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REPORT TO THE CONGRESS

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

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Effective Item Entry Control In The Complex Government Supply System Can Reduce Costs

Department of Defense

General Services Administration

New and unnecessary items have entered the Federal supply system because item entry controls are not entirely effective. Each unnecessary item adds a cost ranging from a few hundred dollars to over $30,000.

This report recommends that agencies work with contractors to develop methods which will facilitate their use of items already in the logistics system and establish a uniform centrally operated system for controlling the adoption of new items for use by Government agencies.

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

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

Since 1952 the Secretary of Defense and the Administrator of General Services have been working to develop an item entry control program to stem the yearly proliferation of items entering the Federal logistics systems. The program is intended to promote optimum interchange of equipment and repair parts data between and among all Government agencies, industry, and our allies in order to standardize the least number of items necessary to do an effective job.

This report discusses the progress, problems, and challenges these agencies must face to increase the effectiveness of the item entry program and to meet the objective of using items already in the logistics system rather than introducing similar items.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are 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

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ABBREVIATIONS

DOD	Department of Defense
FAA	Federal Aviation Administration
GAO	General Accounting Office
GSA	General Services Administration

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

EFFECTIVE ITEM ENTRY CONTROL IN THE COMPLEX GOVERNMENT SUPPLY SYSTEM CAN REDUCE COST

Department of Defense
General Services Administration

D I G E S T

Several congressional committees have a continuing interest in improving the Government's supply systems. This report provides an overview of General Services Administration and Department of Defense management actions needed to increase the effectiveness of the system for deciding what new items should be adopted for Government use and included in its catalog. Tighter central controls over entering items in the Government's catalog system and standardization of uses of all supply items are priority requirements.

Since advantages of standardization have been generally accepted, Federal agencies should put into practice a Government-wide item entry control program to reduce the number of virtually duplicate items entering the system.

About 280,000 new items are entered in the Government's supply catalog each year. Some unnecessary items are entered because neither the Department of Defense nor the General Services Administration has effective enough entry controls.

Entry controls are often ineffective because they

--are not influencing the parts selection decisions that are made when new equipment is being designed for Government use,

--are not applied to all items,

--are often slow, and

--are not always coordinated among Federal agencies.

Most entry controls are reviews of new parts just before cataloging, which can determine if the exact same item is already cataloged. However, if a new part is functionally identical but physically dissimilar to parts in the catalog, it is difficult to reject cataloging the new part if it has already been built into a piece of equipment.

To be effective, an entry control system must start at the earliest possible stage--that is, with the contractor designing new equipment. However, the General Services Administration and the Department of Defense have made little effort to help designers locate and select preferred (standard) items from the Federal catalog, the best available source of data.

Each unnecessary item cataloged adds to the cost of operating the Government supply system from a few hundred dollars to over $30,000 annually.

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

--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. (For discussion of this recommendation, see ch. 2.)

--Develop advisory services to help industry and the Government select parts from all classes of items experiencing a high growth rate. (See ch. 3.)

--Establish a uniform entry control system for each class of catalog items and require all agencies to submit their new items for cataloging through these centrally operated systems. (See ch. 4.)

The Departments of Defense and Transportation and the General Services Administration generally agreed with our recommendations.

CHAPTER 1

INTRODUCTION

The Federal Government has an extensive operation to provide Federal agencies with the items[1] necessary to perform their missions. These items vary from commercially available products, such as office supplies, to parts and components for the military services' weapon systems.

During the 1970s, about 280,000 new items have entered the logistics (catalog and supply) system each year. The costs incurred for each item include about $200 for entry into the Government's system, $100 a year for management, $25 a year for cataloging, and $40 a year for warehousing. For certain items the Government also pays $500 to $8,000 for engineering drawings and up to $25,000 for testing to insure that the item meets Government requirements.

The Federal catalog system, containing over 4 million items, is the official system in which items often bought by Federal agencies are uniformly named, described, classified, and numbered. Through a series of codes, the catalog system shows (1) which agencies are responsible for managing the items, (2) who uses the items, and (3) what standardization decisions, if any, have been made to continue to use or to phase out the items.

GOVERNMENT STANDARDIZATION PROGRAM

To avoid purchasing or managing unnecessary or duplicative items, the Congress established the Federal Standardization Program, managed by the General Services Administration (GSA), and the Defense Standardization Program, managed by the Department of Defense (DOD).

