BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

9446

Fragmented Management Delays Centralized Federal Cataloging And Standardization Of 5 Million Supply Items

It has been nearly 30 years since the Federal Catalog System was created, yet congressional intent has not been fully achieved. Notable progress has been made, but duplication of supply items continues to hamper effective Government logistics. Duplication will continue unless substantial changes are made in the management of cataloging and standardization.

Each item erroneously cataloged or entered into the system adds from a few hundred dollars to over $30,000 annually in costs. The basic problem is shared jointly by the General Services Administration and the Department of Defense, and each has its own viewpoint. A Government-wide perspective is needed.

LCD-79-403
MARCH 15, 1979

004097

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-146778

To the President of the Senate and the
Speaker of the House of Representatives

This report addresses the Federal cataloging, engineering standardization, item entry control, and item deletion programs used by Government agencies to manage the thousands of parts needed by them were reviewed.)

Several GAO reports were issued from 1973 through 1977 pointing out problems in these programs and recommending solutions to the problems. This followup review shows that although progress has been made in improving the programs, duplication of items continues to hamper effective Government supply operations.

We are also sending copies of this report to the Director, Office of Management and Budget; the Secretaries of Defense and Transportation; and the Administrator of General Services.

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

FRAGMENTED MANAGEMENT DELAYS CENTRALIZED FEDERAL CATALOGING AND STANDARDIZATION OF 5 MILLION SUPPLY ITEMS

D I G E S T

By authorizing the Federal Catalog System in the early 1950s, the Congress intended to

--establish a single cataloging system to be used by all Government agencies,

--name each supply item in a manner which would distinguish it from every other item, and

--establish standardization programs to make sure the catalog system would contain only those items necessary for defense and civil agency operations.

Several GAO reports issued in 1973-77, pointed out problems in cataloging and standardization programs and recommended solutions. Although notable progress has been made, duplication of items continues to hamper effective Government supply operations.

The basic problem is a fragmented management structure. The Defense Department and General Services Administration have the main responsibilities for cataloging and standardization. However, programs have been tailored to individual interests and degrees of commitment of many organizations. As a result, overall goals, priorities, and requirements have not been identified, and results have not been monitored. A Government-wide perspective is needed. (See ch. 7.)

CATALOGING

An automated catalog system covering 5.3 million supply items has been developed for use by all Federal agencies.

Although GAO recommended in 1973 that the Defense Department and the General Services Administration work with Federal agencies to replace local stock numbers with national stock numbers when appropriate, local systems still operate today, and in some cases their use is growing. (See ch. 6.)

The effectiveness of the Federal Catalog System also has been impeded by inadequate controls over organizations authorized to catalog new items, and items have been inaccurately and incompletely described. Without complete item descriptions, controls to prevent unneeded items from entering the catalog cannot operate as effectively as needed. (See ch. 5.)

ENGINEERING STANDARDIZATION

Engineering standardization, primarily through parts control programs, is intended to prevent unnecessary or duplicate items from entering the Federal catalog and supply systems. To be effective, controls should start at the earliest possible stage--that is, during the design of new equipment.

In 1975 GAO reported (see p. 17) that these controls did not influence the selection of parts during equipment design. GAO recommended that Defense and General Services

--work with industry in determining how designers could best learn about items already in the Government's supply system and

--develop advisory services to help industry and the Government select parts from all classes of items experiencing a high growth rate.

Because the former recommendation has not been carried out, designers still do not have a systematic means of incorporating parts, preferred by the Government, into their design. (See ch. 3.)

The latter recommendation was carried out at three Defense locations, and the advisory service has been quite successful in suggesting the use of parts preferred by the Government. However, civil agencies are not required to use the advisory services, and Defense agencies can bypass them. (See p. 17.)

ITEM ENTRY CONTROLS

Item entry controls are applied later, right before an item is assigned a national stock number. These automated controls attempt to prevent unnecessary items from entering the catalog by screening their manufacturers' part numbers and their characteristics. The controls have not been as successful as possible because of incomplete and inaccurate item descriptions and problems with the computer system used. (See ch. 5.)

Although many of the limitations of automated controls were compensated for in the past by specialists who made technical reviews, these reviews were abandoned in 1975. (See p. 65.)

ITEM REDUCTION PROGRAMS

Item reduction programs are intended to weed out of the catalog and supply systems those unneeded items that were not caught by entry controls or that have become unnecessary over time. GAO reported in 1974 (see p. 31) and 1977 (see p. 31) that these programs were ineffective because the Defense Department and General Services did not follow through and eliminate unnecessary items from the catalog and did not issue stocks of items no longer needed before issuing their replacements (known as force issue).

Some of the recommendations GAO made in its prior reports have been implemented, including those aimed at creating Government-wide oversight of item reduction.

However, recommendations have not been implemented to reduce the time needed to make item reduction studies, and ensure that sufficient priority and resources are assigned to item reduction programs. Also, programs to delete nonessential items from the catalog and supply systems are still not as effective as they should be. (See ch. 4.)

RECOMMENDATIONS

The Secretary of Defense should make the Joint Logistics Commanders of the military services members of the Defense Materials Specifications and Standards Board. This would better aline the Board's function of program planning and management with the Logistics Commanders' control of the dollars and people needed to perform the standardization program tasks. (See p. 91.)

The Secretary of Defense and Administrator of General Services should take the following actions:

(1) --Work with industry to explore ways that designers can best learn about preferred items that may already be in the Government's supply system. Design selection lists being developed by the Navy could be a viable alternative.

(2) --Make clear to contractors that engineering standardization is a priority concern in Government procurements.

(3) --Explore various incentive programs that could lead to greater parts standardization in Government weapon systems and related equipment.

(4) --Put more "teeth" in parts control monitoring by involving Military Parts Control Advisory Groups in the earliest phase of equipment design, requiring use of groups in all development and production

contracts, and extending the groups' services to all Government activities, including civil agencies;

(5) --Modify the definition of a standard item so that it describes only those items governed by an existing Government specification;

(6) --Monitor procurement activity performance to be sure that technical data, including true vendor and alternate manufacturers' part numbers, are obtained so that proper cataloging and item entry control can work. If necessary, contract provisions should be clarified;

(7) --Supplement current, automated item entry controls with manual reviews by experienced equipment or item technicians. There should be single points of contact for related Federal Supply Classes, with concentration of efforts in the high growth classes; and

(8) --Continue efforts, when payoff is sufficient, to improve item identifications through matching computerized part numbers, updating part number information through contacts with manufacturers, and upgrading item descriptions. Additional recommendations are discussed on pages 46 and 82.

AGENCY COMMENTS

Although written agency comments were not obtained, GAO discussed the report with agency officials.

DOD and GSA concurred with many recommendations, but there were major objections in some areas. (See pp. 29 and 71) DOD did not concur with recommendations on the need to improve and expand coverage of engineering standardization programs, and supplement current, automated item entry controls with manual reviews by technicians. GAO disagrees with DOD's position.

Tear Sheet

GSA continues to assert that a lack of resources has prevented it from accomplishing more in the areas of civil agency participation in the Federal Catalog System and in supply standardization.

PROGRAM OBSERVATIONS FOR CONGRESS

GAO could not determine how much duplication there actually was in the Federal Catalog. However, examples of duplication uncovered in this review were not isolated cases but rather were the results of fundamental cataloging and standardization program deficiencies. While some amount of duplication is inevitable, GAO believes existing resources would be better utilized if comprehensive, Government-wide management were brought to cataloging and standardization programs.

The basic problem GAO sees in these programs is that a number of agencies are involved to various degrees. Each agency has approached cataloging and standardization with a different management emphasis and perspective. Only the minimum basic cataloging and standardization techniques are used by some agencies, whereas more effective techniques have been developed and implemented by others.

As in the past, agencies have come forward with master plans, new item screening techniques, and other remedies for cataloging and standardization system ills. The National Supply System concept is regarded as a significant effort which should bring about needed change. However, before substantial new resource commitments are made, agencies should demonstrate that their remedies will effectively overcome the fundamental problems in cataloging and standardization. GAO believes the resolution of problems will require a high degree of concentration by top agency management. Further,

the appropriate congressional oversight committees must exert their influence over the Federal agencies to assure that a Government-wide perspective is given to program plans implementation, operation, and review.

Tear Sheet

Contents

ABBREVIATIONS

DOD	Department of Defense
DOT	Department of Transportation
GAO	General Accounting Office
GSA	General Services Administration
NATO	North Atlantic Treaty Organization
USC	United States Code

CHAPTER 1

INTRODUCTION

The need for the Government to have an efficient and economical supply system for its goods and services has been recognized for many years. World War II experiences convinced the Congress that the variety of independent catalog and supply systems had resulted in confusion and duplication in purchasing, warehousing, handling, issuing, and maintaining supplies. To stop the loss of millions of dollars caused by such duplication, the Congress passed laws in 1949-52 requiring the establishment of a Federal Catalog System. The congressional intent was to

--establish a single cataloging system to be used by all Government agencies in obtaining needed items,

--name each supply item in a manner which would distinguish it from every other item, and

--establish programs to make sure the catalog system would contain only those items necessary for supply operations.

Emerging to meet those needs have been (1) an extensive, automated catalog system to identify, number, and describe the universe of items in Government supply systems and (2) standardization programs to control the introduction of new items and eliminate items no longer needed, thereby keeping the universe of items to the minimum necessary.

THE ARENA FOR CATALOGING AND STANDARDIZATION

Today's cataloging and standardization activities can be broadly categorized as follows:

--Agencies are urged to participate in a single cataloging system to prevent duplication of logistics efforts.

--Item identification is a process to uniquely identify each item of supply.

--Item entry controls are to detect duplication between new items and those already cataloged.

--The Federal Catalog System is the repository of descriptive and management data relating to items of supply used by Federal agencies.

--Engineering standardization controls are to prevent the introduction of a wide assortment of similar items.

--Supply standardization programs are aimed at reducing the assortment of similar items no longer needed.

The model on the following page depicts these activities. As can be seen, the many activities interact to identify what is in the supply system and keep it free from duplication. Appendix I shows what each program is intended to accomplish.

CURRENT MANAGEMENT

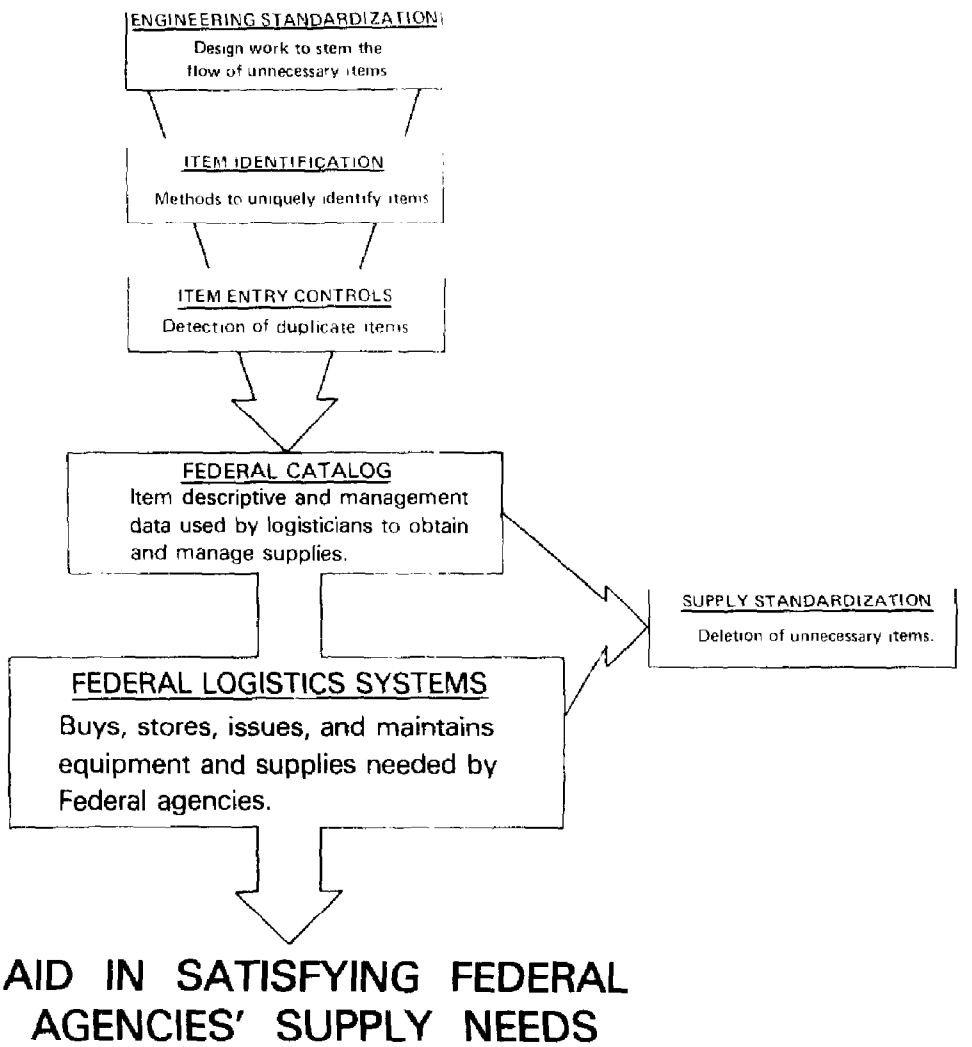
The Defense Logistics Services Center, a field activity of the Defense Logistics Agency, operates the Federal Catalog System. Cataloging records and data were fully automated in March 1975 with the introduction of the Defense Integrated Data System. The system, which contains data on 5.3 million items, also assists the standardization process.

Under working agreements with the Department of Defense (DOD) the General Services Administration (GSA) participates in the catalog system. Although most civil agencies participate through GSA, the Coast Guard and the Federal Aviation Administration have authorization from DOD and GSA to submit catalog data directly to the Defense Logistics Services Center. North Atlantic Treaty Organization (NATO) countries and other foreign governments participate through DOD.

Both DOD and GSA operate item reduction programs. Until 1976, DOD was responsible for making item reduction studies for all Federal supply classes. 1/ GSA was given item reduction responsibility for the 69 classes it manages in February 1976.

1/A Federal supply class is a group of supplies having similar physical or performance characteristics.

CATALOGING AND STANDARDIZATION ACTIVITIES



CHAPTER 2

CATALOGING AND STANDARDIZATION: AN OVERVIEW

By operating at the "front end" of the total Federal logistics network, cataloging and standardization programs can play vital roles in promoting efficiency and economy of logistics operations. But to fully benefit, Federal agencies must be dedicated to planning, controlling, and monitoring their programs. In light of the complex relationships among cataloging and standardization programs, as depicted in the model on page 3, coordination is also essential. Our past reviews and this follow-on review, however, have found that such dedication and coordination is lacking.

It has been nearly 30 years since the initial legislation was enacted to create a Federal Catalog System, yet congressional intent has still not been achieved. Although notable progress has been made, duplication of items continues to hamper effective Government supply operations. Such duplication will continue in the future unless major changes are made in the management of cataloging and standardization.

OUR PRIOR REPORTS

In the past 6 years, we issued six reports on the Federal Catalog System and related item standardization efforts. The reports stressed the need to

--increase participation in the catalog system by all Government agencies,

--promote the use of items already in the catalog and supply systems in the design of new Government equipment,

--provide a uniform system of reviewing items before they enter the catalog and supply systems, and

--provide efficient methods for deleting from the catalog and supply systems those items no longer needed.

In this followup review, we wanted to determine the status of agencies' actions to carry out the recommendations in our previous reports. Those reports and their key recommendations are summarized below. A complete list of our prior recommendations and the actions taken on them can be found in appendix II.

Participation and duplication in the Federal Catalog System

On June 20, 1973, we issued a report to the Congress entitled "The Federal Catalog Program: Progress and Problems in Attaining a Uniform Identification System for Supplies" (B-146778). The report stated that some Government organizations did not participate fully in the Federal Catalog System, but instead used local systems to identify many items which they bought and stocked. Failure to use national stock numbers could increase procurement and inventory costs.

The report also demonstrated that about 200,000 national stock numbers were unnecessary because they represented items which duplicated other items in the catalog system. Deleting these duplicate numbers from the catalog would save millions of dollars each year.

We recommended that DOD and GSA

--investigate the extent of and reasons for using local stock numbers, and replace them with national stock numbers when appropriate, and

--delete unnecessary stock numbers from the catalog system.

Controlling new item entry into the catalog and supply systems

On November 20, 1975, we issued a report entitled "Effective Item Entry Control in the Complex Government Supply System Can Reduce Costs" (LCD-75-420). This report said that cataloging and standardization program controls often did not prevent unnecessary items from entering the Federal catalog because they (1) did not influence parts selections decisions during new equipment design, (2) did not apply to all items, and (3) were not always coordinated among Federal agencies.

We recommended that DOD and GSA

--work with industry in determining how equipment designers could best learn of items already in the Government's supply system,

--develop advisory services to help industry and the Government select parts from all classes of items experiencing a high-growth rate, and

--establish a uniform entry control system for each class of items and require all agencies to submit their new items through this system.

Regarding the third recommendation, "The Defense Integrated Data System--Is It Efficient and Effective?" (LCD-77-117) was issued on December 20, 1977. The computer system discussed in this report automated the controls used just before items entered the catalog. But as our report pointed out, the system paid a price in complexity that has limited its effectiveness.

Reducing the number of items in the Federal catalog

DOD's and GSA's item reduction programs were the subject of another report to the Congress, "Number of Items in Federal Supply Catalog Can Be Reduced" (Oct. 21, 1974, B-146778). Although these programs had existed several years, the number of items in the catalog had remained relatively constant. The primary problem was that DOD and GSA did not follow through and actually eliminate from the supply and catalog systems many of the items identified as no longer needed. The programs were also hindered by the low priority assigned to them and incomplete guidelines. Further, GSA's program lacked a defined mode of operation.

The report also stated that while DOD's and GSA's policy was to issue remaining stocks of items no longer needed before issuing their replacements (known as force issue), DOD and GSA supply activities generally did not follow this policy because they believed that only the requisitioner knew his needs. As a result, requests for replacement items have been honored while items no longer needed have been held for long periods and finally just disposed of--a costly practice.

We recommended that a Government-wide steering committee be established to provide coordination for item reduction programs. We also recommended that DOD and GSA

--develop yearly program guidance on the objectives of the item reduction programs,

--give the item reduction programs enough priority to ensure that work would be controlled and completed and that decisions would be promptly recorded in the catalog,

--enforce the policy authorizing item managers to issue remaining stocks of items no longer needed before issuing their replacements and make requisitioners responsible for justifying exceptions, and

--revise procedures to automatically delete users from catalog records at a specified time after stocks of items no longer needed have been issued.

We took another look at GSA's program in a July 11, 1977, report, "How the Item Reduction Program of the General Services Administration Could Be More Effective" (LCD-76-459). We noted that DOD had recommended that 1,439 of the 37,500 items stocked by GSA be removed from the supply system. The report said, however, that GSA continued to purchase and stock many of those items, some for as long as 16 years. Also, because GSA had recorded only limited data on item interchangeability, it did not use up its stocks of items no longer needed in a timely manner.

We recommended that GSA

--implement DOD's item reduction decisions, and

--establish procedures for item managers to issue items no longer needed as substitutes for their replacements.

DOD officials responded to this latter recommendation by citing the capability of the Defense Inactive Item Program to eliminate from the supply system unneeded items which use warehouse space, personnel time, and computer processing time. In a January 26, 1977, report entitled "Defense Inactive Item Program Could be More Effective" (LCD-77-204), however, we pointed out that the program had not been effective because of (1) technical difficulties in merging the program with other systems, (2)

delays in obtaining information on item users, and (3) the lack of a system to verify the reasons for keeping inactive items.

