports.

2: APADE maintains a flat file.

3: SAACONS provides a price variance report.

APPENDIX C
DEFENSE ACQUISITION POSITIONS

REQUIRED POSITIONS
Program management
Systems planning, research, development, engineering, and testing
Procurement, including contracting
Industrial property management
Logistics Quality control assurance
Manufacturing and production
Business, cost estimating, financial management, and auditing
Education, training, and career development
Construction
Joint development and production with other government agencies and foreign countries

APPENDIX D
DBOF ACTIVITIES

ACTIVITY
Reutilization and Marking Services
Test and Evaluation Ranges
Financial Operations
Contract Management
Industrial Plant Equipment Services
Contract Auditing Technical Information Services
Mapping Services
Investigative Services
Research and Development Laboratory Activities
Printing and Publication Services
Data Processing

APPENDIX E**FY 1992\FY1993 DoD BUDGET REQUEST
(CURRENT \$ BILLIONS)**

	FY 1990	FY 1991	FY 1992	FY 1993
Military Personnel	78.9	79.0	78.0	77.5
O&M	88.3	86.0	86.5	84.7
Procurement	81.4	64.1	63.4	66.7
RDT&E	36.5	34.6	39.9	41.0
Military Construction	5.1	5.0	4.5	3.7
Family Housing	3.1	3.3	3.6	3.6
Other	-0.3	1.0	2.3	0.7
DoD Total	293.0	273.0	278.2	277.9

APPENDIX F

DOD MANPOWER (END STRENGTH IN THOUSANDS)

	FY 87	FY 92	FY 93	FY 94	FY 95	FY 87-95 CHANGE
ACTIVE MILITARY						
ARMY	781	660	618	577	536	-245
NAVY	587	551	536	516	510	- 77
MARINE CORPS	199	188	182	176	171	- 28
AIR FORCE	607	487	458	445	437	-170
TOTAL ACTIVE	2,174	1,886	1,794	1,714	1,654	-521
SELECTED RESERVES	1,151	1,068	989	924	906	-245
CIVILIANS	1,133	1,003	976	958	940	-193

LIST OF REFERENCES

1. U. S. Department of Defense Joint Interservice Resource Study Group handbook.
2. General Accounting Office Report, 1974.
3. Defense Regional Interservice Support Program Consolidation study, 18 September, 1975.
4. Defense Regional Interservice Support Program study, 2 June, 1980.
5. Defense Regional Interservice Support Program study, 20 February, 1986.
6. U.S. Department of the Army, Eighth U.S. Army, letter 10 January, 1986.
7. Pacific Air Force Center Japan, After Action Report, September 1976.
8. National Defense Authorization Act for Fiscal Year 1991.
9. Defense Management Progress Report, March 1991.
10. Defense Management Report Update, April 1991.
11. Office of Assistant Secretary of Defense News Release, 4 February, 1991.

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