The Federal Property and Administrative Services Act of 1949 (Public Law 81-152), approved June 30, 1949, created GSA and authorized its Administrator to develop standard purchase specifications and to establish and maintain a uniform Federal catalog system for identifying and classifying materiel used by Federal agencies. To speed up standardization and to improve the effectiveness of the Government's cataloging, the Congress passed the Defense Cataloging and

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[1]"Equipment" refers to a large end item, such as a car. "Component" refers to major assemblies, such as fuel pumps, that make up the car. "Parts" refer to the pieces that make up the assemblies. Equipment, components, and parts are collectively referred to as items.

Standardization Act of 1952, 10 U.S.C. sections 2451-2456. This act, entitled "Defense" because of the larger role DOD has in cataloging and standardization, emphasized the need for controlling the entry and cataloging of items used by Federal agencies. To avoid duplication, the act directed GSA and DOD to work together in their standardization and cataloging activities.

Today's standardization activities can be broadly categorized as:

--Item entry controls, used to limit the number of items entering the catalog and supply systems.

--The Federal catalog system, in which data on items used by Federal agencies and on related standardization decisions is recorded.

--Item deletion programs, which try to eliminate from the logistics systems items no longer needed.

The catalog and item deletion programs were the subjects of previous reports,[1] in which we pointed out ways to improve the programs' effectiveness. This report covers only the item entry controls.

ITEM ENTRY CONTROL PROGRAM

The Government's item entry controls include those used by Government engineers to review items entering the design of new equipment and those used by Government logisticians to control items entering the logistics system. Commercial items are submitted to logistical controls to assure the Federal agency introducing the items that they are not already in the supply system. Items designed specifically for the Government are first subjected to the Government's engineering controls and then to the logistical controls.

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[1]"Number of Items In Federal Supply Catalog Can Be Reduced" (B-146778, Oct. 21, 1974).
"The Federal Catalog Program: Progress and Problems in Attaining a Uniform Identification System For Supplies" (B-146778, June 20, 1973).
"Need to Remove More Low-Cost, Low-Usage Items From Inventories" (B-133118, Mar. 31, 1971).
"Opportunities For Savings Through the Elimination of Nonessential Stock Items" (B-114807, May 22, 1970).

By controlling the entry of new items, the Government can avoid the logistics cost for

--testing new items,

--acquiring engineering drawings and technical data describing items,

--cataloging new items and establishing management records, and

--managing and warehousing the items.

The challenge to item entry controls is the inflow of new equipment and the repair parts, components, and tools needed to support the equipment. For example, an automobile has 15,000 to 18,000 individual parts; the F-111 military aircraft has more than 300,000. Thousands of manufacturers continually turn out new, and sometimes better, items which could be used in existing or new equipment.

CHAPTER 2

THE DESIGN CONTRACTOR: KEY TO ACHIEVING STANDARDIZATION

To be effective, an item entry control system must start at the earliest possible stage--that is, with the design contractor. Private industry and the Government generally agree that designers are more likely not to introduce an unnecessary item into the supply system if they can easily determine what preferred[1] items are already in the system.

Although some designers work through Government specialists who have access to specific data on items, no comprehensive method exists to communicate to designers the Government's decisions on the acceptability of specific items. The Government has made little effort to help designers locate and select preferred items from the Federal catalog. Instead, by emphasizing the development of specifications and standards, which primarily benefit parts manufacturers, and by establishing a system to review design work after it is completed, the Government has left designers without the means or the incentive to select preferred items. As a result, new and unnecessary items continue to be accepted into the system.

NEED TO HELP DESIGNERS SELECT PREFERRED ITEMS

Designers are more likely to further standardization if they

--can easily determine what standard items are available,

--can talk to item specialists about their needs,

--can use current state-of-the-art items, and

--have the freedom to choose the items they believe are needed to design reliable equipment.

Specifications and standards explain the essential technical features the Government wants in equipment and repair parts being acquired. GSA and DOD spend about $35 million a year to develop and update these documents. GSA administers 6,000 documents applicable to all civil

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[1]Preferred or standard items are those which the Government has authorized for future procurement and which design engineers are encouraged to use in new equipment.

and military agencies, and DOD administers 34,000 documents applicable only to military agencies.

By including specifications and standards in design contracts, the Government hopes to obtain standard items meeting agencies' requirements. This technical data, such as the types of acceptable materials, sizes of the part, operating temperature ranges, thread sizes, and welding requirements, helps the parts manufacturer make items acceptable to the Government. If manufacturers' items meet the Government requirements, they can note this data in their catalogs.