We recommended that DOD improve its computer program and establish a system for independently verifying the military services' reasons for keeping inactive items.

THE CURRENT SITUATION

DOD and GSA have carried out some of our past recommendations for improving cataloging and standardization programs, and the problems of item duplication have been addressed. Many of the problems pointed out in our prior reports, however, still exist today. Full participation in the catalog system is not yet a reality. Duplication exists because incomplete and inaccurate item identifications continue to hamper the effectiveness of item entry controls.

Further, design contractors still lack a timely, effective means of satisfying Government parts preferences, parts control programs have not been fully used, and item reduction programs are not achieving their objective of limiting the variety of items in the catalog system.

The progress made in the various programs, as well as the continuing problems, are summarized below and are discussed in detail in later chapters.

Cataloging problems

Each year about 200,000 new items are added to the Federal catalog. Cataloging enables the Government to know what it has in stock and to refrain from buying, under a different name or number, items already in stock or being sold as surplus. These benefits accrue only to the extent that supply items are uniformly named and uniquely described, classified, and stock numbered.

Our followup review showed that not all agencies fully participate in the catalog system. Local stock numbering systems still operate and in some cases their use is growing.

Both DOD and GSA are aware of the local stock numbering problem. A DOD study group highlighted the problem in a report issued in August 1978. A study group member advised us that lack of trained personnel, failure to consider

items in the Federal catalog before making local purchases, and inadequate Federal Catalog System publications have all contributed to the problem.

Although GSA has estimated the extent of local stock numbers in civil agencies as we recommended, its followup has been hindered by limited resources, limited authority, and the belief of some civil agencies that participation in the Federal Catalog System is not economically justified. (See ch. 6, p. 73.)

Many Federal organizations are authorized to catalog items in the Federal Catalog System (see ch. 5, p. 48). This degree of cataloging freedom has led to significant problems in trying to control the entry of new items. Because cataloging operations are not uniformly applied from agency to agency, items have been misnamed, inaccurately and incompletely described, and misclassified.

Approved item names determine how an item is described, classified, and numbered in the Federal Catalog System. Therefore, failure to use them substantially weakens the usefulness of the resulting item identifications and causes the items to escape some item entry controls. However, assignment of other than approved item names is common. (See ch. 5, p. 50.)

After being named, items are described by (1) physical and performance characteristics or (2) reference numbers assigned by manufacturers. The preferred method is by characteristics. This requires an approved item name and a Federal Item Identification Guide to structure the item's technical characteristics. Complete descriptions which differentiate each item from every other item are vital to keeping unneeded items out of the catalog. But of the 4.7 million active items in the Federal catalog on December 31, 1977, only about 1.7 million were fully described and about 1.3 million were partially described. The remaining 1.7 million items were identified by manufacturers' part numbers. (See ch. 5, p. 52.)

The item identification issue is related to another problem involving how engineers, technicians, and others view the information stored in the catalog system. During our review we observed that many potential users of catalog information, including engineers and technicians, believed that beyond a certain point, the existing catalog system, by itself, could not effectively control duplication. Catalog information is often not used in

trying to control duplication due to difficulties in accessing the information, a mistrust of the information caused by incompleteness, inaccuracies, and outdated material. Instead, alternate, supplemental sources of information are used, usually because they better suit the individual needs of an agency and its personnel.

The questions of how much and what type of data should be in the catalog system and what the system should be able to do have their roots in the mid-1960s when decisions had to be made on automating the catalog data base. The validity of the responses by cataloging managers, however, was beyond the scope of this review.

In the final analysis, then, cataloging problems continue to hamper efforts to control duplication. Existing controls do not "see" every item that eventually gets into the supply system, and often the items they do see are inaccurately or incompletely described.

Item entry controls

Item entry controls are still not completely preventing unnecessary items from entering the Federal catalog. Poor item identification, as discussed previously, is a major reason for the continued duplication. In addition, the decentralized organization of the cataloging process has limited overall direction and control of item entry programs. The various controls are summarized below.

--Part number screening compares manufacturers' part numbers of items proposed for entry in the catalog. Although this screening has enjoyed moderate success, it does not necessarily prevent assignment of more than one stock number to the same item. (See ch. 5, p. 62.)

--Characteristic screening through the Defense Integrated Data System looks at item identifications to identify physically different but functionally similar items in the catalog. Because item identifications are often incomplete or inaccurate, this screening has not been totally effective. (See chapter 5, p. 63.)

--Parametric screening was intended to match more similar items by programing the Defense Integrated Data System to accept a range of values for some

item characteristics. This screening was so complex that development was recently modified toward a simpler process. (See ch. 5, p. 65.)

In the past, limitations now noted in automated characteristic and parametric screening were, to a certain extent, compensated for by equipment specialists who made technical reviews before items were assigned new stock numbers. (See ch. 5, p. 65.) With the introduction of the Defense Integrated Data System, these valuable technical reviews were abandoned, and individual agency catalog activities assumed responsibility for bringing technical knowledge during item entry control. The decentralization of technical review activities and other resource realinements have placed increasing reliance on the Defense Integrated Data System for most new item entry control. This reliance has not worked well because of the system's many problems.

Engineering standardization

Engineering standardization is unique among standardization controls in that it does not depend on catalog data to achieve its objectives. (See ch. 3, p. 16.) Instead, it is accomplished through communications with designers on Government parts preferences and through parts control programs, which assist designers in selecting a preferred part, method, or process and using it wherever possible in equipment design. This latter effort is accomplished by writing specifications on part characteristics and performance, designating preferred parts as military standards, and encouraging manufacturers to use these preferred parts whenever feasible.

Defense and industry specialists generally agree that the most effective way to restrain the proliferation of new, unneeded items in the Federal catalog is to practice standardization at the time new equipment is designed. They realize that by the time item entry controls can operate, the Government has committed itself to buying equipment which, while meeting stated performance requirements, may contain many items for which the Government already has cataloged preferred substitutes.

In our November 1975 report we pointed out that no comprehensive method existed to communicate to designers

the Government's decisions on the acceptability of specific items. Although DOD and GSA agreed with our recommendation to work with industry in determining how designers may best learn of items in the Government's supply system, they have not done so.

Our 1975 report also observed that existing catalog system publications, such as Item Identification Lists, could meet designers' needs if improvements were made. As we recommended, the Defense Logistics Services Center improved the lists. The lists maintained by the military services and civil agencies were consolidated, published in economical microfiche form, and their availability was publicized. However, we were advised that the lists are still not easy to use or complete, nor are they tailored to designers' needs.

We had also cited the Defense Integrated Data System as a valuable new tool through which the equipment designer could systematically describe his design requirements and receive, in turn, a list of items possessing these properties. But as we have already noted, the system's characteristic search capability has not yet evolved into the tool described above and may not.

Government reviews of parts selected by design contractors are another type of engineering control. We noted in 1975 that a Military Parts Control Advisory Group at the Defense Electronics Supply Center had been successful in making these reviews for electronic items. We recommended that similar groups be established for all high-growth items. Since our report, the advisory group concept has been used at the Defense Industrial Supply Center for fasteners and other mechanical parts (nuts, bolts, gaskets, etc.).1/ By reviewing contractors' parts lists and recommending replacement of some parts with parts preferred by the Government, savings have greatly increased.

Despite their success, the Military Parts Control Advisory Groups' services have not been fully used. Civil agencies are not required to use the groups and seldom do. Even within DOD, parts control programs can be left out of new design and development contracts.

1/ A June 1978 action by DOD expanded the groups to include the Defense Construction Supply Center and the Defense General Supply Center.

Although statistics for the past several years indicate the military services are increasing their use of the groups, we could not determine how many DOD contracts should have been reviewed by the groups because system-wide management information was lacking. (See ch. 3, p. 22.)

Supply standardization

Supply standardization is primarily accomplished through item reduction studies and inactive item reviews. (See ch. 4, p. 31.) Item reduction studies compare the technical characteristics of similar items to determine their continued need and to classify them as procurable or nonprocurable. If labeled nonprocurable, the items should no longer be bought and users should deplete their onhand stocks and withdraw their interest in the items. Inactive item reviews determine how many times items were requested by users and in what quantities. Those items not meeting established minimum demand levels are proposed for withdrawal of user interest.

Item reduction programs

Our current review shows some progress has been made since our 1974 and 1977 reports on item reduction programs. DOD and GSA have implemented some of our prior recommendations including those aimed at creating Government-wide oversight of item reduction efforts, issuing additional item reduction guidance, and clarifying coding systems to prevent continued procurement of items no longer needed. However, the full benefits of item reduction studies have not been obtained. The time needed to make item reduction studies has not been reduced to the levels in existing guidance.

Item reduction programs have also not been given sufficient management emphasis. Even though its program responsibilities have increased, GSA initiated only eight item reduction studies in fiscal year 1978. Over that same period, the Army's Natick Laboratories in Massachusetts initiated an additional 25 studies for GSA. Further, GSA has not reviewed many of DOD's item reduction studies due to lack of personnel.

Inactive item reviews

Our 1974 report concluded that many potentially inactive items remain active in the Federal catalog because users fail to record in the catalog that they are no longer interested in the items. DOD and GSA agreed with our recommendation to automatically withdraw user interest in uneeded items after a specified time limit, but they did not carry it out.

DOD's official response to our report cited the Defense Inactive Item Program as the proper way to handle the problem. The basic objective of this automated program was to eliminate from the supply system low-use, inactive 1/ items. Low-use items are defined by DOD as items for which no current or future requirements are recognized by any registered user or material manager. If all registered users agree, action to remove the item from the supply system is initiated. However, a single user's continued need for an item causes it to be retained.

After we issued our 1977 report on the problems with the Defense Inactive Item Program, the Defense Audit Service examined the program. The Audit Service report stated the program had not been effective, primarily due to the lack of a serious emphasis by the military service users to purge their low-use items.

THE KEY TO THE FUTURE: CENTRALIZED MANAGEMENT

To date, the many managers of the cataloging and standardization programs have tailored the accomplishment of objectives to their individual interests and degree of commitment. Overall program goals and priorities have not been set, and results have not been monitored. And because of the program's fragmented management and funding, it is difficult to determine how much money has been invested and what the return is. Although DOD's annual reports have cited program improvements, neither they nor any other documents assess how well the programs have brought duplication under control.

1/ The catalog and logistics systems use the term "inactive" item. The definition, however, is not exactly consistent. Our discussions use the term "low-use" in place of "inactive."

Some of the constraints working against full accomplishment of program objectives have been

--difficulties in demonstrating the need for uniform application of cataloging procedures and their impact on the rest of the logistics systems,

--difficulties in demonstrating the benefits of standardization,

--rivalries between agencies for management control of items,

--fears that standardization actions will inhibit engineering design creativity or will impede prompt customer support, and

--the lack of confidence in standardization work done by one agency for another.

Although progress has been made in strengthening cataloging and standardization, many of the personnel knowledgeable of the programs are nearing retirement age and are not being replaced. Instead, increased reliance is being placed on the Defense Integrated Data System--a move we question in light of the system's problems. One of those problems goes back to the fragmented program management; that is, the integrity of the system's data depends on the many different users who catalog the data. As we have noted, cataloging procedures are not uniformly applied from agency to agency, and items are often inaccurately and incompletely identified.

The Defense Standardization Program is operated by the Defense Materials Specifications and Standards Board. The Board has devoted little effort or time to standardization; it seldom meets, has a high turnover rate, and does not control standardization resources.

CHAPTER 3

NEED TO EMPHASIZE ENGINEERING STANDARDIZATION

Since 1952 the law concerning cataloging and standardization (10 U.S.C. Section 2451 et. seq.) has required a reduction in the number of sizes, kinds, and types of generally similar items in the Federal catalog and supply systems. The most effective way to do this is through engineering standardization during equipment design. By providing designers with a systematic method of narrowing down the possible choices of items, the Government can avoid paying for drawings, tests, etc., for many items that might otherwise be cataloged and bought. These costs have been estimated to be between $500 and $30,000 for each item.

Engineering standardization has taken on increased importance in view of recent weapons system developments. Characterized by a marked increase in capabilities, complexity, and cost, each weapons system or major piece of equipment brings with it thousands of new parts. The development of a new capability is sometimes accompanied by extensive use of new parts, even though parts already in the Government's supply system would suffice.

This practice creates two costly problems. First, new parts must be given an engineering pedigree--they must be described in a drawing, assigned a national stock number, and tested and qualified to ensure adequate performance. Second, new parts needing replacement during the equipment's life generate additional logistics requirements for procurement, stockage, and issuance.

Defense and industry specialists generally agree that the only effective way to restrain the proliferation of new, unessential parts and associated costs is to standardize parts at the time new equipment is designed. A 1970 congressional report 1/ also recognized the economies available through engineering standardization and criticized DOD for failing to emphasize and coordinate its many independent programs. Three elements of effective engineering standardization programs were singled out as essential:

--Communication to inform designers what items the Government prefers to have in new equipment. Such

1/ House Committee on Government Operations, report on Military Supply Systems: Cataloging, Standardization, and Provisioning of Spare Parts, H.R. Rep. 91-1718, Dec. 10, 1970.

communication must be readily available, current, and tailored to the needs of the designers.

--Incentives to encourage contractors to use preferred items through positive and negative rewards.

--A monitoring system to ensure that contractors give sustained attention to the problem of using nonessential new parts.

In a November 1975 report, GAO examined the Government tools and programs used to engage designers in engineering standardization. We recommended that DOD and GSA

--work with industry in determining how designers may best learn of items already in the Government's supply system that can be adapted to new equipment and

--develop advisory services to help industry and Government in the selection of parts experiencing high-growth rates.

NEED FOR BETTER GOVERNMENT AND INDUSTRY COMMUNICATIONS ON PREFERRED PARTS SELECTION

Designers are more likely to further standardization if they can easily determine what items the Government prefers in new equipment early in the design phase of equipment development. Such information must be readily available, current, and tailored to designers' needs. In 1975 we reported there was no comprehensive method to communicate to designers the Government's decisions on the acceptability of specific items, particularly those already in the supply system. Instead, the Government had emphasized the development of specifications and standards and had established a system for reviewing design work after it was completed.

We observed that Item Identification Lists published by the Defense Logistics Services Center for the military services and civil agencies could possibly meet this need if improved. The planned characteristic search capability of the Defense Integrated Data System also offered potential benefits to designers if the system is implemented according to plan. We recommended a Government-industry evaluation of designers' information needs as a first step toward determining the best tools to encourage selection and use of preferred items in new equipment.

DOD and GSA did not meet with private industry as we recommended, even though both agencies agreed with our recommendation. GSA deferred to DOD because most design work on weapons systems and related new equipment is performed for military agencies. DOD put off consultation with industry until an analysis of the causes of item proliferation in the supply system could be completed. Because this study was not funded or staffed, consultation with industry on designers' needs was not initiated.

Limited value of Item Identification Lists for parts selection

Item Identification Lists are narrative descriptions of all active items in the Federal catalog arranged by Federal Supply Class grouping. The principal uses of the lists are to

--obtain or verify a national stock number when only the characteristics of an item are known,

--assist in determining interchangeable and substitutable items, and

--obtain descriptive data when the national stock number is known.

Following our 1975 report, some improvements to Item Identification Lists were made by the Defense Logistics Services Center. The several lists maintained by the military services and civil agencies were consolidated and published in the economical microfiche form. The lists are available to these agencies and design contractors upon request and are updated periodically. The Defense Logistics Services Center has tried to publicize the existence of Item Identification Lists and educate military activities in their use. Brochures describing this and other publications have been sent to many Government contractors.

Despite these improvements, Defense Logistics Agency officials advised us Item Identification Lists are of limited value to designers. Designers require detailed descriptions of physical and performance characteristics of candidate parts and prefer to work with primary source data such as drawings and specifications. Federal catalog records can and do cite references to this source data, but their characteristic descriptions are not seen by designers as suitable

substitutes for primary source data. Further, item reliability and performance test information is not always recorded in the Federal catalog.

In a recent evaluation of Item Identification Lists, the Defense Logistics Agency recommended changes to facilitate their use by supply personnel. Discussions with agency officials indicated the proposed changes would further limit the usefulness of this publication for parts selection purposes.

The Defense Integrated Data System is not used in parts selection

Use of the Defense Integrated Data System to help equipment designers select new items was discussed in our 1975 report. Using the system, the designer inputs a description of his parts requirements and in turn receives a list of items possessing these properties. Under optimal conditions, this process produces several candidate items meeting both equipment design requirements and Government preferences. When the Defense Integrated Data System was in its early design stages, this search capability was a high priority item for development.

The Defense Integrated Data System's characteristic search has not yet evolved into the tool described above and may not. From December 1977 to June 1978, an average of 197 requests for characteristic search were recorded monthly at the Defense Logistics Services Center. 1/ None of these, according to Center officials, were made by private contractors, and use by DOD activities has been low. This low usage reflects several deficiencies in the system relating to its timeliness, accessability, completeness, and selectivity.

A commercial parts manufacturer and an aerospace industry representative said designers have little time to waste evaluating the merits of individual piece parts. For this reason, carefully designed commercial parts catalogs are provided to make parts selection quick and easy. By comparison, parts selection through the Defense Integrated Data System is complex, cumbersome, and time consuming. A 1977 Air Force test of the system pointed out that the system's characteristic search was untimely, complicated to use, intolerant of errors, and limited to only about half of the electronic piece parts in the Federal catalog. It also showed that the item search a designer might pursue

1/ Data shows the Defense Integrated Data System processes an average of 2.5 million transactions monthly.

would be further complicated by lack of access to personnel and other resources needed to make the characteristic search process work.

Design selection lists

Efforts have been made to provide design contractors with lists of parts preferred by the Government. The existing body of parts specifications and standards cite preferred part types (e.g., military specification MIL-M-38510 on linear microcircuits), but they still present too many choices to the contractor. The designer can become overburdened and resort to parts used previously, regardless of Government preferences.

Efforts are being made by the Navy to narrow down the designers' choices through standard parts lists. Navy officials believe the lists could increase the likelihood of design contractors using preferred parts in Government equipment. These lists, the first of which will cover electronics items, are intended to be contractually required for use by contractors. The electronics item list is being prepared by the Naval Weapons Support Center in Crane, Indiana, with assistance from the Defense Electronics Supply Center. The list was to be issued by the end of July 1978.

Navy officials added that the standard parts list concept is practiced by the other military services and the National Aeronautics and Space Administration, but primarily through existing specifications and standards.

INCENTIVES FOR PREFERRED PARTS SELECTION

Another method of increasing contractor selection of preferred parts is through monetary incentives. Such incentives have been used before by DOD, but in areas such as reliability or maintainability.

We did not review standardization incentive possibilities in detail during our review. We did speak with a representative of the aerospace industry who had written an article on the subject. With the objective of limiting the quantity of new supply items entering military inventories, the author proposed a scheme of rewarding or penalizing a contractor for the number of different parts that would eventually be designed into the equipment being procured. Contract milestones would be specified to identify the

the parts being used throughout the development and production of the equipment. Contractors would score points based on a predetermined formula and would earn a "dollars per point" reward or incur a penalty.

We did not explore other possible standardization incentive plans in our review. However, in light of the 1970 congressional report cited previously (see footnoote, p. 16), we believe the subject has merit and warrants the attention of DOD.

AGGRESSIVE DOD FOLLOWUP ON PARTS CONTROL MONITORING ACTIVITIES IS NEEDED

In addition to developing better methods of communicating to designers what parts are already available in the supply system, GAO recommended that Government reviews of parts selected by designers be improved. We pointed out that the benefits of an existing parts review group at the Defense Electronics Supply Center were not fully realized because not all high-growth part types were subjected to such reviews, the authority of the group's decisions was limited, and not all Government agencies used such techniques.

Since our 1975 report, DOD has established an integrated parts control program using parts review groups for all military activities and defense agencies. Military Standard 965 has also been adopted which provides uniform contractual procedures for implementing the parts control system. Our followup review of engineering standardization programs indicates that these changes address some of the problems we identified in 1975. The scope of the review groups, however, remains limited, the group's recommendations continue to be advisory, and full participation by Government agencies has not been achieved.

Military Parts Control Advisory Groups

Past DOD studies have shown the use of nonstandard parts during the design of military equipment was the primary cause of proliferation of DOD inventory items, particularly electronic and mechanical piece parts. As a remedy,

a DOD task group recommended the creation of centralized parts screening activities to provide equipment designers information on parts already in the DOD inventory or about to enter the inventory. Such parts would have already been tested and covered by adequate drawings and specifications. In 1973, pilot testing of a Military Parts Control Advisory Group at the Defense Electronics Supply Center was completed, and use of this technique became mandatory for all three military services.

The Defense Electronics Supply Center group responds to designers' requests for advice and engineering recommendations on electronics item selections and also prepares military specifications and standards. The group reviews proposed parts lists and makes an engineering evaluation to uncover possible standard or advanced technology parts which meet design needs. The group helps contractors identify common parts to limit the number of different part types used in a system or piece of equipment. By recommending parts meeting Government standards, much of the costly process of preparing engineering drawings and conducting reliability testing is avoided. Since such parts are often in the supply system, cataloging costs are eliminated and logistics support is simplified.

Each year since 1973, the Defense Electronics Supply Center parts advisory group has increased the number of items reviewed and replaced with parts meeting Government standards. Government savings by the group have increased from an estimated $22 million in fiscal year 1973 to $111 million in fiscal year 1977. This success prompted DOD to create another parts advisory group at the Defense Industrial Supply Center in 1975 and subsequently (June 1978) at the Construction and General Supply Centers.

Changes in Military Parts Control Advisory Group scope and participation

In 1975 we reported that the scope of Military Parts Control Advisory Groups was generally limited to electronic items. Efforts to expand the techniques to mechanical parts and other types of piece parts were just beginning. Parts advisory groups are currently operating at the Defense Logistics Agency's Electronics, Industrial, Construction, and General Supply Centers, and provide parts recommendations for items in 48 high-growth Federal Supply Classes. In addition to these primary classes, parts assistance is offered through

the advisory groups for any item managed by the Defense Logistics Agency. This encompasses over 300 Federal Supply Classes and over 1.9 million items.

We also reported that the advisory group was limited in scope because its services were voluntary; it recommended items only when military services and their contractors agreed to ask for advice. DOD Instruction 4120.19, which established DOD's Parts Control System, now mandates the use of parts advisory groups on all major weapon system acquisition programs. It also requires the military services to negotiate parts control support agreements with the Defense Logistics Agency to ensure parts control disciplines are applied consistently and uniformly.

The establishment of DOD's Parts Control Program and adoption of Military Standard 965 has not, however, solved the participation problem we identified in 1975. Because these documents are internal to DOD, civil agencies are not required to use or abide by them. Each year civil agencies having authority to submit catalog data directly to the Defense Logistics Services Center (such as the Federal Aviation Administration and the Coast Guard) add new unnecessarily similar piece parts to the Federal catalog and supply system. The Federal Aviation Administration in particular buys equipment utilizing many electronic components similar to those used by DOD activities. While the Federal Aviation Administration has an agreement with the Defense Logistics Agency on parts control support, only one contract encompassing the review of 14 items has been processed by the parts advisory group at the Defense Electronics Supply Center since 1972. The Coast Guard had none. Department of Transportation (DOT) officials said the agency is not bound by DOD's parts control program since governing regulations are internal to DOD.

Defense activities can exclude or limit use of Military Parts Control Advisory Groups

Not only is DOD's Parts Control Program limited to defense activities, it is also limited in application within DOD. DOD's Parts Control Program can be (1) left out of new design and development contracts or (2) tailored to the point that few standardization benefits are derived.

Air Force finds parts control not used enough

The Air Force has been a driving force within DOD to improve parts control during design. Since the creation of the parts advisory group at the Defense Electronics Supply Center, the Air Force has provided most of the group's workload. Nevertheless, a 1977 Air Force review of 43 acquisition programs disclosed that parts control in the design or Air Force avionics equipment is not being exercised to a degree consistent with the intent of DOD Instruction 4120.19, Military Standard 965, and Air Force implementing regulations.

The Air Force study evaluated parts control in 14 production and 29 full-scale development, modification, or prototype test and evaluation programs. 1/ Each contract was compared to a standard parts control statement of work derived from DOD and Air Force parts control regulations.

The following results were reported for development, modification, and prototype programs

--9 programs had no parts control requirements;

--12 programs had parts control requirements judged to be less effective than the standard; and

--8 programs had parts control programs equivalent to the standard.

These results were reported for production programs

--1 program had no parts control requirements;

--13 programs had parts control requirements judged to be less effective than the standard; and

--none of the production programs had a parts control requirement equivalent to the standard.

An Air Force official who worked on the study said that inadequate parts control provisions in these contracts reflected limited knowledge about the benefits which can be derived from parts control. A Defense Electronics Supply Center official believed that pressures on program managers

1/ While Military Standard 965 was not in existence when the Air Force contracts were awarded, internal Air Force parts control guidance did exist and later became the basis for Military Standard 965.

to contain data acquisition costs may be limiting the potential of DOD's parts control program.

Defense Logistics Agency finds Military Parts Control Advisory Group benefits are not fully realized

As shown by the following instruction, Military Standard 965 was designed to be tailored to reflect the type and complexity of equipment being developed. A reading of Military Standard 965 discloses:

> "This document should not be contractually evoked without detailed tailoring as indicated in Section 1.3."
>
> "(Section 1.3) This Standard shall be tailored by the procuring activity to meet the minimum requirements of the contract or internal government program and shall apply only to the extent and in the manner specified in the contract. Additional tailoring may be recommended within the program management plan or other appropriate program plan."

However, the degree of tailoring can weaken the standard's application and effect. For example, in February 1978 the Air Force awarded a contract for a Standard Very High Frequency (VHF) AM/FM radio to a large electronic equipment manufacturer. The contract included provisions for parts control in which Military Standard 965 was specifically cited. The Air Force forwarded the plan to the parts advisory group at the Defense Electronics Supply Center for review and comment 1 month after the production contract was signed.

The group reviewed the plan and found it unacceptable as a viable parts control program. Specifically, the plan contained no requirement for a review of the contractor's parts selection list, nor were provisions for nonstandard parts review established. Instead, the contractor's own parts control program and expertise was called out in the plan and contractually accepted by the Air Force. Thus, although Military Standard 965 was called out in this Air Force contract, parts control by the Military Parts Control Advisory Group was tailored out.

In addition, this Air Force contract provided for a Critical Design Review of the equipment 60 days after contract award. Thus, even if the Defense Electronics Supply Center advisory group had reviewed the contractors' proposed

parts list, little change could have been made since the the contractors' design was firm almost at the time the contract was awarded. For this reason, Defense Electronics Supply Center officials advised the Air Force that the parts control plan and preferred parts lists requirements in the contract were not economical efforts and not necessary. What was needed was a screening by the advisory group of all parts proposed for use by the contractor as soon after award as possible.

Such a review, according to the Defense Electronics Supply Center's letter to the Air Force, would have provided many alternate, military standard microcircuits and overturned the contractor's decision to use commercial microcircuits. This would have eliminated the expense of contractor source drawings and saved procurement dollars since the commercial parts cost more than the better, higher quality military alternatives.

Potential for contractual involvement of Military Parts Control Advisory Groups cannot be assessed

In our 1975 report we pointed out that because use of parts control advisory services was voluntary, participation was low. We recommended that all Government agencies use such services.

During out followup review, we attempted to determine how many DOD contracts should have been reviewed by the Defense Electronics Supply Center group, but were unable to do so because equipment contract data involving electronic piece parts was not readily available. While statistics showed an increase in participation over the last several years, Center officials believed only about 20 percent of the new equipment contracts involving electronic piece parts were being reviewed by them. Without data on contracts available for review, we believe parts control managers lack the means of evaluating the extent of program participation.

The definition of a standard item has not been clarified

In our 1975 report, we discussed the need to develop a uniform definition for "nonstandard" items because parts control reviews of such items were being performed differently by various activities.

For a given contract, a part type (for example, a microcircuit) may be considered a standard item even though it

does not meet the requirements of current Government standards and specifications. Military Standard 965 defines a standard part as one covered by contractually required, general equipment specifications or as otherwise stated in the contract. The definition of a standard part was left open-ended so that program managers would not be obligated to use more costly parts meeting Government standards and specifications when others could meet design needs.

Since Military Parts Control Advisory Group technicians do not review parts contractually determined to be standard, 1/ unessential new items can be added to the Federal catalog and supply system. For example, the Navy provided the Defense Electronics Supply Center a contractor-supplied list of electronic parts specifications for use on on the F-18 aircraft. The Center's subsequent parts control review of the list showed the presence of outdated Government specifications, some of which identified parts no longer stocked in the logistics system. Center officials were against using these "standard" parts in the F-18. The Navy, however, said that informal agreements with the equipment contractor would ensure the use of approved parts.

We believe Military Standard 965's definition of a standard part is contrary to the language and intent of DOD instruction 4120.19. The instruction cites the following policy:

> "The DOD parts control system shall be managed and conducted to minimize the variety of parts and associated documentation by * * * utilizing parts described by DOD approved standardization documents to the maximum extent practicable."

In our view, sufficient evidence exists on the merits of using parts meeting current Government standards. Careful consideration should be given before approving the use of parts not meeting such standards.

CONCLUSIONS

Our followup review has shown that many of our past recommendations have been addressed by DOD and GSA but coordinated, high-level attention to standardization is absent.

1/ This refers to parts declared standard in a contract but which are not covered by an existing equipment specification.

As a consequence, many unneeded items enter the Federal catalog and supply system without being subjected to engineering standardization controls.

The 1970 House Government Operations Committee report (see footnoote on p. 16) on cataloging and standardization stated engineering standardization could be enhanced through (1) better communications between the Government and design contractors, (2) incentives to encourage contractor use of parts preferred by the Government, and (3) a monitoring system to ensure continued attention to parts control. During our review we found that

--little progress has been made toward better communications between Government and industry and

--while the monitoring system--Military Parts Control Advisory Groups--has been adopted, followthrough on parts control by DOD is absent.

We believe standardization incentives could play a role in promoting greater contractor use of parts preferred by the Government.

Regarding the Military Parts Control Advisory Groups, we believe more could be done to take the burden off the monitoring side of parts control and shift the emphasis to better communications and incentives.

RECOMMENDATIONS

We recommended that the Secretary of Defense and Administrator of GSA take the following actions:

--Promote better Government-industry communications, work with industry to explore ways that designers can best learn about preferred items that may already be in the Government's supply system. Design selection lists being developed by the Navy could be a viable alternative.

--Make it clear to contractors that engineering standardization is a priority concern in Government procurements.

--Explore various incentive programs that could lead to greater parts standardization in Government weapon systems and related equipment.

--Put more "teeth" in parts control monitoring by (a) involving Military Parts Control Advisory Groups in the earliest phases of equipment design, (b) making the use of the groups mandatory in all development and production contracts, and (c) extending the groups services to all Government activities, including civil agencies. Regarding (a), the groups should play a more active role in the "pre-monitoring" phases of parts control. This means greater involvement in getting preferred parts information to designers and formulating standardization incentives programs.

--Modify the definition of a standard item so that it describes only those items governed by an existing Government specification.

Agency comments and GAO s assessment

DOD did not concur in our recommendations on engineering standardization. GSA again responded that since design work was more closely associated with military equipment, our recommendations were not really applicable to the agency. GSA and DOD by law are co-equal partners in operating these programs. Further, with DOD being GSA's largest customer, we believe coordination of program changes for certain items would be desirable.

DOD officials felt the existing body of specifications and standards and the availability of Military Parts Control Advisory Group services constituted an adequate engineering standardization program. They argued that their programs avoid stifling design creativity or giving the impression that the Government is trying to dictate parts selection to designers. DOD officials were also concerned about the cost of parts control versus the benefits obtained, and they argued that it may not be economically justified to push for more or expanded parts control programs.

We disagree with DOD's position. The lack of follow-through by DOD on its parts control efforts has allowed the advisory services to be bypassed or totally ignored, and merely providing a contractor a specification does not guarantee that parts preferred by the Government will actually be selected for use in equipment designs. Our main point is that the Government has not acted forcefully enough to

better its chances of convincing contractors to use standard parts in equipment designs. Far from stifling creativity, we believe a more active role by the Government will convince contractors that parts control is a priority concern in equipment design.

Concerning the economics of parts control, we believe that the Defense services and agencies in selected instances have shown that parts control efforts have paid off. We believe, however, that DOD has not taken the initiative to determine the economic feasibility of expanding these efforts.

CHAPTER 4

NEED TO IMPROVE SUPPLY STANDARDIZATION

The Secretary of Defense and the Administrator of GSA are directed by law to reduce the number of generally similar items in the Federal catalog and supply systems. Elimination of unessential items results in lower catalog management, inventory handling, and procurement costs. One means of identifying unessential items is through technically oriented item reduction studies.

Item reduction consists of looking at items already in the catalog, grouping together those which serve the same purpose, and eliminating those that are unneeded. It is accomplished by comparing the functions and technical characteristics of similar items and selecting a preferred item from the group. Removal of the other nonpreferred items from the inventory and the catalog is then initiated. If all registered users of the items agree to the findings of the study, the unessential items are coded "not procurable" and the remaining inventory stocks are systematically depleted. Thereafter the preferred item is ordered and used. As stocks of nonpreferred items are eliminated, users withdraw their official interest in the item and it becomes inactive. Five years later the item is eliminated from the Federal catalog.

Another method of eliminating unessential items is to find and remove those no longer used. Automated inactive item review programs are operated to identify unused items, prompting coordinated withdrawal of user interest and subsequent inactivation.

Beginning in 1974 GAO examined DOD and GSA supply standardization programs to determine how effectively unneeded items were identified and removed from the Government's supply systems. Three reports 1/ were issued on these programs and 20 recommendations were made to effect improvements. A synthesis of our key recommendations to DOD and GSA follows.

1/"Number of Items in Federal Supply Catalog Can Be Reduced," Oct. 21, 1974; "How the Item Reduction Program of GSA Could Be More Effective," July 11, 1977; and "Defense Inactive Item Program Could Be More Effective," Jan. 26, 1977.

--Take coordinated action to provide Government-wide direction to supply standardization programs.

--Effect more timely completion of item reduction studies.

--Adopt and implement uniform standardization status codes and annotate all cataloged items with these codes to prevent continued procurement of nonpreferred items.

--Adopt and enforce policies allowing item managers to issue replaced items before honoring requisitions for their replacements.

--Reemphasize the benefits of the Defense Inactive Item Program to eliminate inactive items from the supply system and Federal catalog.

DOD and GSA have established new policies and procedures for eliminating problems identified by our prior reviews, but several problems remain.

IMPROVED MANAGEMENT OF SUPPLY STANDARDIZATION PROGRAMS

In 1974 we reported that DOD and GSA had not adequately coordinated their item reduction programs. The agencies' roles, responsibilities, and methods of operation were uncertain because of the numerous interpretations of verbal agreements and written policies. We concluded standardization decisions were not uniformly recorded in the Federal catalog and were frequently ignored in the procurement process. We recommended DOD and GSA establish a joint standardization program steering committee to provide Government-wide oversight of the item reduction program and to ensure that the program is adequately defined and coordinated. We also recommended that the Secretary of Defense resume yearly program guidance, coordinated with GSA, to establish objectives and goals for the item reduction program.

DOD and GSA formed a Standardization Program Steering Committee in March 1975 to address the issues and recommendations included in our 1974 report. The committee was disbanded in October of that year after approving a new chapter to the Defense Standardization Manual. This policy and procedural document incorporates many of the recommendations we

made in 1974. Among these are the following:

--The manual clarifies and extends the concepts of item reduction to civilian agencies. Item reduction is now a Government-wide program.

--The item standardization coding system definitions and their universal applicability are clarified.

--The significance of the procurement and inventory management role in implementing item reduction decisions has been amplified, emphasizing the positive actions to be taken to halt procurement, delete stocks of unneeded items, and deregister users of those unneeded items.

--GSA was assigned full responsibility for the conduct of the item reduction program within its 69 assigned classes.

--GSA also was designated the civil agency coordinating activity for item reduction to expedite the review and comment process now required on DOD item reduction studies.

--Normal time limits of 60 and 90 days to respond to item reduction studies were established. A maximum of 120 days is allowed for the total coordination phase.

--Piecemeal submission of individual standardization decisions is authorized to expedite recording and procurement action on unneeded items.

--How and where technical data on items can be obtained is explained.

Despite these policy and procedural improvements, our followup review has shown that the full benefits of item reduction studies are not being realized.

TIMELINESS OF ITEM REDUCTION STUDIES

Elimination of unneeded items through item reduction is a lengthy process of which the study of candidate items is only a first step. Our 1974 report noted that while such studies are supposed to take about a year to complete, some

have taken over 30 months. Obtaining the agreement of agencies using items proposed for replacement was identified as a key factor contributing to the length of some studies. We also noted in that report that delays of 1-11 months occurred because decisions on specific items were not recorded until the entire study, which usually involved hundreds of items, was completed. To make the coordination and recording of item reduction decisions more timely we recommended that the Secretary of Defense:

--Give item reduction studies enough management attention to ensure participating activities assign adequate priority to completing their tasks.

--Make the 2-3 month goal for coordinating item reduction decisions the maximum time allowed. If users fail to respond within this period, agreement with the proposal should be assumed.

--Clarify DOD's policy on submitting item reduction decisions to the Defense Logistics Services Center and require piecemeal submissions of study items as they are agreed to.

During our followup review we examined the actions DOD had taken with regard to these recommendations. Revisions to the Defense Standardization Manual made by the Joint DOD/GSA Steering Committee: (1) set time limits of 60 or 90 days for responding to item reduction studies (depending upon number of items included in a study), (2) gave GSA the responsibility of the civil agency coordinating activity to centralize and expedite coordination of items reduction studies affecting one or more civil agencies, (3) established procedures to forward needed technical data to users to effect timely evaluation and decision, and (4) set 120 days as the maximum time for total coordination of item reduction studies.

Our recommendation that a user's agreement with an item reduction decision be assumed if a response was not received within a predetermined period was not accepted by DOD or GSA. GSA pointed out that 3 months may not be adequate to conscientiously review each and every end item application to determine if the recommended item can replace one or more items in the inventory. Lack of technical data for but one application could preclude acceptance of the recommended item. DOD officials later pointed out that assumed user concurrence could affect the operation of weapon systems and jeopardize mission performance and personnel safety. The Joint Steering

Committee did, however, authorize piecemeal submission of accepted standardization decisions as a means of expediting the recording of these decisions at the Defense Logistics Services Center.