Government specifications and standards provide the minimum technical requirements the equipment designer must incorporate in the design. However, the specifications and standards by no means limit the designer to using certain items. For example, military standard 454 establishes the technical requirements for the design and construction of 67 types of electronics equipment and lists hundreds of Government specifications. Under the section dealing with capacitors, the standard addresses four broad types.

--Variable compression and fixed-paper dielectric capacitors are not to be used in Government equipment.

--Military specification C-92 is listed as the document where requirements on variable air dielectric capacitors are found.

--Military specification C-39018 is listed as the source of data on fixed electrolytic capacitors.

--Military standard 198 is listed as the source of engineering technical requirements for different types of capacitors.

The specifications and standards are obviously very general. They offer designers engineering data on the types and styles of capacitors but do not identify the capacitors in the Government's logistics system, the specific capacitors the Government would like to continue using, or the manufacturers of preferred items. Although qualified products lists do show the manufacturers of preferred items, not all specifications are accompanied by these lists. For over 31,000 specifications, there are only 1,750 qualified products lists.

Also, specifications and standards do not always contain the Government's most recent standardization decisions and

sometimes do not reflect the latest state of the art. To obtain access to the decisions, designers usually have to go through their Government contracting agencies, which is time consuming. Further, the decisions on unacceptable items are not maintained centrally. For example, Government decisions not to use certain electronic items are recorded in files at the Defense Electronics Supply Center, Dayton, Ohio; the Army Electronics Command, Fort Monmouth, New Jersey; and the Federal Aviation Administration's (FAA's) Aeronautical Center, Oklahoma City, Oklahoma.

After reviewing the specifications, the design engineer faces the problem of identifying the specific items which meet his design needs. Many items differing slightly in physical or technical characteristics can meet a Government specification. For example, the December 1974 Federal catalog listed 93,000 capacitors, of which 13,000 met military specifications. Thus, the designer usually has many items from which to choose. So how does he actually choose an item for use in new equipment?

The House Committee on Government Operations, in a December 1974 study of parts standardization, posed this question to 30 companies with Government design contracts. Most of them said the bulk of their data came from parts manufacturers' catalogs and that, "Unless required to, they make no attempt to select parts from Government lists." Also, many of the larger companies had established their own catalogs of items they wanted their designers to use. Only one company reported receiving a great deal of data from the Government. The Committee also found that many companies, anticipating future Government design contracts, had completed about 30 percent of the design work before actually receiving the contracts.

We also examined the methods designers use to select items. Some examples follow.

--Company A had an Army contract requiring that items be selected in accordance with over 400 specifications. An item selection group was responsible for screening manufacturers' catalogs and selecting items for the company's catalog. To select items, designers used the company's catalog, which showed the Government specification, if applicable, that each item could meet. The designers also informally contracted Government sources, such as the Defense Electronics Supply Center, the Army Missile Command, and the Defense Logistics Service Center, for catalog data on specific items.

--Company B had an Army redesign and engineering update contract for an electronics countermeasure set. The company's designers were allowed to select items from whatever sources they had. They therefore selected items they had developed or used in other Government equipment, and they referred to manufacturers' catalogs and a few qualified parts lists provided by the Army's contracting officer.

--Company C had contracts with both the Army and the Navy for electronics gear. According to the designer, he used items shown in manufacturers' catalogs and, when possible, items used on other Government equipment. For items not meeting Government specifications, the company worked with Army and Navy engineers to find military-approved items or to agree on the use of nonstandard items. This company said it is having problems obtaining timely information on the availability of preferred items in the Government's logistic system.

Thus, the Government has given advice only when designers knew where to find it and requested it, and the Federal catalog has not been the principal reference used in selecting items.