Despite these changes, our review of item reduction project records showed timely coordination of item reduction studies remains a problem. For example, at the Defense Industrial Supply Center, item reduction studies of rivets, gaskets, and bolts were conducted with the following results:

	Rivets	Gaskets	Bolts
Items reviewed	3,960	1,840	1,843
Items made nonprocurable	126	123	227
Months to identify unneeded items	28	21	9
Months to coordinate proposed deletion action	11	7	24

As this data shows, coordination of all studies exceed the 4-month (120-day) period allowed by the DOD Standardization Manual. Other studies initiated by the Electronics and Industrial Centers were delayed because users did not respond after many months. At the Defense Electronics Supply Center, for example, of 43 studies begun since April 1974, only 1 was complete by December 1977. Half were awaiting coordination. Officials at both the Electronics and Industrial Centers said that the the Navy presented a major problem to timely completion of their item reduction studies. At the close of our review, however, this problem was being resolved.

PROCUREMENT OF UNNEEDED ITEMS

GAO's 1974 and 1977 reports discussed at some length the continued procurement of items coded "no longer procurable" due to item reduction studies. In 1974 we reported that lack of a uniform system for recording item reduction decisions led to misunderstandings of standardization codes and the continued procurement of unessential items by GSA for stock and issuance. Military activities were requisitioning such items from GSA and thus were not adhering to the item reduction decisions originally agreed to.

In response to recommendations we made concerning the need to clarify the standardization coding system to preclude the continued procurement of replaced items, a uniform coding system was adopted by DOD and GSA for all Government agencies. This coding system is part of the revised chapter added to the Defense Standardization Manual as a result of the joint DOD/GSA Steering Committee work.

The coding structure provides for the categorization of items as either "authorized for procurement" or "not authorized for procurement." Within these two broad categories, specific codes indicate key management information relating to why the code was assigned. Codes 3 and E are assigned to items no longer authorized for procurement.

The Defense Logistics Agency centers employ the Standard Automated Materiel Management System to restrict the continued procurement of items coded not procurable during item reduction studies. At the Defense Electronics Supply Center, the system is periodically updated to reflect recent standardization coding changes arising from item reduction studies. Replaced items coded 3 or E are automatically assigned a supply status code indicating they are terminal items and not to be bought in the future. Subsequent requisitions for replaced items are filled until inventory stocks are exhausted. Thereafter requisitions are automatically routed to and filled with approved replacements.

At the present time a user may requisition a replaced item using a specific code which acknowledges the not procurable status of the item. Such requisitions will be automatically filled on a one-time basis for direct delivery to the user. Such items are not added to inventory stock. Defense Logistics Agency officials advise that this exception procedure has been evaluated, and a change to the Standard Automated Materiel Management System is planned to require a manual review of requisitions for replaced items which require additional procurement.

In 1977, we reported that GSA continued to buy and stock items which were coded not procurable during DOD item reduction studies. GSA then had an inventory of $4.4 million and orders for $5 million worth of such items, and stocked some of the replacement items as well. Some items were retained in GSA inventories as long as 16 years after the standardization decision to delete them from Federal inventories.

GSA continued to stock and issue these items because prior to June 1975, DOD item reduction studies did not always consider the needs of civil users when it designated some items as not authorized for procurement. Since our report was issued in July 1977, GSA has been coordinating DOD item reduction decisions with civil agencies.

Current GSA procedures allow customers orders for replaced items to be filled on demand by direct delivery. Although this practice does not affect the size or composition of GSA inventories, it does allow users to circumvent the Government's standardization decisions. Because requisitions filled through "buy on demand" procedures are recorded as valid demands regardless of the standardization status of these items, the normal process of eliminating unneeded items from the Federal catalog is inhibited.

Amendments to the Defense Standardization Manual by the joint DOD/GSA Steering Committee provide for procurement and direct delivery on an interim basis of items coded 3 or E to any requisitioning activity which has challenged the standardization coding. Otherwise, requests should be filled with approved replacement items. We believe such exception provisions are necessary to overcome unforeseen compatability problems arising from the substitution of one item for another. Nevertheless, such situations should be carefully controlled.

USING UP INVENTORIES OF REPLACED ITEMS

In 1974, we reported that many items remained in Federal inventories long after item reduction decisions to eliminate them were agreed to. Even though DOD policies required that stocks of replaced items be used up before orders for approved replacements were honored, this policy was not followed. Similarly, GSA supplied customers the items they requested regardless of the item's standardization status. The impact of these practices varied from premature disposal of serviceable assets to simply holding items for 2 years before disposal. In any event, the process of economically and effectively phasing out unneeded items was hindered.

Both DOD and GSA disagreed with our recommendation that item managers be authorized to issue all replaced items before honoring requisitions for their approved replacements. These agencies advised that item reduction studies often propose the continued use of one item in place of several others.

While each of the items determined unneeded can be replaced by the approved item (one-way substitution), relationships among unneeded items (interchangeability) are not established. Thus item managers have no basis of knowing if the replaced items in stock could be used as well as the approved replacement item.

Although they disagreed with our 1974 recommendation, GSA and DOD prepared and approved an amendment to the Defense Standardization Manual which includes procedures to improve the orderly drawdown of assets determined to be unessential through item reduction decisions. These changes were effective February 1976 and include:

--Establishing procedures to encourage the use of items "not authorized procurement" until exhausted in lieu of items authorized for procurement.

--Reviewing "due in" assets positions and effect contract termination, as feasible, when total assets of items authorized and not authorized for procurement, on hand and on order, exceed authorized levels.

Drawdowns of unessential items by the Defense Logistics Agency

Within the Defense Logistics Agency, items are assigned to a family group according to the interchangeability/substitutability relationships developed after completion of item reduction studies. A family group may have from one (bachelor item) to forty members. For each family group, one item is designated the family head and is the approved replacement for all family members. The Standard Automated Materiel Management System records indicate for each family member the approved family head so that when stocks of replaced items are exhausted, requisitions can be filled with the approved replacement item.

While the system is capable of substituting a family member (item no longer authorized for procurement) in place of the family head, this capability is generally not used. Currently, if stocks of approved items are insufficient to fill a requisition, the item is back ordered and the requestor is notified that a substitute item is available. If the user agrees, the substitute is shipped; if he does not agree, the requested item is delivered when it becomes available.

The system does not carry interchangeability data on individual family members. As stocks of these items are exhausted, subsequent orders can be filled with the approved family head. We were advised that substitutability relationships among family members are not determined or recorded during item reduction studies.

We discussed the potential of the Standard Automated Materiel Management System to expedite the attrition of unneeded items with Defense Electronics Supply Center officials. They agreed that if used, the system could eliminate stocks of unneeded items more quickly and in some cases avoid disposal of unneeded assets.

GSA drawdown actions

Our July 1977 report pointed out that substitutability data developed during item reduction studies was not recorded in GSA's automated item management system. Because this data was not recorded, GSA's item managers were not drawing down stocks of items no longer needed by substituting them for their approved replacements. As a result, stocks of unneeded items were either held in inventory or disposal action was initiated. In addition, the absence of item reduction data in GSA's order processing system allowed requisitions for unneeded items no longer in stock to be back ordered, rejected, or bought for direct delivery, even though replacement items were available.

To overcome these problems and prevent the premature disposal of unneeded assets, we recommended that GSA

--include cross-reference and interchangeability data in the automated supply management and order processing systems,

--establish procedures for item managers to substitute replaced items in requisitions for their approved replacements rather than retain or dispose of excess inventory, and

--retain a cross-reference in the order processing system to assure that new orders are filled with approved replacements after inventories of unneeded items are exhausted.

During our followup review, GSA advised that its automated supply management and order processing systems now respond to changes in the standardization status of items. Replaced items are coded "use until exhausted," and reference to the approved replacement item has been incorporated. When stocks of replaced items become attrited, the replacement is issued. Records of replaced items are retained so that requisitions received after inventories are exhausted can be directed to the replacement item.

GSA has not, however, adopted procedures to expedite the attrition of unneeded items by issuing them when requisitions for their replacements are received. Item managers offer replaced items as substitutes only when stocks of replacement items are inadequate to meet customer requirements.

A GSA official contended that forced substitution of replaced items as a means of using up stocks of unessential items is costly and counterproductive. Customers have returned such items in the past at the Government's expense and suffered delays in receiving items they needed. While agreeing that users approved the substitutability of replaced and replacement items during the items reduction coordination, this official said GSA's files do not record the specific approval of each user. For example, an item reduction decision may be agreed to by the Air Force Cataloging and Standardization Office but activities within the Air Force may not be able to use a replaced item.

We disagree with the GSA position. Our 1977 report demonstrated ample opportunities to use up unneeded items without resorting to disposal. The 1976 amendments to the Defense Standardization Manual, which GSA helped develop, clearly encourages item managers to promptly exhaust stocks of items determined to be no longer needed. In our view, this requires a conscientious effort to determine whether users can accept substitute items. We agree that force issue without considering the needs of users can be counterproductive. However, we feel that user needs do not change so radically in the short run that they would prevent depletion of unneeded items through normal demand. The improvements offered by most approved replacement items should be carefully weighed against the potential for eventually disposing of assets that could have been used instead.

WITHDRAWAL OF USER INTEREST REMAINS A PROBLEM

After an item reduction decision is recorded, users of items no longer needed are supposed to use up their inventories and thereafter order approved replacements. Until catalog records reflect such a transition by all registered users of the item, the unneeded item remains active in the Federal catalog.

Our 1974 report showed that prompt user deregistration was not occurring because of varying cataloging and equipment support policies, and in some instances because users were unfamiliar with procedures. In June 1973 we studied 178,000 items listed in the Federal catalog as not procurable, and reported that 57 percent had remained in that status more than 4 years. About 70 percent of those items in the "over 4 years old" category were assigned to two Federal supply groups which included electrical and electronic equipment components, and common hardware items and abrasives. Most of the items in these groups were managed by the Defense Logistics Agency's electronics and industrial supply centers. We concluded in that report that while users had agreed to item reduction decisions, thousands of items remained active in the catalog years later. If the true value of item reduction study results are to be realized, unneeded items must be removed from both the supply and cataloging systems.

Our recommendation that cataloging policies and practices be revised to provide a specified time limit for user withdrawal (after which automatic withdrawal would occur) was agreed to by DOD and GSA. Nevertheless, cataloging procedures have not changed nor has automatic user withdrawal been implemented. During our followup review, we examined catalog data and found in December 1977 that of 270,013 items coded "not procurable," only 29,401 were inactive.

DOD's official response to our 1974 report stated that:

> "We concur in the intent of the (above) recommendation. Accomplishment, however, must be outside the cataloging system since that system does not consider asset positions. It would appear more feasible to include this provision in the Defense Inactive Item Program (DIIP)."

DEFENSE INACTIVE ITEM PROGRAM

The Defense Inactive Item Program was implemented by the Defense Logistics Agency in 1963 and adopted DOD-wide in 1968. Its basic objective is to eliminate from the supply system unneeded and unused items which use up warehouse space, personnel resources, and computer processing time. The program provides uniform procedures whereby unused items are selected and considered for elimination as items of supply and from active cataloging records. Unused (inactive) 1/ items are defined by DOD as those for which no no current or future requirements are recognized by any registered user or material manager. To be considered by the program, items must have been in the DOD supply system for a minimum of 7 years, with no experienced demand for the last 2 years. As employed by the Defense Logistics Agency, the Defense Inactive Item Program is completely automated and refers items meeting the above criteria to military service users for review. If all registered users agree, action to remove the item from the supply system is initiated. One user's continued need for the item will cause it to be retained.

In 1977 GAO issued a report 2/ on the effectiveness of the inactive item program as implemented by the Defense Logistics Agency. We reported a number of problems that impeded effective operation of the program. An estimated $46 million was being spent annually to maintain unneeded items in the Agency's supply system.

In January 1977 the House Appropriations Committee reported that the number of unneeded, unused stock items managed by the Defense Logistics Agency had not been reduced but actually had grown from 472,000 in fiscal year 1972 to 534,000 as of June 30, 1976. In response to our report and that of the Congress, the Defense Audit Service examined the Defense Inactive Item Program as implemented by the military services, the Defense Logistics Agency, and in particular, the Defense Electronics Supply Center.

1/Both the catalog system and the logistics system use the term "inactive" item. The definitions, however, are not consistent. In our discussions, we use the term "unused item" in place of "inactive" as found in most program documentation.

2/ "Defense Inactive Item Program Could Be More Effective" (LCD-77-204, Jan. 26, 1977).

A draft of the Defense Audit Service report states the program has not been an effective means to purge unneeded items from the DOD material inventory and active cataloging records. The principal reason for this failure is the lack of a serious or continuing emphasis by the military service users to purge unneeded items. The audit service's report also found that improvements were needed to assure that all potentially inactive items are subjected to the program and that all unused items identified by users as unneeded are eliminated from the DOD supply files.

According to the audit report, the Defense Logistics Agency had unilaterally disposed of $21.9 million in assets during 1977 due to frustration with the ineffectiveness of the Defense Inactive Item Program. Some of these assets, according to the report, were needed by the military services and should not have been excessed.

GSA INACTIVE ITEM DELETION PROGRAM

GSA officials advised us that their inactive item deletion program has become a successful tool in reducing the number of stocked items in GSA's inventories. Since 1976 the number of items stocked by GSA has been reduced from 37,449 items in Janaury 1976 to 22,112 items in June 1978. Much of this reduction GSA attributes to inactive item deletion.

GSA's program entails a semiannual review of user requests for stocked items. If demand falls below established tolerance levels (zero demands in 1976, zero to five demands in 1977), items are reviewed for transfer to methods of supply other than central stockage. These include buy-on-demand, direct ship, and local purchase. In 1978, GSA will again operate the inactive item deletion program using a criteria of zero-10 requests for an item in the previous year to identify items to be removed from the stock system.

GSA also considers items which are not stocked during semiannual item deletion reviews. Agency officials said, however, that emphasis is placed on reducing the number of stocked items and unneeded inventory assets. GSA has had some problems getting civil agencies to agree to withdraw their official interest in unused items. As a result of the Agency's inactive item deletion program, letters are forwarded to civil agency users to obtain information on the amount of locally stocked assets and to encourage user withdrawal. GSA acknowledges that users should promptly

withdraw interest when local assets are depleted, but resists an automatic withdrawal of user interest after a specified period of time.

Low priorities still preclude an effective GSA item reduction program

Our 1974 report identified the low priority and limited resources GSA has assigned to item reduction studies as one of the key factors influencing the Agency's failure to effectively eliminate unnecessary items from the Federal catalog and supply systems. We pointed out that item reduction potential was present in many of GSA's assigned Federal Supply Classes. GSA gave qualified agreement to our recommendation that adequate priority be given to developing a complete and well defined item reduction program: unless sufficient resources were received to support such improvements, the recommendation would not be implemented.

After our report was issued, GSA worked actively with DOD in developing a coordinated item reduction program. Full integration of GSA and civilian agencies was the primary thrust of this effort. As a result, GSA assumed, in June 1976, complete item reduction responsibility for its 69 classes which had previously been assigned to DOD activities. GSA also became the civilian agency coordinator for all DOD item reduction studies impacting civil agencies.

In 1977, GAO again examined GSA's item reduction program and reported that although the agency had begun to improve its program, much more could be done to reduce the quantity of items it stocked. We observed that while GSA had established a group to monitor and control item reduction programs within GSA, it had made no item reduction studies as of May 1976. GSA advised that its slow progress could be attributed to a lack of resources.

Our followup review of GSA's item reduction program in 1978 has shown that while GSA program responsibilities have increased, resources needed to meet these responsibilities have not been allocated. GSA initiated only eight item reduction studies in fiscal year 1977, and planned only six studies for fiscal year 1978. Beyond this internal GSA effort, the Army's Natick Laboratories in Massachusetts initiated an additional 25 studies for GSA over the same time period. Studies proposed by DOD as part of the annual

standardization program for the 69 GSA assigned classes have been rejected due to lack of resources. DOD studies encompassing over 31,000 items have been sent to GSA, civil agency coordinator for final review and coordination since 1975. Yet nearly 8,000 items had not been reviewed in June 1977 due to lack of available personnel.

Despite repeated efforts since June of 1975 by GSA Federal Supply Service officials to thoroughly document and strongly recommend additional funding for item reduction, increased resources have not been allocated. GSA's current position with regard to funding the item reduction program is contained in a September 1977 letter to the Chairman of the Senate Committee on Governmental Affairs. The Acting Administrator of GSA wrote:

> "The merits of studying items in the stock program which have not previously been subjected to item standardization (reduction/review) were considered together with increased cost of performing this work had in our zero based budget review for FY 1979. They were evaluated and ranked in relation to other GSA programs and it was determined that the increased expenditure required to perform these studies was not of sufficient priority for inclusion in our FY 1979 budget submission."

GSA officials advised us that they foresee little change in the agency's budget priorities in the next several years.

In our view, item reduction studies are needed in GSA's 69 assigned classes. Analysis of 1977 catalog data shows that about 72 percent of approximately 150,000 items assigned to GSA for item reduction purposes have never been studied. GSA's hand tool class, which in the past was reported by us to have excellent potential for item reduction, contained over 55,000 items in December 1977. Over 44,000 (80 percent) of these items have never been subjected to item reduction. Our review at GSA's Tool Center in Kansas City, Missouri, showed center personnel identifying duplicate items (particularly screwdrivers) which were missed by item entry controls.

CONCLUSIONS

DOD and GSA have made improvements which are in line with our prior recommendations. Notably, the Joint Steering Committee established by DOD and GSA prepared and issued

directives for eliminating many of the old problems which limited program effectiveness, but the directives have not been fully adopted or implemented. Coordinating item reduction decisions still takes too long. GSA, while taking on added responsibilities for item reduction, has not adequately implemented a program for fulfilling those responsibilities. Efforts to eliminate unnecessary items, particularly through the Defense Inactive Item Program, have not been as effective as they should be.

RECOMMENDATIONS

We recommend that the Administrator, General Services Administration, require item reduction studies to be conducted within GSA's 69 classes. We also recommend that the Secretary of Defense and the Administrator, General Services Administration:

--Closely monitor the time required to coordinate item reduction studies.

--Ensure that existing programs to delete unnecessary items from the catalog and supply systems are, in fact, accomplishing that goal. Timely standardization coding actions, item substituting, and inactive item reviews are the available "tools," but more aggressive followthrough is needed to (1) make sure these matters are used and (2) assess their results and verify reasons for continued retention of nonessential items.

AGENCY COMMENTS AND GAO's ASSESSMENT

DOD and GSA agreed with the intent of our recommendations. While in agreement, DOD emphasized that supply standardization, especially through item reduction studies, is a low priority that is not likely to receive more resources or management attention than that which currently exists. DOD added, however, that it will be examining procedures, guidance, and criteria for the Defense Inactive Items Program to improve its efficiency. GSA said sufficient resources have not been allocated to supply standardization in order for the program to be effective.

We looked at results achieved and noted that supply standardization has not been effective in deleting items from the Federal catalog and supply systems. As a result, projected savings from item reduction studies and the Defense Inactive Item Program are often not realized because users cannot agree to specific item deletions. In the end, the dollar investment value of such studies and analyses becomes questionable when actual followthrough is either too limited or absent.

CHAPTER 5

DUPLICATION DUE TO INADEQUATE ITEM IDENTIFICATIONS AND ENTRY CONTROLS

In 1973, GAO issued a report on problems we observed in the Federal Catalog System. Among the issues discussed was the presence of thousands of unnecessary stock numbers. Because items were not identified uniquely, more than one stock number was assigned to the same supply item.

Several agencies have the authority to catalog items in the Federal Catalog System, including

--the three military services and the Marine Corps,

--the six Defense Logistics Agency Supply Centers and the Defense Industrial Plant and Equipment Center,

--GSA, for itself and most civil agencies,

--the Federal Aviation Administration,

--the Defense Nuclear Agency,

--the National Security Agency,

--the Coast Guard, and

--the Defense Logistics Services Center for NATO countries and other foreign governments.

The general rule is that the agency which manages a particular item handles all the cataloging actions for that item, regardless of which agency has management oversight for the item's Federal Supply Class. As a result, an agency with oversight for a particular class may handle only a small part of the total cataloging activity for that class. For example, we noted that in fiscal year 1977:

--GSA and other civil agencies cataloged only 7.4 percent of all the items added to GSA's largest Federal Supply Class (5120-hand tools).

--Four Defense Logistics Agency Supply Centers cataloged only 56 percent of all the items added to 37 of their high-growth Federal Supply Classes.

In 1975, we reviewed some of the controls within the catalog system to prevent duplicate items from entering the catalog and supply system. We identified problems and recommended improvements to the entry controls being used. Shortly after our report was issued, the Defense Integrated Data System was implemented by the Defense Logistics Agency. The system fundamentally changed the manner in which item entry control is performed.

During our followup review we again examined the item identification process and the effectiveness of item entry controls provided by and in conjunction with the Defense Integrated Data System. We observed that duplication remains in the Federal catalog despite efforts by DOD and GSA to reduce it. Poor item identification and weak item entry controls are two basic causes of this duplication. These problems are made worse and less easily correctable by the decentralized, multiagency organizational nature of the catalog system. Our review shows improvements should be made in the way supply items are identified, and automated item entry controls should be supplemented by manual technical reviews for some types of items.

INCOMPLETE ITEM IDENTIFICATION IS A SOURCE OF DUPLICATION

Proper item identification is fundamental to all supply management operations including procurement, distribution, storage, issuance, accounting, and disposal. Cataloging establishes a uniform method of identifying supplies and, as such, underlies all other operations in the supply chain. Its logic requires that each item be uniquely identified so that the same item does not appear under different names, numbers, and descriptions, or that different items are not given the same designation. This requires a uniform, systematic procedure for naming, describing, classifying, and numbering items. The new entries can then be screened against existing items to avoid unnecessary duplication.

In the Federal Catalog System the process which establishes the unique character of each item is known as item identification. Item identification is both the process and product of describing items and includes the following elements:

--Item name.

--Item description.

--Item classification and numbering.

Each of these elements is necessary to fully identify items and support the entry controls employed within the catalog system to keep out unneeded items. Poor (that is, inaccurate or incomplete) identification weakens these control mechanisms and promotes duplication in the catalog.

Failure to use approved item names

Under the Federal Catalog System a single name is assigned to each item of supply so that regardless of how many activities use the item, each will call it by the same name. Federal catalog policy requires the use of approved item names in the identification process, except when an approved name has not been established. About 29,000 item names are currently approved for use in the Federal catalog.

Once an item is given an approved name, the remaining steps of identification can be performed. Using the approved name, cataloqers consult various directories to locate (1) the appropriate Federal Item Identification Guide, which sets forth procedures for describing item characteristics and (2) the Federal Supply Class(es) into which items are recorded.

If an approved name is not assigned, the usefulness of the resulting item identification is substantially weakened. This is because approved names

--determine how the physical and performance characteristics of an item are systematically described, and

--guide the classification of items into the 603 Federal Supply Classes into which the Federal catalog is divided.

Without an approved name, most items cannot be described characteristically, and proper classification is uncertain. In short, the unique character of an item may not be established and the following forms of duplication can result:

--More than one national stock number can be assigned to the same or similar items.

--Identical and similar items remain in the catalog and supply system undetected.

--Items not assigned approved names are subject to recataloging when adequate technical data is assembled. In essence this means performing the cataloging job twice.

Despite the recognized disadvantages of not using approved item names, many items in the Federal catalog are identified without them and each year more are added. A March 1978 Defense Logistics Agency analysis of 5.2 million items in 222 Federal Supply Classes showed nearly 2 million were not assigned approved item names. These classes, which comprise more than one third of all Federal Supply Classes, each contain 1,000 or more items not assigned approved names. The following table shows the incidence of items without approved names among selected Federal Supply Classes.

Defense Logistics Agency Analysis of Approved Item Names In The Federal Catalog System March 1978

Federal supply class	Number of items in each class	Number of items without approved names	Percent without approved names
1005 (guns, through 30mm)	17,510	14,807	84.6
1560 (airframe structural components)	260,751	209,086	80.2
2040 (marine hardware and hull items)	6,241	4,716	75.6
5120 (hand tools, non-edged, nonpowered)	58,898	33,789	57.4
5310 (nuts and washers)	124,723	21,118	16.9
5905 (resistors)	304,875	16,869	5.5
6610 (flight instruments)	20,988	16,355	77.9
7320 (kitchen equipment and appliances)	3,081	2,136	69.3
Total	797,067	318,876	40.0

As shown in the table, Defense Logistics Agency-managed classes (5310 and 5905) contained a large number of items but had substantially lower percentages of those items without approved names when compared with other cataloging activities. The military services, on the other hand, have higher percentages of items without approved names. Further, they can and do catalog items without approved names in classes assigned to the Defense Logistics Agency for integrated management.

Each year more items not assigned approved names are added to those already in the catalog. Cataloging actions performed for foreign governments by the Defense Logistics Services Center's International Codification Division during the 12 months ended June 30, 1977, showed that of 21,687 cataloging actions, 7,828 (36 percent) involved items without approved names.

The potential for duplication inherent in items not assigned approved names is largely related to the absence of recorded characteristic descriptions for these items.

Item descriptions are not complete

Item description is the second step in identification. It is accomplished by describing an item's physical and functional attributes or by reference to a number assigned by the manufacturer. The preferred method of identification is by characteristics. This requires an approved item name and a Federal Item Identification Guide to establish the technical characteristics of an item with that name. A certain bolt, for example, might be identified by describing the kind of metal, diameter, length, type of head, size of thread, and other features. Performance as well as physical data may be given. This information is extracted by catalogers from engineering drawings, manufacturers' catalogs, test reports, specifications, and standards. In May 1978 there were 445 Federal Item Identification Guides cross-referenced to the 29,000 item names approved for use in the Federal catalog.

Item descriptions can be either complete (full) or partial depending upon how closely the cataloger is able to satisfy the guide requirements. Of the 4.7 million active items in the Federal catalog, about 1.7 million are fully described and about 1.3 million are partially described. The remaining 1.7 million items are not described characteristically, but rather are identified by reference to a manufacturer's part number. Items not assigned approved names comprise a large percentage of the cataloged items which are not fully described by characteristics.

Maximum use of the full descriptive type of item identification is preferred under Federal catalog policy. Nevertheless, in March 1978 only about 38 percent of the DOD-managed items listed in the Federal catalog were fully described. The following table shows items managed and the percent of items fully described for major DOD catalog participants.

Total Items Managed by DOD and Percent Managed by Full Descriptive Method

Department	Items managed March 1978	Percent fully described FY 74 ending %	FY 76 ending %	FY 77 ending %	March 78 ending %
Army	257,177	24.2	23.4	23.8	23.9
Navy	660,203	17.1	16.9	16.1	15.6
Air Force	828,948	17.7	17.2	16.5	16.4
Marine Corps	38,026	34.2	33.4	31.9	29.8
Defense Logistics Agency	1,914,300	45.4	49.1	54.8	56.3
DOD Total (note a)	3,836,963	32.4	34.3	37.0	37.7

a/ Does not include 138,309 items managed by other DOD activities. As shown above, the Defense Logistics Agency's efforts to fully describe items explains the small upward trend in DOD. Since 1974 the percentage of fully described items managed by the military services has declined.

Full characteristic descriptions establish the true identity of an item and differentiate it from every other item of supply. Thus, duplicate stock numbers can be recognized and eliminated and similar items can be selected and studied for elimination of those having dispensable differences. By comparison, partially described and reference type identifications are not complete. Because all characteristics are not documented, such items are not subject to the full range of item entry controls operating in the catalog system. As a result, new items are assigned national stock numbers and added to the catalog and supply systems even though identical and similar items are already in the catalog. This duplication can remain undetected because some controls designed to identify duplicate and unneeded items depend upon the presence of characteristic data. If items are not fully described, these controls are substantially weakened.

Impacts of poor item identification on item entry controls

The item entry controls used to detect and stop the unnecessary addition of new items into the catalog and supply system can be placed into two groups--those which compare the manufacturers' part numbers assigned to items, and those which compare item characteristics. Items which are not fully described by characteristics (for example, those which are not assigned approved names) are subject to only those controls which compare item part numbers.

As we will discuss later in this chapter, part number screening is effective only when identical items have the same part number; many do not. For example, Defense Construction Supply Center officials found that the following mufflers were identical even though the part numbers assigned these items were different.

Type of item	National stock number	Manufacturer's code and part number
Muffler	2990-00-041-2984	10086 63800 DB48242
Muffler	2990-00-790-2644	a/18265 MZM08-5023

a/ Catalog records showed 27 other reference numbers for this item.

Center officials detected this duplication by obtaining an engineering drawing from an equipment manufacturer in an effort to fully describe the first item. The part number of the second item was listed on the drawing; however, the manufacturer had assigned his own part number to the item.

Many times manufacturers are unwilling to respond to requests for engineering data on components or send technical data which is not useful. In such cases Defense Construction Supply Center officials have examined warehouse stocks for clues to the true identity of suspected duplicate items. This procedure was used to identify the following duplicate mufflers.

Type of item	National stock number	Manufacturer's code and part number	
Muffler	2990-00-375-9836	24617	334634
Muffler	2990-01-011-4005	11862	343194

Examination of the shipping containers for the first item disclosed the part number of the second item. Physical inspection of both items showed they were identical.

In both of the above examples, additional research showed that all four mufflers were made by the same manufacturer. Part number screening, the only entry control to which these items were subjected (due to the absence of characteristic data), did not and could not detect the duplication Construction Center officials found.

The problem of multiple part numbers on identical items is common among piece parts managed by the Defense Construction Supply Center. The problem illustrated above--lack of true vendor part number--is only one variation of the item identification problem faced by catalogers. Some piece parts, for example, are made by more than one manufacturer, although anyone may replace the other in terms of form, fit, and function. Items such as spark plugs and oil filters are commonly cited examples. For such items, knowledge of the original manufacturer's part number will not disclose duplication. Only careful comparison of technical characteristics can show with certainty that one item is identical to another. To perform such comparisons, adequate technical data to document item characteristics is necessary.

Inadequate technical data hampers the item identification process

Defense Logistics Agency officials advised us that inadequate technical data at the time new items are cataloged largely explains the high number of items which are not assigned approved names or described characteristically. Under current cataloging procedures, supply activities must supply the items requested by a user as long as each request is accompanied by a valid manufacturer's part number. Such a part number need not be the true vendor (original manufacturer's) part number, and technical data such as a manufacturer's engineering drawing need not accompany the request, although this is the preferred procedure.

If technical data is not supplied by a requestor, catalogers try to obtain it through direct request to the manufacturer or by consulting the manufacturer's catalog. Neither of these alternatives is satisfactory in the short run because supply centers must respond to supply requests promptly. Unless needed data is readily available, new items are cataloged without approved item names or without characteristic descriptions. Thereafter, when needed data is obtained, the item is re-cataloged, sometimes resulting in the identification of a duplicate item. When this occurs, the recently cataloged item must be canceled and the catalog changed accordingly. Warehouse stocks must then be consolidated and all recorded users notified. Obviously, this effort is time consuming and expensive.

The failure of Government activities to obtain item identifying information from commercial manufacturers at the time of equipment purchase is an old problem which remains unresolved. Regulations and procedures have for years required that true vendor and alternate part numbers be obtained by procurement activities, yet this is not done in many instances. This problem has been discussed in prior GAO reports and in a 1970 report prepared by the Congressional Committee on Government Operations. We did not investigate this problem in detail during our followup review, but noted that without adequate technical data to properly identify and describe items entering the Federal catalog and supply systems, assignment of more than one national stock number to the same item cannot be stopped.

Classification is uncertain

The third step in item identification is determining the relationship of a new item to others already in the system. Federal Supply Classification provides, by specific definition, uniform commodity groups and classes for all items.

The Federal Supply Classification scheme currently includes 77 major families called Federal Supply Groups, each of which is assigned a two-digit code. Each Federal Supply Group is divided into Federal Supply Classes. Each class is designated by adding two more digits to the Federal Supply Group code. The classes within any group are considered to be closely related. Each class covers a relatively homogeneous area of commodities with respect to their physical or performance characteristics. For example,

Federal Supply Group 53, Hardware and Abrasives, is divided into 15 classes, some of which are:

--Class 5305--screws.

--Class 5306--bolts.

--Class 5307--studs.

--Class 5310--nuts and washers.

--Class 5360--coil, flat, and wire springs.

The Federal Catalog System Policy Manual requires that each item of supply shall be classified in one and only one Federal Supply Class. Accordingly, cataloging handbooks are prepared and issued to help identify the appropriate class for an item of supply. Typically, the manufacturer's part name or approved name can be found in such handbooks together with references to the normally assigned Federal Supply Class.

By consulting such handbooks, catalogers can assign items to designated Federal Supply Classes and thereby assure that each item of supply appears in only one class. Our examinations of Federal Catalog records, however, showed that many items which were not assigned approved item names were misclassified.

We reviewed the classification of items not having approved names normally assigned to the hardware classes of Federal Supply Group 53. The following table presents the results of our examination.

Misclassification of Items Not Assigned Approved Names

Item name and designated Federal Supply Class		Number of items assigned this name at March 1978	Number of items Classified outside designated class	Number of classes in which items appeared
Screw	(5305)	6,806	1,207	149
Bolt	(5306)	1,727	365	74
Stud	(5307)	2,164	840	120
Nut	(5310)	2,984	747	140
Washer	(5310)	3,413	1,018	144
Spring	(5360)	7,979	4,577	213
Spring, helical	(5360)	585	493	81
Total		25,658	9,247 (36.0%)	

The names assigned to the items shown in the above table (i.e., screw, bolt, etc.) are called basic names. They identify a broad group of items generally assigned to a particular class but they do not identify specific items. Because these names do not adequately identify an item, they are not approved names. For example, the approved name "Screw, machine" specifically identifies a particular type of screw. Many items assigned basic names, however, are easily classified because the basic name is assigned to a particular supply class. Nevertheless, many of the items we examined were improperly classified. Over 1,200 items named "Screw" appear in Federal Supply Classes other than 5305.

Automatic edits are not employed by the Defense Logistics Services Center to compare other than approved item name codes within Federal Supply Classes to detect misclassification of items. Consequently, beyond quality control reviews conducted by catalogers, the misclassification goes unchecked.

Items which are misclassified also escape the scrutiny of item managers. Controls used to expose duplicate and unneeded items are generally restricted to particular classes.

Items not assigned to these classes are simply not examined. Similarly, efforts to more completely describe items not assigned approved names or not described characteristically are focused on a particular class of items. As a result, misclassified items which are duplicates or unneeded variations of similar items go undetected.

The presence of inadequate and incomplete item identifications in the Federal Catalog has been recognized by the cataloging community for some time. Steps have been taken, especially by the Defense Logistics Agency, to improve current cataloging practices and correct poor item identifications made in the past. The catalog system's input process, however, is too decentralized, and records in need of correction are too numerous for the Agency to accomplish this task alone.

ITEM IDENTIFICATION CAN BE IMPROVED

In our 1973 report we said the Federal Catalog contained about 200,000 unnecessary stock numbers which could be readily identified and eliminated. Another 100,000 could have been eliminated if additional catalog data were obtained and recorded. We said a program to identify and eliminate unnecessary stock numbers would be worthwhile and would result in

--savings in operating the catalog system,

--savings from consolidating requirements presently identified under more than one stock number, and

--greater use of items in the system.

Elimination of duplicate items

Following our report, the Defense Logistics Agency initiated a review of the manufacturers' part numbers recorded in the Federal Catalog. Using variations of a computer program developed during our audit, each manufacturer's part number in the catalog was compared to all others. When matching part numbers were found, the responsible cataloging activity was asked to investigate the items and eliminate those which were duplicates.

The "Cancel Dup Program" was operated from September 1974 to October 1977. During this period 487,381 items were reviewed by various cataloging activities and 141,467

duplicate items were eliminated. The program was discontinued when the time required to find a duplicate stock number became excessive.

Beginning in January 1978, the Defense Logistics Services Center resumed the automated search for duplicates using variations of the methodology developed during the Cancel Dup Program. As of June 1978, 12,564 national stock numbers were identified as possible duplicates and forwarded to cataloging activities for review and corrective action. About 2,300 duplicates were eliminated during the first 6 months of program operation. A second phase of the project was implemented in June 1978.

Joint Government/industry data update program

In January 1978 the Defense Logistics Agency established a joint Government industry program to verify part number records in the Federal Catalog. The Government/Industry Reference Data Edit and Review program was initiated because reference numbers (i.e., the combinations of manufacturers' code, part number, and other data) in the catalog data base may have been superseded, replaced, or unrecognized by the indicated manufacturer, or no longer manufactured.

As of June 1978, 38 companies had been advised of the program and 17 had agreed to participate. By the end of our review, 11 companies had been provided data on about 300,000 reference numbers.

Defense Logistics Agency Item Identification Improvement Program

For several years the Defense Logistics Agency has recognized the potential for duplication inherent in the less than fully described items recorded in the catalog. To minimize duplication and to enhance the overall operations of the supply system, the Item Identification Improvement Program was established. Under this program cataloging activities are encouraged to upgrade the item identifications which lack approved item names or are not or only partially described characteristically.

Response to the Agency's Item Identification Improvement Program by military service cataloging activities has been low due to resource constraints and the higher priorities assigned to other cataloging tasks. Within the Agency, increasing emphasis has been placed on this

program, and overall progress within DOD is due largely to the efforts of Agency Supply Centers. A table showing the progress and status of this program as of March 31, 1978, is presented below.

Item Identification Improvements
From Reference and Partial
Descriptive to Full Descriptive Method

Department	Number of Items FY 74	FY 77	FY 78 cumulative to March 1978
Army	3,103	675	606
Navy	3,792	1,665	1,010
Air Force	7,150	462	2,769
Marine Corps	69	34	29
Defense Logistics Agency	25,266	108,111	57,895
Other DOD activities	397	3,218	1,483
DOD Total	39,777	114,165	63,792

AUTOMATED ITEM ENTRY CONTROLS HAVE KNOWN LIMITATIONS

Unneeded items continue to enter the Federal Catalog because automated entry controls, which rely on available item identification information, are not able to screen them out. Consequently, different national stock numbers are being assigned to the same or similar items increasing the supply system workload unnecessarily.

Our work shows that many of these items would have been identified and excluded from the catalog if manual reviews by technical specialists had been performed prior to national stock number assignment.

Current automated entry controls

Each year about 200,000 new items are assigned national stock numbers and added to the Federal catalog. Automated entry controls compare the new items with those already cataloged in a variety of ways.

Part number screening

Since 1963 the Defense Logistics Services Center has operated a part number screening system. This is accomplished by comparing the part and manufacturer's numbers of a new item to those of items already cataloged.

Part number screening is required for all items prior to national stock number assignment and may be performed several times depending upon the origins of an item. Of over 7 million part numbers submitted for screening in fiscal year 1977, 29 percent were found to match items already in the catalog.

As we noted earlier in this chapter, part number screening does not necessarily prevent assignment of more than one stock number to the same item. When identical items have different part numbers, they will not be detected. Further, some vendors produce items for several end item manufacturers and label each item with different part numbers provided by the buyer. Other vendors periodically change their part numbering system while their products remain essentially the same.

As GAO pointed out in 1975, part number screening is also ineffective in excluding generally similar items made by the same or different companies. Even items made to a Government specification or standard can escape detection though they are functionally equivalent. The entry of these functional duplicates into the catalog is illustrated by a recent cataloging action on behalf of the Saudi Arabian government.