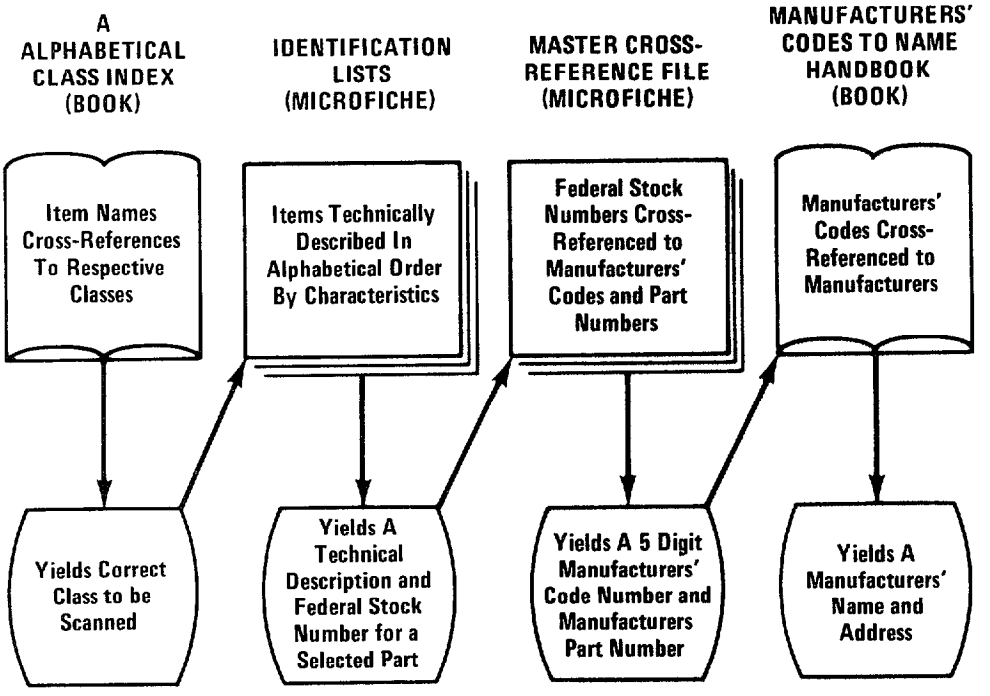
ITEM IDENTIFICATION LISTS

Important Federal catalog information that could help designers select preferred items can be found in item identification lists. Agencies individually developed these lists for their own personnel to use in identifying and ordering items. For example, an electronics repairman could review the list for resistors and determine, by technical characteristics, which resistors were cataloged and what Federal stock numbers were assigned to them.

Until 1973 the DOD and civil agency identification lists were printed in hard copy. Because of high printing costs, the lists were specifically tailored to agency use. The costs of consolidating, printing, and widely distributing lists were not practical. Then in 1973 the Defense Supply Agency, operator of the Federal catalog system, had the DOD identification lists consolidated and printed on microfiche for easier distribution. Microfiche is a 4- by 6-inch plastic sheet on which 269 pages of data can be printed for 6 cents a page. A microfiche reader costs about $95.

DOD's identification lists are prepared in Federal supply class[1] order. An alphabetical index of catalog items refers a user of this data to the proper supply classes in which items are listed. Each item in a supply class is then alphabetically listed on microfiche by technical description, if such a description is available. If an item meets the requirements of a Government specification, this data is listed. Certain items are also illustrated. To identify the manufacturers of the items listed, a master cross-reference file, also on microfiche, relates the items' Federal stock numbers to the manufacturers' code and part numbers. A book of manufacturers' codes is then used to obtain a particular manufacturer's name and address.

The process involved in using the identification lists is illustrated below.



[1] A Federal supply class is a group of items having similar physical or performance characteristics. For example, all power-driven handtools are grouped in one class. A Federal supply group comprises several classes. There are currently 595 classes.

Although the identification lists may potentially assist designers in selecting preferred items, they have the following deficiencies:

--The microfiche identification lists contain only items used by DOD. Although some civil agencies have developed their own lists, they have not consolidated the lists on microfiche.

--Not all items in a given class are fully described. If a manufacturer did not provide descriptive data, the identification lists contain only the manufacturer's part number. Of all items in the Federal supply system at the end of 1974, 33 percent were fully described, 22 percent were partially described, and 45 percent had only their part numbers listed.

The Government is trying to describe as many items as possible, but manufacturers' unwillingness to provide the data is a problem. This deficiency is less widespread for high-growth classes and classes of particular interest to designers, such as resistors, screws, and capacitors.

--The identification lists do not contain the Government's standardization decisions, which are recorded in the catalog system data bank.

One designer who used the identification lists received an incentive award because 30 percent of the items he selected were standard Government parts. Other designers could use the lists to help the Government promote standardization, but they have no incentive to do so. Some design contractors have suggested to the House Committee on Government Operations that, if Government contracts required using the lists, preferred item selections would receive top priority.

COMPUTER SCREENING OF CATALOG DATA

Another technique that could greatly help designers has been under joint DOD-GSA development since 1965. All technical characteristics screening of items is done manually at many activities. In the cataloging system being developed, a computer will be able to perform this screening. Computer programs will include decision guides allowing the computer to select duplicate or possible duplicate items.

Programing the decision guides for the thousands of different items the Government uses has been difficult. In addition, all items in the catalog system are not fully described in terms of physical size and performance characteristics.

These p[illegible]s are being worked on, but it is uncertain when the com[illegible] screening technique will be fully implemented. The technique will be partially implemented as each class of items is programed. Electrical capacitors, the first class of items scheduled for computer screening, are to be screened in January and February 1976.

It is envisioned that designers using the computer screening technique will in the future have remote computer terminals to allow direct access to the catalog files. However, small contractors may never be able to directly use the screening technique because of the expense involved.

CONCLUSIONS

The item entry control system has not been as effective as possible in preventing design contractors from introducing new and unnecessary items into the supply system. The Government's specifications and standards, which designers are required to follow, promote the use of standard engineering data and requirements in the initial design concept but do little to promote the selection of preferred items. This problem exists because designers primarily use manufacturers' catalogs, rather than the Federal catalog, to select items.

Although the microfiche identification lists have some deficiencies, they could help designers select items from the Federal catalog system. In view of the House Committee's finding that many designers complete about 30 percent of the design work before receiving Government contracts, providing designers with ready access to the lists becomes even more important. Increased use of the lists not only would promote standardization but also would complement the new computer screening of catalog data system. In addition, designers' extensive use of the identification lists or computer screening, when available, could induce manufactur[illegible] to upgrade and monitor the identification list data on their products.

To stem the introduction of unnecessarily similar items in the Federal catalog and supply systems, Government engineers and logisticians must cooperate more with designers in item selection decisions. This cooperation is necessary to insure that, as new equipment is designed, preferred items already in the Government's logistics system will be used when possible. Each unnecessarily similar item introduced by a designer adds another burden to the logistics workload.

RECOMMENDATIONS

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.

--The lists should include the Government's standardization decision on each item.

--A consolidated list of all catalog items, including those used by civil agencies, should be printed on microfiche.

--The lists should be made available to design contractors upon demand.

--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.

AGENCY COMMENTS

GSA (see app. I) agreed with our recommendations, stating that implementing them will increase and more firmly structure industry's use of the Government's logistics data by inducing industry to use it in the equipment design process.

DOD (see app. II) said it would help GSA and design contractors in any way to develop the proper tools for selecting items already in the Government's logistics system. DOD, however, has reservations about this area and has therefore deferred decisions and actions until a study--to determine all the causes of item proliferation--is completed and reviewed. It is our observation that since the late 1950s and through the 1960s at least 18 different Government or industry studies have reported on the problems with the Government's standardization program. We believe that corrective action is overdue.

The Department of Transportation (see app. III) generally agreed on the need for more effective item entry control. However, the Department has reservations about attacking the root cause of the item entry problems--the inadequate control of items being designed into equipment. The Department believes that revised item entry procedures that foster the use of preferred items may

--increase design costs,

--require use of sometimes more expensive preferred items,

--lead to overdesign,

--delay the introduction of superior items, and

--stifle design improvements.

Most of the Department of Transportation's fears have been considered in the growing number of studies and pilot projects on standardization and item entry control. Both industry and the Government have reported more benefits than problems. Industry has reduced design costs by learning of acceptable preferred items, thus eliminating the need to prepare engineering drawings and test new parts. Although some preferred items are more expensive to purchase, their greater reliability means lower equipment maintenance costs. Also, as the number of uses for a preferred item increases, its cost per unit decreases. Industry and Government officials also believe that standardization does not stifle design improvements. By using standardized parts and methods, designers need not spend time "reinventing the wheel", but instead can concentrate their talents on truly new design areas.

The Department of Transportation was also concerned that requiring designers to use Government catalogs would result in increased prices. The House Committee on Government Operations, in a December 1974 study of parts standardization, asked 30 companies whether stronger contract terms would lead to more effective standardization. The study indicated that, with few exceptions, the response was affirmative. Some firms candidly noted that the contract is the final determinant of company effort. Whatever is contractually required receives top company attention. The firms were cautious only about inflexible programs or if more bureaucracy might result.

CHAPTER 3

NEED TO IMPROVE ENGINEERING CONTROLS

As discussed in chapter 2, the Government has made little effort to promote standardization at the initial stage of the item selection process. Later in the process, the Government does use certain controls to limit the entry of items into the supply system. However, these controls have not been fully effective.