The Defense Logistics Services Center cataloged about 3,000 items for Saudi Arabia during 1977. Examination of 371 electronics items by the Defense Electronics Supply Center experts showed only 7 of the items should have been cataloged. All of the others had higher reliability counterparts listed in the Federal Catalog or awaiting stock number assignment.

All of the items cataloged for Saudi Arabia were subjected to automated part number screening, but because their military part numbers were slightly different from the inventory items, the duplication was not detected. Several of the improperly cataloged items and their more reliable counterparts are shown on the following page.

Item type	Catalog status	Military part number	National stock number
Fixed resistor	Functional duplicate	RNC55H1781FM	5905-01-036-9171
Fixed resistor	Preferred item	RNC55H1781FS	5905-00-256-8869
Fixed capacitor	Functional duplicate	VK20BA331K	5910-01-038-5196
Fixed capacitor	Preferred item	VK20BA331G	5910-01-007-6336
Relay armature	Functional duplicate	M39016-15-005L	5945-01-034-6532
Relay armature	Preferred item	M39016-15-005M	5945-01-020-5010

As can be seen, only the last character of each set of items was different, yet that difference was sufficient to defeat the only item entry control to which these items were subjected.

Despite this shortcoming, part number screening alone is relied on to test the uniqueness of many items entering the Federal Catalog. Items with reference type descriptions are subjected to this control alone. Other automated entry controls require descriptive, that is item characteristic, data in order to function.

Characteristic screening

Comparison of item characteristics is performed to overcome some of the limitations of part number screening, particularly the failure of part number comparison to identify functionally similar items. Prior to 1975 such comparisons were done manually using 5- by 8-inch cards which contained the item descriptions. With the implementation of the Defense Integrated Data System, characteristic screening was automated and is now performed on all new item entries for which a characteristic description is available.

As currently structured, the computer mechanically generates a numerical screening key from the coded characteristics of each new item entry. Before a new stock number is assigned, the screening keys of new entries are compared to those of items already cataloged. When this process results in one or more matches, the submitter is notified of the possible duplication and must evaluate the acceptability of the inventory item to perform the function of the proposed item. Unmatched new entries are assigned stock numbers.

To gain the speed of characteristic screening, the Federal Catalog System has paid a price in complexity. Consider the opportunity for error from the standpoint of the cataloger. Almost all items, regardless of origin, have a part number and a vendor number. For the purposes of part number screening, the cataloger has only to consult a directory to find the appropriate vendor code, and, together with the item part number, submit this data to the Defense Logistic Services Center. Beyond typographical and transpositional errors, this data should arrive at the Center reasonably correct.

Preparation of characteristic descriptions is not nearly so simple. In addition to documenting the item part number and vendor code, an approved item name and Federal Item Identification Guide must be located. Using technical data from the manufacturer, engineering drawings, specifications, and other sources, the cataloger must record and code the physical and performance properties of an item in the exact structure established by the guide. Several Federal Item Identification Guides contain descriptions of over 30 characteristics. Two catalogers can describe the same item with varying degrees of accuracy and completeness, depending upon the technical data available and their level of experience. Since the composition of a screening key depends upon the characteristic description, the effectiveness of characteristic screening is directly related to the uniformity and accuracy of item identification.

The completeness of an item identification is nearly as important as its accuracy. The computer only considers those characteristics submitted when screening keys are generated. Thus a partially described item will not match a more fully described item even though they are the same.

As we noted earlier in this chapter, full item descriptions are the preferred method of identification in the Federal Catalog System and offer the best means of realizing the potential of characteristic screening. Yet, only 38 percent of the active items in the Federal Catalog in 1977 were fully described. The remainder were partially described or not described characteristically at all.

The complexity of describing items characteristically, the difficulties catalogers experience in obtaining data, and the inflexibility of the screening key generation process has encouraged refinement of characteristic screening.

Parametric screening

To increase the effectiveness of characteristic screening, the Defense Logistics Services Center, through the Federal Item Identification Guide program, has tried to add flexibility to the comparison process. Through parametric screening the computer is programed to accept a predetermined range of values for some characteristics during the screening process.

Because parametric screening does not require that all characteristics of new and inventoried items match exactly, more "near matches" should be identified.

This added flexibility, however, is obtained only through additional complexity. So complex, in fact, that implementation of this capability has lagged well behind expectations. At the conclusion of our review, implementation had been modified toward a simpler process called two-step characteristic screening. Two-step characteristic screening is described as a compromise between the current characteristic screening process, which lacks flexibility, and parametric screening, which is too complex and costly. The two-step proposal completed testing in September 1978 and implementation has begun.

While the Defense Logistics Agency is testing refinements to automated characteristic screening, another look at the benefits of manual technical reviews is also taking place.

MANUAL TECHNICAL REVIEWS

Underlying the difficulties of optimizing automated item entry controls has been the question of the most effective mix of men and machines. Before the Defense Integrated Data System was implemented, 10 technical review teams were operated by the military services and the Defense Logistics Agency to supplement part number screening. Each technical review group was organized to perform item entry control for specific classes of items included in 76 high-growth Federal Supply Classes. For example, the review activity located at the Defense Electronics Supply Center was responsible for electronic items, while the group at the Defense Industrial Supply Center reviewed bearings and fasteners, among other high-growth items.

Technical review activities brought together, in one location, a number of resources enhancing effective item entry control. These included

--centralized review of all new items in high-growth classes accounting for about 75 percent of the new items entering the Federal Catalog,

--technical descriptions of all items in the high-growth classes for which data was available,

--technical libraries of commercial parts catalogs, test reports, specifications, standards, and other primary data sources, and

--personnel trained in the technical aspects and applications of specific types of items.

Technical reviews were generally performed after automated part number screening but before national stock number assignment. During these reviews, which usually took about 8 days, specialists

--questioned the need for proposed new items and determined whether items already in the supply system would do the job,

--determined if the proposed new item identifications were accurate and complete, and

--reviewed catalog data on items already in the catalog to ensure its accuracy and completeness.

Technical reviews were successful in identifying unneeded items. In fiscal year 1974, the last full year of operation, 173,600 items were reviewed by these activities, of which 33,400 (19 percent) were found to be duplicate or similar in form, fit, and function to inventory items.

In March 1975 the 10 technical review activities were disbanded by DOD in preference to the new automated characteristic screening capability of the Defense Integrated Data System. Thereafter, cataloging activities submitted new item entries directly to the Defense Logistics Services Center for automated item entry control.

At former technical review locations, equipment specialists and technical libraries were generally absorbed by the co-located cataloging activities. Technical reviews continue to be performed at some of these locations, particularly at Defense Logistics Agency Supply Centers; however, reviews are made only for those items cataloged and managed by that activity. Centralized manual review of all new items entering high-growth classes was discontinued. In fiscal year 1977, for example, Defense Electronics Supply Center experts reviewed and cataloged only 60 percent of the new electronics items added to their 10 high-growth classes.

The decentralization of technical review activities and further resource realinements have resulted in increasing reliance upon the Defense Integrated Data System for most new item entry controls.

UNNEEDED ITEMS CONTINUE TO ENTER THE SUPPLY SYSTEM

Our review indicates unneeded items are entering the Federal Catalog because automated entry controls--part number and characteristic screening--are not identifying many unneeded items. Consequently, duplicate stock numbers are being assigned and unneeded items are being purchased and distributed. Our work shows many of these items would have been identified and excluded from the catalog if manual reviews by technical specialists had been performed prior to national stock number assignment.

We examined some electronic items added to the Federal Catalog during 1977 by the Defense Logistics Services Center's International Codification Division and the Federal Aviation Administration. Electronic items were selected because these account for 27 percent of the items in the Federal Catalog and 30 percent of the items added in fiscal year 1977. We reviewed items cataloged by the International Codification Division because we suspected serious weaknesses in its item entry controls. We examined new items added by the Federal Aviation Administration because a similar test in 1975 showed that many of its items should not have been assigned a new national stock number.

Discussions with officials of these activities revealed that the International Codification Division relies entirely on the automated Defense Integrated Data System's item entry controls. The Federal Aviation Administration performs a

manual screen for some items before submitting new items to the automated entry controls.

The International Codification Division test and results

In fiscal year 1977, the International Codification Division cataloged over 7,000 items for foreign governments in 10 high-growth electronic classes managed by the Defense Electronics Supply Center. We sampled at least 60 items from Federal Supply Classes 5905, 5910, 5935, 5961, and 5962. A consolidated sample of 60 items was drawn from the Center's five other high-growth classes. These were 5920, 5925, 5930, 5945, and 5960. In all, 365 items were selected for review. Technicians who perform item entry control at the Electronics Center and who are considered experts in the electronics field analyzed the sample items. The following results were obtained:

--One hundred and sixty-six items (45 percent) were judged correctly cataloged.

--One hundred and sixteen items (32 percent) should not have been assigned a new national stock number.

--Eighty-three items (23 percent) required more technical data for them to make a definitive decision.

Of the Defense Logistics Services Center sample items which should not have received a new national stock number, 112 had substitutes already in the catalog. The remaining four items would not have been cataloged by Center experts because of incorrect or incomplete manufacturer's part number data.

The Federal Aviation Administration test and results

During fiscal year 1977, the Federal Aviation Administration cataloged over 1,200 items in the Defense Electronics Supply Center's 10 high-growth classes. We sampled 271 for technical review as follows:

Class	Sample size
5905	46
5910	50
5935	35
5961	50
5962	38
Five other classes	52
Total	271

Center experts said that:

--Ninety-four items (35 percent) were correct as cataloged.

--Fourty-six items (17 percent) should not have been assigned a new national stock number.

--One hundred and thirty-one items (48 percent) required more technical data for them to make a definitive decision.

Of the Federal Aviation Administration sample items which should not have received a new national stock number, 43 had substitutes already listed in the Federal catalog. The other three would have been rejected by Electronics Center experts due to incorrect or incomplete manufacturer's part number data.

Adjustments to the current mix of entry controls

In our 1975 report we discussed the success of technical review activities and questioned abandoning them before the Defense Integrated Data System's automated controls were available. We also questioned the advisability of operating several cataloging activities, all of which must amass the resources and develop the necessary expertise to effectively catalog items in the same stock classes. Now, as then, people, facilities, and files of technical data related to electronics items are used to conduct item entry and cataloging functions at the Army Electronics Command, the Federal Aviation Administration's Aeronautical Center, the Defense Electronics Supply Center, and other locations. At each of these locations item entry decisions are made on similar items.

In 1975 we recommended that the Administrator of GSA and the Secretary of Defense establish a uniform logistics

item entry control system for each class of items and require all participants in the Federal Catalog System to submit their new item requests through these centrally operated systems. DOD and GSA replied that Defense Integrated Data Systems would provide the centralized item entry control needed in the Federal Catalog System. Our followup review has shown, however, that for many items, manual technical reviews are a needed complement to automated entry controls. Recent tests by the Defense Electronic Supply Center for the Air Force and Defense Logistics Services Center's International Codification Division have shown the merits of such reviews.

CONCLUSIONS

Nearly 30 years have passed since the Federal Catalog System was created, and during that time much has been accomplished to reduce the duplication of supplies. Nevertheless, GAO's past and current reports on the Federal Catalog System have shown that many items are not being uniformly and uniquely identified and that controls employed to detect duplicate and unessential items are not fully effective. As a consequence, the Government has incurred unnecessary procurement, cataloging, and supply management costs.

Our followup review has shown that poor item identification is a key factor underlying the continued presence of duplication in the Federal Catalog. Among the causes of incomplete item identification, we observed the failure of Government activities to obtain adequate technical data on items when they are purchased, particularly original manufacturer and alternate part numbers.

In addition, the decentralized organization of the cataloging input process limits overall direction and control of programs to identify new items and use this information to minimize duplication.

RECOMMENDATIONS

The Secretary of Defense and the Administrator of General Services should:

--Monitor procurement activity performance to ensure that technical data, including true vendor and alternate manufacturers' part numbers, are obtained for proper cataloging and item entry control to occur. If necessary, clarifications of contract provisions should be issued to accomplish this.

--Supplement current, automated item entry controls with manual reviews by experienced equipment or item technicians. There should be single points of contact for related Federal Supply Classes, with concentration of efforts in the high-growth classes. As examples, Defense Electronics Supply Center personnel could review electronics items, and Defense Industrial Supply Center personnel could review mechanical and fastener items. We believe these reviews could be handled by existing staff levels within the Federal Government.

--Continue efforts, when payoff is sufficient, to improve item identifications through computerized part number matching, updating part number information through contacts with manufacturers, and upgrading item descriptions.

AGENCY COMMENTS AND GAO'S ASSESSMENT

While generally agreeing with our first and third recommendations, DOD strongly objected to the recommendation on supplemental item entry control reviews by technicians. GSA also expressed reservations about supplemental reviews, but the main concerns were expressed by DOD.

DOD officials believe the Defense Integrated Data System provides effective item entry control, and the success of manual technical reviews at the Defense Electronics Supply Center is largely an isolated case. They felt manual reviews of commodities other than electronics items would not be productive. Further, the DOD officials felt that success of Defense Electronics Supply Center reviews was understandable because Center officials have resisted the Defense Logistics Agency's attempts to input critical information found in these reviews into the Defense Integrated Data System. In other words, the system is defeated before it has a chance to work.

We disagree with DOD's position. Manual technical reviews are necessary because of the Defense Integrated Data System's characteristic and parametric screening deficiencies. DOD may be concerned that concurrence with our recommendation would be tantamount to reinstating the Defense Technical Review Activities which were abandoned in 1975 upon Defense Integrated Data System implementation. We are not calling for full reinstatement of those former review activities. On the contrary, we want any supplemental technical reviews to concentrate only on high-growth, high-pay-off Federal Supply Classes such as electronics parts and fasteners. If DOD does not want technical reviewers to operate as an independent office (in other words, combine them with cataloging operations), that is an internal DOD matter.

While the Defense Integrated Data System has improved part number screening performance, the major benefits stressed by DOD during the system's development were its characteristic screening and search capabilities. These have not worked well and our point is that further refinements are not likely to correct the basic deficiencies we identified in our review. Even if such refinements were implemented, user acceptance of Defense Integrated Data System output remains the key to its success. If access problems, response times, or other problems continue, users will simply turn elsewhere (or worse yet, they will ignore established controls). For electronics items, that "elsewhere" has often been the Defense Electronics Supply Center. Through manual reviews, users and Center officials exchange information that in the past has led to item substitutions and avoidance of costly cataloging actions.

CHAPTER 6

INSUFFICIENT PARTICIPATION IN THE FEDERAL CATALOG SYSTEM

Federal Catalog System benefits have not been fully realized because local inventory identification systems are being misused by many activities. Some items given local stock numbers duplicate others already assigned national stock numbers. Agencies which incorrectly use local stock numbering systems hamper interagency utilization of surplus assets and increase procurement and inventory management costs.

In 1972, DOD initiated a program to control the misuse of local stock numbers. The effort resulted in converting about 400,000 local stock numbers to national stock numbers and was terminated in December 1975. Subsequent monitoring efforts by the military services and their respective audit agencies has disclosed that the problem continues. Because GSA has not adequately addressed the problem, use of local inventory identification systems by civil agencies has increased since our 1973 report was issued.

ACTIVITIES CONTINUE TO USE MULTIPLE IDENTIFICATION SYSTEMS FOR SUPPLIES

Federal Catalog System policies require that most supply items purchased by Federal agencies be identified, recorded, and assigned a unique national stock number. Some items such as forms, publications, and those items purchased on a one-time-only basis are excluded from the catalog system. These may be identified and numbered as each activity deems appropriate.

In 1973, we reported that some military and civil activities used national stock numbers, assigned through the catalog system, to identify their items of supply; but at the same time they assigned local stock numbers to other items which they bought, stocked, stored, and issued. We characterized these practices as multiple inventory identification systems, the very thing the Congress wanted replaced by a single Federal catalog. To improve the system and reduce unnecessary duplication, we recommended that GSA and DOD evaluate the appropriateness of local stock numbering practices, determine why they were used, and determine when it is appropriate to assign national stock numbers.

Our followup review disclosed that some DOD and civil activities continue to assign local stock numbers to supply items and issue catalogs to facilitate use and distribution of these items. DOD and military service audit agency studies have shown that some items assigned local stock numbers were already listed in the Federal catalog, but local activities were unaware of specific instances of duplication.

Despite two prior reports dealing with this problem, use of unauthorized identification systems by civil agencies is increasing. Some civil agencies, in fact, identify most of their supply items with locally assigned stock numbers.

Use of local stock numbers by civil agencies is increasing

In response to our 1973 report, GSA required civil agencies with supply inventories exceeding $20,000 to report annually the total number of items carried in inventory (1) that have national stock numbers, (2) for which national stock numbers have been requested, and (3) for which national stock numbers have not been assigned.

Reports to GSA for fiscal year 1975 showed about 280,000 items were identified by locally assigned stock numbers. Subsequent reports showed use of local stock numbers has increased, as shown below.

Use of National Stock Numbers and Local Stock Numbers by Civil Agencies (1975-77)

Year	Assigned national stock numbers (note a)	Local stock numbers (note a)
1975	316,512	279,586
1976	315,612	383,916
1977	395,072	380,212

a/GSA officials advise that no effort has been made to test the accuracy of data submitted by civil agencies. They consider the totals estimates only.

A GSA official estimated that 35-40 percent of the locally numbered items would already be listed in the Federal Catalog and available through established supply sources. In addition, our 1976 report on the National Supply System

concept showed that civil agency management data on items listed in the Federal Catalog was generally outdated and inaccurate.

Local numbers are used to identify most of the supply items used by some agencies according to annual reports submitted to GSA. As shown in the table below, most of the supply items used by nine Government departments or activities are assigned local stock numbers.

Profile of Selected Civil Agency Inventory Identification Systems for Fiscal Year 1977

Department/activity	Assigned national stock numbers	Local stock numbers
Department of Agriculture, Agricultural Research Branch	8,885	27,070
Department of Commerce Maritime Administration	2,731	8,920
Department of the Interior Bureau of Reclamation	23,133	21,856
National Aeronautics and Space Administration		
Marshall	17,842	38,501
Kennedy	25,507	31,746
Department of Transportation Federal Railroad Administration	1,641	7,458
Department of the Treasury Bureau of the Mint	5,869	16,310
Tennessee Valley Authority	40,684	139,654
Panama Canal Company	2,482	34,676
Subtotal	128,765	326,191
Other activities	266,307	54,021
Total	395,072	380,212

Use of local stock numbers in DOD continues

During 1977, DOD began a study of Federal Catalog System publications which included visits to DOD and civil agency activities. At several locations, study team participants found that items of supply were being identified by local stock numbers instead of national stock numbers. To advertise the availability of these items, local supply catalogs were being published. The study group provided us the following examples of these practices.

Marine Corps

At Camp LeJeune, local stock numbers are assigned to locally purchased items pending a decision by the Marine Corps Cataloging Office whether to assign a national stock number.

The Camp LeJeune Shop Stores Catalog contains a descriptive listing of these items, some of which have counterparts in the Federal Catalog. For example, the April 1977 Camp LeJeune Shop Stores Catalog listed two types of men's work gloves, one of cloth and asbestos and the other of leather construction. We forwarded the Corps' local catalog's descriptive information on these items to the Defense Personnel Support Center in Philadelphia, Pa., and asked if the same or similar items were listed in the Federal Catalog.

Center officials said that similar items (with national stock numbers 8415-00-261-7015 and 845-00-269-0433) have been and are still available from the Center's warehouse stock.