Through engineering controls, the Government tries to promote the selection of preferred items for use in new equipment. As previously discussed, specifications and standards are one type of engineering control. Others are described below.

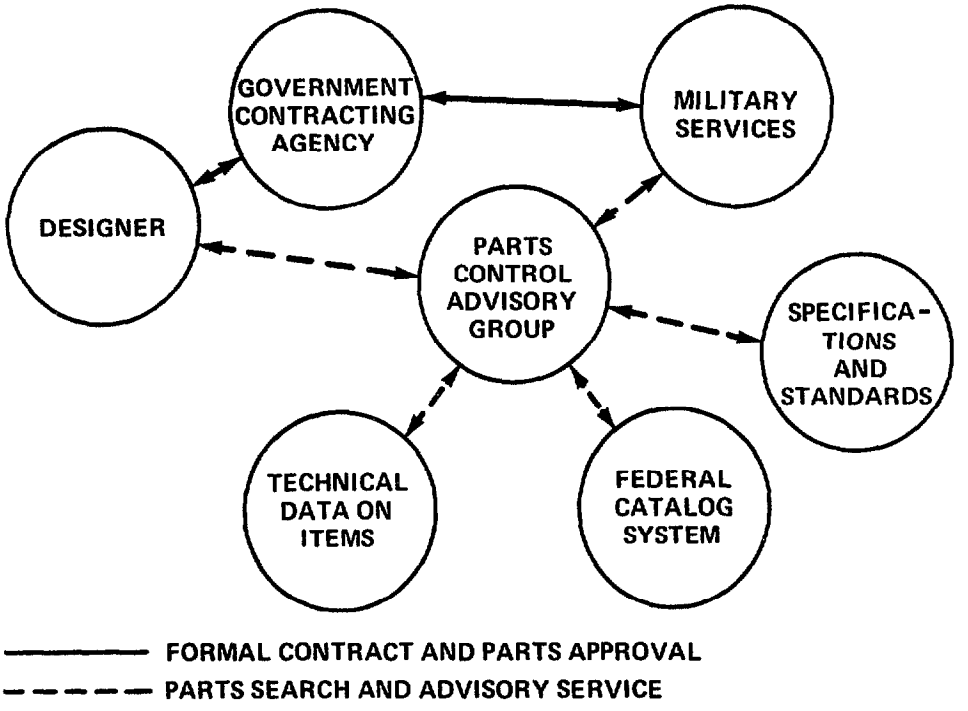
--The Defense Electronics Supply Center's Military Parts Control Advisory Group, Dayton, Ohio. This group was established in 1971 to (1) respond to designers' requests for advice and engineering recommendations on electronics items selections and (2) update military standards and specifications. The group has immediate access to logistics and engineering data on electronics items.

--Nonstandard item reviews. Both DOD and FAA require that, before contractors start production, their use of nonstandard items be reviewed. These reviews compare the nonstandard items' technical descriptions with preferred items' descriptions to determine if equivalents exist. If an agency can suggest alternatives to nonstandard items, the contractor will not unnecessarily introduce items similar to preferred items.

MILITARY PARTS CONTROL ADVISORY GROUP

After a designer asks the Military Parts Control Advisory Group for recommendations, the group makes an engineering evaluation of possible standard or advanced technology items that would meet the designer's requirements. Within 2 to 7 days, recommendations and supporting technical data can be returned to the designer for consideration. The designer evaluates the recommended items, makes his decisions and forwards a request for approval of proposed nonstandard items through the contracting agency to the responsible military engineering activity. The engineering activity then forwards its decisions to the designer and provides data on all approved nonstandard items to the Military Parts Control

Advisory Group. The group uses the data to promptly update standardization documents and provides the data to the appropriate defense technical review activity or item manager. This system is illustrated below.



In its September 1974 report to the Congress on defense cataloging and standardization programs, DOD stated that the group reviewed 7,300 proposed nonstandard items in fiscal year 1973. By successfully replacing 59 percent of the nonstandard items with preferred items, the group saved the Government an estimated $22 million, as follows:

	Savings (millions)
No need to develop new engineering drawings	$ 2.245
No need to make qualification tests	12.123
No need to incur inventory management costs	7.740
Total	$22.108

The cost of the group's service in 1973 was $667,000; thus, the overall cost-benefit ratio was 1 to 33. The group's success can be attributed to

--its professional talent and willingness to work at solving problems,

--the Defense Electronics Supply Center's collocation of engineering and supply management functions for classes of items, and

--the centralization of electronics item standardization planning with the engineers who prepare most of the electronics specifications and standards.

Although the Military Parts Control Advisory Group has solved some item entry control problems, its scope is limited. The group gives advice only on electronics items, including only 21 of the 76 high-growth Federal supply classes. In 1973 DOD announced that it intended to apply the advisory group concept at the Defense Industrial Supply Center for the fastener and bearings classes. A feasibility study concluded that a 1-to-34 cost-benefit ratio was possible. As of March 1975, the concept had been implemented on a limited basis for five contracts. DOD has not explored the feasibility of including all the high-growth classes under the advisory group concept.

The advisory group is also limited in scope because its services are voluntary; it recommends items only when a military service and the contractor agree to ask for advice. Defense Electronics Supply Center personnel estimated that in 1973, of about 450 contracts which could have used the group's service, only 59 did.

Acceptance of the advisory group's service has been limited. While the Air Force has helped to develop the group, the Navy and Army have been less enthusiastic but do have arrangements for using the group's service. Under the Army's arrangement, the group evaluates a contractor's item proposals and submits its advice to the Army Electronics Command, not directly to the contractor. The command then evaluates the group's advice and advises the contractor of the desired action. This additional evaluation prevents the Government from responding to a contractor within 7 days. In addition, as of December 1974, few Army contracts called for contractors to use the group.

Another problem with the advisory group concept is that it probably would not work for many classes of items for which the engineering and supply management functions are not collocated in the same agency. For example, in the anti-friction bearing classes, the Defense Industrial Supply Center is responsible for supply management. Responsibility for preparing and updating specifications and standards is scattered among the military services. Of the 76 high-growth classes, 36 are similarly misaligned, which could prevent the prompt coordination of engineering and supply standardizations decisions.

NONSTANDARD ITEM REVIEWS

To review designers' item selections and offer alternatives to nonstandard items, the Government developed nonstandard item reviews. DOD and industry have indicated that the Government, to be responsive to a designer, must reach a decision on nonstandard items within 7 days of the request. However, both DOD and FAA reviews have taken much longer. As a result, their item changes are usually suggested too late in the equipment acquisition process to have much influence on the items selected for use in new equipment.

DOD reviews

DOD guidelines require that item approvals or disapprovals be made within 30 calendar days. However, the Army Electronics Command took an average of 117 days to review 79 nonstandard item submissions under 5 contracts, as follows:

Equipment	Number of submissions	Total number of nonstandard items	Average number of days to evaluate each submission
Counter-measure set	26	139	128
Tactical landing system	9	191	96
Radar set	33	73	115
Satellite communication terminal	2	100	118
Signal modulation equipment	9	110	129
Total	79	613	117

According to command personnel, delays in making the item reviews were caused by inadequate staffing.

For several of the contracts we reviewed, the command tentatively approved the use of nonstandard items before it had completed its reviews. Because the contractors did not want to delay their equipment development and production, they frequently purchased the nonstandard items and then negotiated waivers allowing the use of the items. Also, the Army Satellite Communications Agency usually requests the command's reviews and simultaneously furnishes the contractor contingent approval for use of all nonstandard items, to avoid delays in equipment development. The contingent approval letters state:

> "The listed parts have been reviewed and found acceptable from a theoretical standpoint. Therefore, approval for use in higher generation assemblies is granted contingent upon demonstration of acceptability of the item when tests on higher assemblies are conducted to show compliance with the technical requirements."

The command's item evaluation are later forwarded to the contractor for informational purposes only.

Besides being untimely, the Army Electronics Command's reviews are frequently inconclusive. For example, the command has

--rejected a nonstandard item but offered no substitute item,

--offered no decision while showing a need for additional data in the evaluation report, and

--accepted a nonstandard item provided certain other technical requirements in the equipment were met.

In addition, the command does not follow up on its nonstandard item reviews to determine if designers take its suggestions and resolve any questions it raised. The command's decisions also are not forwarded to supply managers; thus, when items are later submitted to logistics controls, the nonstandard items are not detected as being similar to items already in the logistics system.

FAA reviews

FAA requires nonstandard item reviews in its contracts for electronic, electrical, and mechanical equipment. Like the Army Electronic Command's reviews, FAA's reviews take too long and are made too late in the equipment acquisition process to affect design decisions.