Army

At the Army's Rock Island Arsenal, the study group found that local stock numbers (called management control numbers) are assigned to locally purchased items if a search of Federal Catalog publications does not disclose a national stock number. As of August 1977, Rock Island Arsenal had assigned over 80,000 management control numbers during the previous 9-1/2 years. About 30,000 of these are still on their inventory records.

Study group members researched gloves ordered by local purchase procedures and assigned local stock numbers at the Arsenal. They found several nationally stock-numbered items managed and stocked by the Defense Logistics Agency which would meet the user's need as shown below.

Items, description	Rock Island stock number	National stock number
Gloves, fireman, fire orange, foam insulated type	8415-00-R8-63985	8415-00-349-9318
Gloves, welding, green hornet,		8415-00-269-0432
R&R Welding Co.	8415-00-R8-74648	8415-00-268-7869
Gloves, rubber, laboratory grade	8415-98-25372	The Defense Logistics Agency has numerous items in stock

Other common commodities such as furniture and clothing were also observed among the items assigned local stock numbers. Arsenal officials were preparing a local catalog to centrally record items in stock that were assigned local and national stock numbers. The study team said the Army was aware of the duplication problem and has a study underway to minimize the volume of management control numbers.

Publications Study Group personnel believe one reason local stock numbers continue to be used is that activities buy supplies locally before considering whether items listed in the Federal catalog would meet their needs. Subsequent efforts to find national stock numbers for these purchases through comparison of manufacturer part numbers are often unsuccessful and the local stock number is retained. Factors cited by study group members which influenced this practice were (1) difficulties in using Federal Catalog publications, (2) inadequate training of local supply personnel, and (3) the ready availability of items from private distributors.

As we noted in 1973, activities failing to consider filling their needs from established Government supply sources can incur unnecessary procurement and inventory costs.

Air Force

The Air Force assigns "nonsignificant control numbers" to locally controlled supply items. These control numbers may be used to temporarily account for a one-time procurement, for contractor production items, or for special tools and test equipment. The number is also used when the requirement for an item is so urgent that time will not permit the normal screening for cataloging action.

An Air Force Audit Agency review of nonsignificant control numbers at four Air Logistics Centers showed over 6,700 such items were being managed by the four centers. A statistical sample of these items showed 29 percent of the items were already listed in the Federal Catalog and had valid national stock numbers. Because local supply officials were unaware of this, the Audit Agency report stated that about $4 million of nonsignificant control numbered assets were restricted from full utilization.

Air Force auditors also identified items in their sample which had been reprocured during the last 3 years, indicating recurring requirements for these items. Nevertheless, Air Logistics Center personnel had not initiated Federal cataloging action as required.

In addition, the auditors reported 21 percent of the items assigned nonsignificant control numbers, valued at $8.5 million, were excess due to lack of demand in the last 36 months. According to the auditors, retention of these assets restricted stock fund working capital, increased inventory maintenance costs, and restricted available warehouse space.

Use of local stock numbers by other activities

During our followup review, we discussed the use of local stock numbers with officials at the Navy's Aviation Supply Office, Philadelphia, Pa.; the Coast Guard Yard, Curtis Bay, Md.; and the Federal Aviation Administration's Aeronautical Center, Oklahoma City, Okla. At each location local stock numbers were used to identity and control supply items for which national stock numbers were not assigned or unknown. Our discussions and review of activity records indicated use of local stock numbers was extensive. For example:

--The Navy's Aviation Supply Office prepares and publishes a catalog of aeronautical material on hand at reporting activities which have not been assigned national stock numbers. The May 1977 edition of the catalog contained about 3,400 items identified by local control numbers.

--The Coast Guard Yard manages about 1,700 items listed in the Federal Catalog. Since 1974, about 1,000 additional local stock numbers have been assigned to other supply items.

--The Federal Aviation Administration's Aeronautical Center had about 15,000 items assigned local stock numbers in November 1977. Center officials said about half of these are awaiting national stock number assignment, while the other half do not qualify for stock number assignment.

DOD MANAGERS HAVE LOST VISIBILITY OF LOCAL STOCK NUMBERING PROBLEMS

In response to a draft of our 1973 report and other DOD studies, the Office of the Secretary of Defense directed the military services and the Defense Logistics Agency to:

--Prepare and submit plans to identify, evaluate, and convert local stock numbers to national stock numbers.

--Ensure that activities screen each new item against items in the catalog before assigning a local stock number.

--Establish a system to meet the stock numbering criteria prescribed in DOD directives.

--Periodically report progress made in these efforts.

--Incorporate the subject of local stock numbers into regularly scheduled audits conducted by the military service and Defense Logistics Agency audit groups.

An Office of the Secretary memorandum on this subject advised the military services and the Defense Logistics Agency that:

"The uncontrolled use of local stock numbers tends to proliferate inventory identification systems and is contrary to public law. Further, it inhibits interservice utilization and precludes local activities from obtaining the best price for the items procured since the majority of items are available from established supply systems at a much lower price."

Initial reports to DOD indicated that more than 900,000 local stock numbers were in use in 1973. Conversion of these to national stock numbers was scheduled for completion in December 1974, but it was later extended to December 1975. An Office of the Secretary of Defense official advised that final reports on this project submitted by the military services and Defense Logistics Agency showed that about 533,000 remained in use in January 1976.

After the conversion project, reports on the use of local stock numbers were discontinued. An Office of the Secretary of Defense official advised that his office did not have information on the number of items assigned local stock numbers in DOD in January 1978. He believed the military services, the Defense Logistics Agency, or their respective audit groups were monitoring compliance with stock numbering directives.

We contacted Air Force cataloging officials regarding monitoring efforts and were told that attention to the local stock number problem declined after DOD stopped requiring project status reports. They said detailed information on local stock numbers in use was not readily available. These officials believed periodic monitoring was being done by the Air Force Audit Agency.

Officials of the Air Force Audit Agency told us that one audit of locally assigned stock numbers was completed in August 1977. They were unaware of other audits although they may have been performed by auditors at local Air Force bases.

The Navy Audit Service also said three recent audits have disclosed inappropriate use of local stock numbers at several locations. While the Audit Service does not have a regularly scheduled program to examine this problem, the assignment of local stock numbers is examined along with other issues during their reviews.

MANAGERS HAVE NOT ADEQUATELY ADDRESSED LOCAL STOCK NUMBER PROBLEMS

After our 1973 report, GSA (1) revised and reissued Federal Property Management Regulations to emphasize and clarify the requirement that Federal agencies request national stock numbers for items repetitively procured, (2) required civil agencies to report the number of items identified by local and national stock numbers, and (3) increased cataloging staff to reduce the backlog of civil agency requests for national stock numbers.

Policy revision and management information reports were necessary first steps in increasing civil agency participation in the catalog system. Yet, as we pointed out in 1976, knowledge of the number of items in an agency's inventory for which no national stock numbers have been requested or assigned is merely the starting point of corrective action. GSA, however, has been unable to proceed further because of limited resources, limited authority, and the belief of some civil agencies that participation in the Federal Catalog System is not economically justified.

GSA officials advised us that meaningful actions to increase civil agency participation could not be initiated until additional resources were programed and approved by high-level agency officials. To date, internal prioritization of responsibilities and resources has left this effort unfunded.

GSA has developed a 5-year plan which estimates the resources needed to achieve the full participation of civil agencies in the Federal Catalog System. The plan is based upon converting the 280,000 local stock numbers reported by civil agencies in fiscal year 1975 to national stock numbers. It calls for personnel and support expenditures of $3.8 million over 5 years and $600,000 each year thereafter to meet the increased catalog needs of the civil agencies. In March 1978 the plan remained unapproved and unfunded. GSA officials did not expect a change in agency funding priorities in the near future.

A GSA official said the Agency's authority to require full civil agency participation in the Federal Catalog System is limited. GSA, in his view, does not have the power to demand that larger agencies conform to Federal Catalog policies which would require costly realinement of their supply management systems.

Our 1976 National Supply System report reflected the concerns of some civil agencies which do not have large, sophisticated, centralized supply systems, such as those of the military departments and other DOD agencies. GSA recognized that the current system was not responsive to the needs of civil agencies. During our followup review we were advised that the following actions are necessary to increase participation:

--A commitment by the Office of Management and Budget, GSA, and civil agencies to achieve full participation in the Federal Catalog System.

--Education of civil agency officials on the use and merits of the Federal Catalog System.

--A flexible conversion program tailored to the individual supply needs and existing systems of nonparticipating agencies.

--Adequate resources to implement the conversion effort.

CONCLUSIONS

The full benefits of the Federal Catalog System are not being realized because some Federal agencies continue to misuse local stock numbering systems. Agencies using these systems improperly promote duplication in the Government's supply systems and can incur increased procurement and inventory management costs. In addition, interagency utilization of surplus assets is hampered.

While DOD attempted to bring the local numbering problem under control, this effort lost high-level management attention in 1976, leaving the extent of the problems and basic causes largely unresolved.

Use of local inventory identification systems by civil agencies has increased since our 1973 report was issued. GSA has not adequately responded to the local stock number problem and little change is expected.

RECOMMENDATIONS

We recommend that the Secretary of Defense reestablish a program to monitor the use of local stock numbers in DOD. The DOD audit groups could be used in a coordinated manner to periodically review the appropriateness of assigning local stock numbers to DOD supply items.

We recommend that the Administrator of GSA, in his role of coordinator of civil agency participation in the Federal Catalog System,

--advise the agencies of the benefits of participation for both the individual agency and Government at large, and

--instruct agencies to take a more active role in seeing that their supply systems do not promote duplication through their local stock numbering practices.

AGENCY COMMENTS

DOD and GSA generally concurred with our recommendations. DOD officials pointed out that reinstitution of a local stock number monitoring effort would have to be weighed against potential costs. They do plan to establish procedures for ensuring regular military service and DOD audit group coverage of the local stock number problem.

GSA recognizes its responsibilities as civil agency coordinator of Federal Catalog System participation, but agency officials continue to cite lack of resources as a major reason for GSA's inadequate performance. GSA's Federal Supply Service has requested additional resources for fiscal year 1980, but there is no guarantee that the resources will be approved and provided. The Federal Supply Service, in anticipation of resource approval, is developing an implementation plan for increasing civil agency participation in the Federal Catalog System.

CHAPTER 7

COMPREHENSIVE MANAGEMENT OF CATALOGING AND STANDARDIZATION PROGRAMS IS NEEDED

It has been 30 years since the Congress passed legislation to control supply system duplication through cataloging and standardization programs, yet the problem persists. As discussed in preceding sections of this report, program managers have, on different occasions, cited greater coordination, the Defense Integrated Data System, and reorganization of the Defense Standardization Program as cures for many cataloging and standardization ills. None of these efforts have been completely successful.

Numerous civil agencies and DOD field activities operate cataloging and standardization programs. Accomplishment of objectives has been tailored to the interests and degree of commitment of these agencies and field activities, and limited by their funding for such programs. Prioritization and monitoring of overall results achieved for dollars invested is unattended. Because of the fragmentation, it is difficult to determine how much money is being invested in cataloging and standardization programs and what the return is. It seems logical to us that someone should have comprehensive responsibility and accountability for program performance.

Without comprehensive recognition of the degree of duplication in the Federal Catalog System and commitment to do something about it, we believe the problem will persist and could grow worse. For example, the Department of Transportation (DOT) stressed that it is precisely following established cataloging and standardization policies and procedures. If duplication continues, DOT feels GSA and DOD, the program managers, should assume responsibility for correcting any problems. The potential for the waste of resources that duplication imposes on the Government's supply system is enormous. We believe substantial economies and improved effectiveness can be attained if cataloging and standardization resources and programs are managed from a Government-wide perspective.

RESOURCE ACCOUNTABILITY DOES NOT EXIST

In trying to gage cataloging and standardization program effectiveness, we asked ourselves and DOD and GSA managers, "Who knows how much the programs are costing the Government?" The answer seems to be "no one." In many agency budgets there are no line items for cataloging and standardization programs, so program managers have little knowledge of how much money and time they are spending on the programs.

Lacking readily available information on cataloging and standardization resources, we tried to estimate the current level of resources devoted to cataloging and standardization by Government agencies. We contacted 16 activities in eight major Federal agencies and departments and requested that they estimate their cataloging and standardization resources for us. The following chart shows the results.

Resources Devoted to Cataloging and Standardization in Selected DOD Activities and Civil Agencies

Agency/department	Fiscal year 1978 Dollars	Fiscal year 1978 Staff years	Fiscal year 1975 Dollars	Fiscal year 1975 Staff years	Fiscal year 1973 Dollars	Fiscal year 1973 Staff years
Defense Logistics Agency	$ 24,037,272	1,194.4	$18,605,435	1,141.1	$18,002,498	1,256.7
Defense Logistics Services Center	24,507,000	929.0	23,279,000	1,069.0	17,495,000	1,007.0
Air Force	8,837,000	507.7				
Army	32,796,200	1,282.6	31,959,400	1,535.2	31,610,500	1,771.0
Navy	10,000,756	364.92	9,740,851	403.79	8,101,500	368.4
Marine Corps	868,953	51				
General Services Administration	7,239,000	349	6,560,000	331	5,165,000	280
Coast Guard	600,000	38.75	442,500	33.0	192,500	17.5
Federal Aviation Administration	834,663	32.8	708,352	33.5	640,733	32.7
Total	$109,720,844	4,750.17	$91,295,538	4,546.59	$48,152,272	4,733.3

NOTE: Both the Air Force and Marine Corps activities we contacted could not compile sufficient data for us to enter resource amounts for fiscal years 1975 and 1973.

An expanded version of this chart is contained in appendix III.

Since we limited our request to major catalog system participants, we recognized that our data would not be complete. Nevertheless, the data gave us a "ballpark" estimate of resources and firmly established in our minds that cataloging and standardization managers do not have comprehensive knowledge of the level of these resources.

Another part of our resource request was to obtain information on the cataloging and standardization work force, including age, length of experience, and any turnover impacts. At times, turnover and reductions in force have heavily affected the existing work force. Relocations of cataloging and standardization activities in the Air Force and Marine Corps led to the retirement of many experienced workers. Our statistics on the average age and length of experience of cataloging and standardization workers showed the following for our 16 activities:

Category	Function	
	Cataloging	Standardization
Average age (yrs.)	45.2	44.5
Average experience (yrs.)	14.8	14.8

Averages do not reveal that many cataloging and standardization personnel are close to retirement eligibility. They are not being replaced. The Defense Logistics Agency, the manager of the Federal Catalog System, expressed particular concern over the age of the work force because they have lost and will continue to lose people who have a good knowledge of how the system is supposed to work.

VITAL RESOURCE ELEMENTS ARE IMPROPERLY CONTROLLED

The Defense Integrated Data System, the key element in the item identification and cataloging process, is operated by the Defense Logistics Agency. Standardization activities are primarily operated by DOD and are managed by the Defense Materials Specifications and Standards Board. Neither function is carried out the way it should be.

Defense Integrated Data System

While the Defense Logistics Agency controls the system and its resources, it does not control the data input into the system or its use. The integrity of the catalog data base depends on many different users. In chapter 2 we

noted that all authorized catalog system users are free to catalog any item they manage without regard to Federal Supply Class, but the cataloging procedures used are not uniformly applied from agency to agency. Misidentification of items occurred. This weakened automated item entry controls and allowed duplicate or unnecessary items to enter the system.

Defense Materials Specifications and Standards Board

The Defense Materials Specifications and Standards Board is the DOD activity which manages the Defense Standardization Program. The Board was created in July 1973 and consists of 10 high ranking members from the research and development and logistics sectors of DOD, the military services, and the Defense Logistics Agency. The chairman is from DOD. To act as Secretariat to the Board and to manage the day-to-day affairs of the Defense Standardization Program, DOD created the Defense Materials Specifications and Standards Office.

The Board has also created five working panels on electronics, materials, metrication, audio-visual, and clothing and textiles. These panels were chartered to conduct studies, perform analyses, and develop standardization policy changes for consideration by the Board.

The Defense Materials Specifications and Standards Office, responding to DOD guidance, has developed several DOD directives to provide overall policy for the Defense Standardization Program, especially in the following areas:

--Metrication.

--Providing better parts control mechanisms.

--"Tailoring" specifications/standards to encourage more realistic engineering management and economy.

--Increasing use of non-Government specifications and standards.

--Consolidating and reducing data item requirements levied on contractors.

The Defense Materials Specifications and Standards Office was particularly motivated in the latter three areas by an April 1977 Defense Science Board task force report on specifications and standards. The task force report placed heavy emphasis on the need for (1) more flexible interpretations of specification requirements, (2) upgrading the quality of existing specifications and standards, and (3) relying more on private industry to write specifications and standards. The same report, however, stressed the need for strengthening Defense Standardization Program management, and noted:

> "There is no overall DOD policy guidance on the goals, priorities and allocation of effort of the Defense Standardization Program."

In recommending greater attention to the program by top management (including reinstating annual program planning and guidance), the report stated that commitment to follow through must be evidenced in clearly defined and budgeted support for standardization efforts.

Unfortunately, DOD's commitment to the Defense Standardization Program is no more in evidence today than in prior years. The Defense Materials Specifications and Standards Board has been on a steady decline in terms of its attention to standardization. The Board has met only four times in the last 3 years. We were told the issues brought to its attention were trivial. The Board's panels have been about as inactive as the Board itself. Lack of direction to the metrication panel, for example, has prevented DOD from writing and coordinating even 1 of the 56 metric standards it agreed to do in conjunction with industry. Reflecting the history of program management, 1/ the Board has had a high turnover in its membership; there have been six different chairmen of the Board in its 4-1/2-year history.

Defense Materials Specifications and Standards Office and Defense Logistics Agency officials conceded that overall Defense Standardization Program guidance is not adequate, and revisions to key Defense Standardization Program directives and manuals have been awaiting DOD approval for over 2 years. They claimed they had to put heavy emphasis on the

---

1/ In the 25 years since the creation of the Defense Standardization Program, we identified 12 different offices in DOD that have wholly or partially managed the program.

Defense Science Board task force recommendations at the expense of overall standardization planning and guidance. However, we believe a key problem is that neither the Board nor the Defense Materials Specifications and Standards Office controls standardization resources. The Joint Logistics Commanders of the military services, who do control many of the standardization resources, are not even associated with the Board or the Specifications and Standards Office.

DOD, meanwhile, underwent yet another reorganization in 1977 that placed the Defense Standardization Program in an uncertain status. We were told the Specifications and Standards Board will probably be retained, but its proper role, in light of the DOD reorganization, has yet to be determined.

Industry views on the Defense Standardization Program

We contacted industry officials to obtain their attitudes on the Defense Standardization Program. In general, industry officials felt the Board and Defense Materials Specifications and Standards Office had not been very effective in managing the Defense Standardization Program. While coordination between DOD and industry had improved, a spokesman for the aerospace industry said DOD and the military services had not clearly set out their standardization goals and objectives. Lack of identifying and prioritizing needs has resulted in the "wheel that squeaks the loudest getting the grease." The spokesman found this distressing because metrication, NATO standardization, and advances in microelectronics were on the verge of heavily affecting standardization, but DOD's program guidance in these areas has lacked clear direction and emphasis.

A major reason given by industry officials for lack of progress in standardization is that the Board and the Specifications and Standards Office do not control standardization resources. Again, the spokesman for the aerospace industry felt that although DOD field activities were best for carrying out standardization programs, some form of centralized direction of resources would be helpful.

PROGRAM REPORTS TO THE CONGRESS

Each year, in accordance with the Defense Cataloging and Standardization Act, DOD sends the Congress a report on cataloging and standardization programs. The cataloging section contains a sizable amount of data on the composition of the Federal Catalog System, and the standardization

section discusses ongoing or planned efforts in the Defense Standardization Program. Both sections cite accomplishments and program improvement actions, but neither section assesses how duplication has been brought under better control. While not required, the lack of such an assessment means the reports tell only part of the story, by highlighting only accomplishments and improvements. For example, in reviewing the most recent report (covering calendar year 1977), we found the following:

--DOD cites a study on the adequacy of Federal Catalog System publications but fails to state that a significant local stock number problem was raised during the study.

--The characteristics search capability of the Defense Integrated Data System is praised, but users find it cumbersome and complex and rarely use it. To the knowledge of one Defense Logistics Services Center official, no contractor had ever used the system's characteristics search capability. Recent data reflect low use within DOD and, by and large, an unfamiliarity with the capability on the part of potential users.

--Statistics on the use of the Federal Catalog System by NATO countries and other foreign governments do not tell how these countries are cataloging obsolete, low reliability electronics items that Federal Government users have subsequently bought, stocked, stored, and issued.

--Figures showing improved levels of item descriptions by the military services and the Defense Logistics Agency do not reveal that fully described items are the only ones that can effectively be screened for similarity by the Defense Integrated Data System. As a result, many other items bypass the screening and enter the supply system unnecessarily.

--The progress being made under the Defense Standardization Program does not reveal that parts control has been tailored out of many defense contracts, the use of Military Parts Control Advisory Groups is low, the major Defense Standardization Program guidance documents have been awaiting revision for over 2 years, item

reduction has achieved little, and the Defense Inactive Item Program has been ineffective in removing low demand items from Defense inventories.

CONCLUSION

GAO estimates that in fiscal year 1978, DOD, GSA, and DOT agencies will spend at least $109 million to operate their cataloging and standardization programs. This will involve the commitment of over 4,700 staff years of work. Without better management of current resources and improved methods for accomplishing objectives, the optimum Federal Catalog System and standardization operating posture cannot be achieved, and the costly duplication of efforts and items will continue.

RECOMMENDATION

We recommend that the Secretary of Defense make the Joint Logistics Commanders of the military services members of the Defense Materials Specifications and Standards Board. This would better aline the Board's function of program planning and management with the Logistics Commanders' control of the dollars and people needed to perform the standardization program tasks.

AGENCY COMMENTS

DOD and GSA generally agreed with the ideas presented in this chapter. Each agency stressed the idea that much has been accomplished over the past 30 years. DOD felt it could not be held responsible for action by civil agencies. GSA likewise believes its authority to require civil agency participation in programs is hampered by its stated lack of resources.

PROGRAM OBSERVATIONS FOR THE CONGRESS

GAO could not address how much duplication there actually was in the Federal Catalog. However, examples of duplication uncovered in this review were not isolated cases but were the result of fundamental cataloging and standardization program deficiencies. For example, the part number screening process as discussed on page 61 had known limitations, yet civil agencies use this technique as their principal item entry control. While some

amount of duplication is inevitable, GAO believes existing resources would be better utilized if comprehensive, Government-wide management were brought to cataloging and standardization programs. DOD and GSA, by law, are partners in the Federal Cataloging and Standardization Programs, but neither believes it has the authority to direct other agencies to utilize the advanced item entry control and standardization techniques they have developed.

The basic problem GAO sees in these programs is that a number of agencies are involved to various degrees. Each agency has approached cataloging and standardization with a different management emphasis and perspective. Only the minimum basic cataloging and standardization techniques are used by some agencies (such as DOT), but more effective techniques have been developed and implemented by others to overcome known problems with the basic techniques. DOD has developed various advanced techniques, but uniform application has not been achieved among its own services.

As in the past, agencies have come forward with master plans, new item screening techniques, and other remedies for cataloging and standardization system ills. Each tries to emphasize that if only program resources were provided, problems would be largely alleviated. As we note, however, a major problem in past efforts has been the lack of knowledge about the amount of resources the Government had been devoting to cataloging and standardization and how efficiently the resources were being used. The National Supply System concept is regarded as a significant effort which should bring about needed change. However, before substantial new resource commitments are made, agencies should demonstrate that their remedies will effectively overcome the fundamental problems in cataloging and standardization.

GAO believes the resolution of problems will require a high degree of concentration by top agency management. Further, the appropriate congressional oversight committees must exert their influence over the Federal agencies to assure that a Government-wide perspective is given to program planning, implementation, operation, and review.

CHAPTER 8

SCOPE OF REVIEW

In our followup review, conducted from October 1977 through June 1978, we discussed cataloging and standardization operations with program managers, engineers, equipment specialists, catalogers, supply managers, and procurement personnel, and examined guidance and directives. We also surveyed 16 activities to obtain data on the resources devoted to cataloging and standardization programs, and spoke with private industry officials to obtain their views on Government programs and gain insight into how their own companies' programs operated.

The following organizations provided us information.

(1) President's Administrative Services Reorganization Project
Washington, D.C.

(2) Office of Management and Budget
Office of Federal Procurement Policy
Washington, D.C.

(3) Office of the Secretary of Defense
Washington, D.C.

(4) Defense Science Board
Washington, D.C.

(5) Defense Materials Specifications and Standards Office
Alexandria, Va.

(6) Headquarters, Defense Logistics Agency
Alexandria, Va.

(7) Defense Construction Supply Center
Columbus, Ohio

(8) Defense Electronics Supply Center
Dayton, Ohio

(9) Defense General Supply Center
Richmond, Va.

(10) Defense Industrial Supply Center
Philadelphia, Pa.

(11) Defense Personnel Support Center
Philadelphia, Pa.

(12) Defense Logistics Services Center
Battle Creek, Mich.

(13) Defense Industrial Plant and Equipment Center
Memphis, Tenn.

(14) Departmental Standardization Office
Headquarters, Army Materiel Development and
Readiness Command
Alexandria, Va.

(15) Army Electronics Command
Fort Monmouth, N.J.

(16) U.S. Army Natick Laboratories
Natick, Mass.

(17) Departmental Standardization Office
Headquarters, Naval Material Command
Washington, D.C.

(18) Naval Air Systems Command
Washington, D.C.

(19) Naval Electronics Systems Command
Washington, D.C.

(20) Naval Sea Systems Command
Washington, D.C.

(21) Naval Supply Systems Command
Washington, D.C.

(22) Navy Aviation Supply Office
Philadelphia, Pa.

(23) Navy Ships Parts Control Center
Mechanicsburg, Pa.

(24) Naval Weapons Support Center
Crane, Ind.

(25) Naval Audit Service
Camden, N.J., and
Falls Church, Va.

(26) Headquarters, United States Marine Corps
Washington, D.C.

(27) Marine Corps Logistics Support Base-Atlantic
Albany, Ga.

(28) Marine Corps Base
Camp LeJeune, N.C.

(29) Departmental Standardization Office
Headquarters, Air Force Systems Command
Andrews AFB, Md.

(30) Headquarters, Air Force Logistics Command
Wright-Patterson AFB, Ohio

(31) Air Force Cataloging and Standardization Office
Battle Creek, Mich.

(32) San Antonio Air Logistics Center, USAF
Kelly AFB, Tex.

(33) Aeronautical Systems Division, USAF
Wright-Patterson AFB, Ohio

(34) Rome Air Development Center, USAF
Griffiss AFB, N.Y.

(35) Air Force Audit Agency, Air Force Logistics Command
Wright-Patterson AFB, Ohio

(36) Headquarters, U.S. Coast Guard
Washington, D.C.

(37) Coast Guard Yard
Curtis Bay, Md.

(38) General Services Administration
Federal Supply Service
Washington, D.C.

(39) Region 6, General Services Administration
Kansas City, Mo.

(40) Headquarters, Federal Aviation Administration
Washington, D.C.

(41) Aeronautical Center, Federal Aviation Administration
Oklahoma City, Okla.

(42) National Aviation Facilities Experimental Center
Federal Aviation Administration
Atlantic City, N.J.

(43) Private industry, including:

Aerospace Industries Association
Washington, D.C.

Allen-Bradley Corporation
Dayton, Ohio, and
Milwaukee, Wis.

Bell Laboratories
Holmdel, N.J.

General Electric Corporation
Dayton, Ohio, and
Valley Forge, Pa.

Raytheon Corporation
Goleta, Calif.

CRITERIA FOR EFFECTIVE CATALOGING AND STANDARDIZATION PROGRAMS

MODEL SEGMENT/ISSUES	ESTABLISHED CRITERIA	CONTRIBUTION TOWARD OBJECTIVES OF ORIGINAL LEGISLATION
Participation: Local stock numbers	United States Code (40 U.S.C. 487/10 U.S.C. 145 Catalog to be used by all Government agencies	Prevent multiple catalog systems from being created and operated
Multiple catalogers	DOD/GSA to coordinate actions	
Item identification:	Federal Catalog System Policy Manual (Subsection 23)	Uniquely identify items in order to tell them apart from one another
Approved names	Develop minimum data to establish essential item characteristics	
Full descriptions	Through technical research, provide a sound basis for identification and differentiation (rests on item's physical and performance characteristics)	
Proper classification	Provide a standard supply language throughout the Government	
Item entry controls: Part number screening	Federal Catalog System Policy Manual (Subsection 43); Defense Item Entry Control Program Technical Review Procedures Manual; Defense Integrated Data System Procedures Manual	Prevent the cataloging of nonessential new items
Characteristic screening	Comparison of item identifications results in exact matches of characteristics or reference numbers	

APPENDIX I

CRITERIA FOR EFFECTIVE CATALOGING AND STANDARDIZATION PROGRAMS

MODEL SEGMENT/ISSUES	ESTABLISHED CRITERIA	CONTRIBUTION TOWARD OBJECTIVES OF ORIGINAL LEGISLATION
Parametric screening	Comparison of item identifications results for similarity in characteristics or reference numbers	
Technical reviews	Where no matches can be found, supplement comparison by looking for an equal or better item	
Engineering standardization:	DOD Parts Control Program; Military Standard 965; Defense Standardization Manual	Avoid cataloging a wide assortment of similar performing items by preventing them from being designed into Government equipment
Parts control Programs	Review parts not covered by military specifications and standards and recommend substitutes	
Preferred parts selection	Make contractors aware of preferred Government parts	
Supply standardization:	Defense Standardization Manual; Defense Inactive Item Program Manual; GSA Item Reduction Manual	Reduce the assortment of similar items already in the catalog and supply systems
Item reduction studies	Through reviews of technical characteristics, establish relationships among items based on names, sizes, grades, lengths, etc., to delete or retain items	
Inactive item reviews	Through reviews of demand histories, delete or retain items	

APPENDIX I

Status of Recommendations on Former GAO Cataloging and Standardization Reports

(SAT. = satisfied; PART. SAT. = partially satisfied; UNSAT. = unsatisfied)

	Agency response	Is recommendation still applicable?	Report page reference
FEDERAL CATALOG PROGRAM: PROGRESS AND PROBLEMS IN ATTAINING A UNIFORM IDENTIFICATION SYSTEM FOR SUPPLIES, June 20, 1973			
We recommend that the Secretary of Defense and the Administrator of General Services take coordinated action to (1) determine the extent that organizations are maintaining local item identification systems, (2) ascertain and evaluate the reasons why locally assigned numbers are used, and (3) replace local numbers with Federal stock numbers (FSNs), when appropriate.	PART. SAT.	Yes	74,76
We recommend that the Secretary of Defense and the Administrator of General Services take coordinated action to purify the catalog of unnecessary FSNs. Such action could include using (1) a computer program to identify all manufacturers' part numbers that are referenced to more than one FSN and (2) interchange listings. The identified items should be reviewed to the extent necessary to insure that the items either are different and should have individual FSNs or are identical and the unnecessary FSNs can be eliminated.	SAT.	No	60

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
NUMBER OF ITEMS IN THE FEDERAL SUPPLY CATALOG CAN BE REDUCED, Oct. 21, 1974			
We recommend that the Director, Office of Management and Budget, along with the Secretary of Defense and the Administrator of General Services:			
--Establish a Government standardization program steering committee to provide Government-wide oversight of the program and to insure that an adequately defined and coordinated item-reduction program is developed.	SAT.	No	33,34
We also recommend that the Secretary of Defense:			
--Resume the yearly program guidance, coordinated with CSA, to establish objectives and goals for the item-reduction program.	UNSAT.	Yes	32
--Adopt the Defense Supply Agency's standardization management project as a way to strengthen the entire DOD standardization program planning function.	SAT.	No	32,33

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
--Clarify the standardization coding system in the Federal Manual for Supply Cataloging, to preclude the continued procurement of nonpreferred items.	SAT.	No	36
We further recommend that the Administrator of General Services:			
--Adopt the standardization coding system.	SAT.	No	36
--Insure that the proper standardization status code is shown in the Federal Catalog for each item.	SAT.	No	36
--Insure that all activities understand that they should not buy nonpreferred items.	PART. SAT.	Yes	36,37
We recommend that the Administrator of General Services give adequate priority to developing a complete and adequately defined item-reduction program. This is necessary to overcome existing uncertainties as to how the program is to operate and to ensure that GSA management obtains the greatest benefit from the resources it commits to future item-reduction studies.	UNSAT.	Yes	44,45

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
We recommend that the Secretary of Defense:			
--Explain in a DOD policy manual how and where technical data should be obtained and emphasize the importance of obtaining it.	PART. SAT.	Yes	55,56
--Give item-reduction studies enough management attention to ensure that all participating activities give adequate priority to completing their tasks.	a/UNSAT.	Yes	33,34,35
--Make the current 2 to 3 month goal for coordinating item-reduction decisions the maximum time allowed for users to respond to proposals and for study staffs to negotiate differences. If users do not respond within this time, study staffs should be authorized to assume that users agree with their proposals.	b/PART. SAT.	Yes	33,34,35
--Clarify DOD's policy on submitting item-reduction decisions to Defense Logistics Services Center and require piecemeal submissions.	SAT.	No	33

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
We recommend that the Secretary of Defense and the Administrator of General Services:			
--Adopt a force issue policy giving the item manager authority to issue all nonpreferred items before issuing the preferred item and making it the requisitioner's responsibility to justify any request which can be met only with the preferred item.	b/UNSAT.	Yes	37,38
--Revise cataloging policies and practices to provide that at a specified time after the issuance of all on hand nonpreferred materials, user interest lists automatically be deleted from the catalog records unless users justify the continued need for the items.	b/PART. SAT.	Yes	41
EFFECTIVE ITEM ENTRY CONTROL IN THE COMPLEX GOVERNMENT SUPPLY SYSTEM CAN REDUCE COSTS, Nov. 20, 1975			
We recommend that the Secretary of Defense and the Administrator of General Services work together with design contractors in determining how designers might best be equipped with the proper tools for selecting items already in the Government's logistics system. The identification lists are the best existing tools for this purpose, but the following changes should be made.	UNSAT.	Yes	17,18

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
--The lists should include the Government's standardization decision on each item.	UNSAT.	No	18,19
--A consolidated list of all catalog items, including those used by civil agencies, should be printed on microfiche.	SAT.	No	18
--The lists should be made available to design contractors upon demand.	SAT.	No	18
--Government agencies should contractually require designers to use the lists or the new computer screening technique as their principal means of selecting items in all design work.	UNSAT.	Yes	20,21
We recommend that the Administrator of General Services and the Secretary of Defense:			
--Develop advisory services similar to the Military Parts Control Advisory Group for all high-growth Federal supply classes and require that all Government agencies use these services.	SAT.	No	21,22
--Agree to common, Government-wide definitions of "nonstandard" and "preferred" items.	UNSAT.	Yes	26,27

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
We recommend that the Administrator of General Services and the Secretary of Defense establish a uniform logistics item entry control system for each class of items and require all participants in the Federal Catalog System to submit their new item requests through these centrally operated systems.	UNSAT.	Yes	67
HOW THE ITEM REDUCTION PROGRAM OF THE GENERAL SERVICES ADMINISTRATION COULD BE MORE EFFECTIVE, July 11, 1977			
We recommend that the Administrator of General Services direct the Federal Supply Service to			
--implement DOD's item-reduction decisions in GSA's 69 classes and	PART. SAT.	Yes	36,37
--implement the item-reduction decisions in Defense Logistics Agency (DLA) managed classes by deleting the nonstandard items and referring civil agency requisitions to DLA or, as an alternative, agree with DLA on which agency should stock each item so that each has only one manager.	PART. SAT.	Yes	36,37
We recommend that the Administrator of General Services direct that the Federal Supply Service establish procedures for item managers to use the technical support staff, technical data, and the automatic data processing system to substitute nonstandard items for standard items rather than retain or declare as excess nonstandard inventory.	b/UNSAT.	Yes	39,40

APPENDIX II

	Agency response	Is recommendation still applicable?	Report page reference
DEFENSE INACTIVE ITEM PROGRAM COULD BE MORE EFFECTIVE, Jan. 26, 1977			
We recommend that the Secretary of Defense:			
--Reemphasize the benefits of the inactive item program to all DOD components and agencies and periodically review the program's status.	UNSAT.	Yes	42,43
--Require the Defense Supply Agency to improve its computer program to provide (1) prompt and complete user information and (2) statistical information on items eliminated as a result of the inactive item program.	UNSAT.	Yes	42,43
--Establish a system for independently verifying the reasons the military services give for retaining inactive items.	UNSAT.	Yes	42,43

a/ DOD and/or GSA believe they have satisfied this recommendation (GAO disagrees.)

b/ DOD and/or GSA disagreed with our prior recommendation.

APPENDIX II

Resources Devoted to Cataloging and Standardization in Selected DOD Activities and Civil Agencies

Agency/department	Fiscal year 1978 Dollars	Fiscal year 1978 Staff years	Fiscal year 1977 Dollars	Fiscal year 1977 Staff years	Fiscal year 1975 Dollars	Fiscal year 1975 Staff years	Fiscal year 1973 Dollars	Fiscal year 1973 Staff years	Fiscal year 1971 Dollars	Fiscal year 1971 Staff years
Defense Logistics Agency	$ 24,037,272	1,194.4	$ 22,442,056	1,186.4	$18,605,435	1,141.1	$18,002,498	1,256.7	$18,267,560	1,397.3
Defense Logistics Services Center	24,507,000	929.0	24,261,000	948.0	23,279,000	1,069.0	17,495,000	1,007.0	14,220,000	956.0
Air Force	8,837,000	507.7	8,314,675	471.27	-	-	-	-	-	-
Army	32,796,200	1,282.6	32,891,300	1,483.2	31,959,400	1,535.2	31,610,500	1,771.0	12,000,000	628.0
Navy	10,000,756	364.92	9,989,616	381.02	9,740,851	403.79	8,101,500	368.4	4,982,500	178.0
Marine Corps	868,953	51	1,431,095	84	-	-	-	-	-	-
General Services Administration	7,239,000	349	6,943,573	319	6,560,000	331	5,165,000	280	4,865,000	291
Coast Guard	600,000	38.75	533,000	36.75	442,500	33.0	192,500	17.5	175,000	18.0
Federal Aviation Administration	834,663	32.8	779,694	32.8	708,352	33.5	640,733	32.7	609,410	30.5
Total	$109,720,844	4,750.17	$107,586,009	4,942.44	$91,295,538	4,546.59	$48,152,272	4,733.3	$55,119,470	3,499.15

NOTE: Both the Air Force and Marine Corps activities we contacted could not compile sufficient data for us to enter resource amounts for fiscal years 1975, 1973, and 1971.

APPENDIX III

AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES
GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. GENERAL ACCOUNTING OFFICE

SPECIAL FOURTH CLASS RATE
BOOK