DOD and FAA differ in which items they consider subject to review. Under FAA's definitions, an item is acceptable and is cataloged if it is listed in a vendor's catalog and was available from a manufacturer or supply establishment when it was incorporated in the equipment design. DOD, on the other hand, considers an item acceptable only after it has been reviewed and designated "preferred." Thus, FAA reviews fewer items than does DOD.

CONCLUSIONS

To limit the number of items entering the Federal catalog and supply system and to get the most use from designated preferred items, the Government should improve the effectiveness of its engineering item entry controls. The item identification lists, modified as recommended in chapter 2, would most help designers choose preferred items. But the existing engineering controls--the Military Parts Control Advisory Group and the nonstandard item reviews--could help more if they were improved. These controls need to become more timely, broader in scope, and better coordinated among Federal agencies. In addition, the advisory group technique should be used by

all civil and military agencies which have equipment designed for them.

RECOMMENDATIONS

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.

--Agree to common, Government-wide definitions of "nonstandard" and "preferred" items.

AGENCY COMMENTS

GSA agreed with our recommendation, is working with DOD to publish uniform standardization program definitions, and will cooperate in developing the advisory service concept.

DOD agreed with our recommendations and pointed out that the Parts Control Advisory Group concept has been expanded to include parts control support for hoses and fittings and that other classes of items are to be reviewed for inclusion. The Department of Transportation agreed that item entry controls needed to be improved but expressed concern about the cost impact or possible design delays that might result from requiring contractors to work closer with Government agencies in selecting preferred items. DOD experience, however, has been that contractors have experienced cost savings, because search time for parts was reduced and qualification tests on new parts were not required when preferred items were identified by the Military Parts Control Group.

CHAPTER 4

NEED TO IMPROVE SCREENING REVIEWS OF ITEMS BEFORE CATALOGING

Besides using the engineering controls discussed in chapter 3, the Government uses logistics controls to screen items just before they enter the Federal catalog. These are the only item entry controls over commercial items. For equipment designed for the Government, the logistics controls are intended to allow the Government to adequately consider standardization decisions made after the new items were designed. The logistics controls are briefly described below.

--Part number screening. The Defense Logistics Service Center, Battle Creek, Michigan, has operated the part number screening system since 1963. To prevent items from being cataloged more than once and from having more than one assigned stock number, the center screens manufacturers' part numbers of items proposed for entry in the catalog against part numbers of items already in the catalog. The screening system must be used by all DOD activities and is available, on a voluntary basis, to civil agencies and certain contractors.

--Joint contractor-Government (provisioning) reviews. These reviews start when a contractor prepares a list of all items in a piece of equipment and recommends the items necessary to support the equipment. Contractor and Government personnel then review the list to determine how many and which items will be stocked and which Government supply activity will stock them. About 90 percent of the new items cataloged each year pass through these reviews. For 20 percent of the newly cataloged items, these reviews are the last standardization reviews they receive before entering the Federal logistics system.

--Technical reviews of item characteristics. About 75 percent of all new items cataloged are in 76 high-growth Federal supply classes. Each new item entering one of these classes was formerly required to be processed through a DOD technical review activity, but, on March 19, 1975, DOD decentralized these activities. GSA makes similar, but less indepth, reviews of items entering the 68 supply classes it manages. About 5 percent of all new items enter these classes.

The logistics controls have not been as effective as they could be. They do not effectively identify similar items already in the catalog and supply system, nor do they screen all items. A more coordinated and comprehensive logistics review system is needed.

SIMILAR ITEMS NOT IDENTIFIED BY PART NUMBER SCREENING

By screening the manufacturer's code and part number of a new item against the manufacturer's code and part numbers of items already cataloged, the Defense Logistics Service Center can effectively prevent the assignment of more than one stock number to the same item manufactured by the same company. Of the 2 million to 7 million part numbers screened each year, about 41 percent are found to already be cataloged. However, part number screening does not necessarily prevent the assignment of separate stock numbers to similar items manufactured by the same or different companies.

To insure that data being submitted to the catalog system is complete, civil agencies are required to submit all cataloging actions through GSA. However, GSA makes some exceptions to this requirement. For example, FAA has been authorized to operate its own item entry controls and to catalog its own items.

Part number screening is FAA's principal item entry control and is also heavily relied on by GSA. In 1973 FAA entered 6,170 new items into the Government's catalog and supply systems. To test the effectiveness of the part number screening, we randomly selected 100 electronics items--resistors, capacitors, and microcircuits--for which FAA had obtained Federal stock numbers in the second and third quarters of fiscal year 1974. With assistance from electronics experts at the Defense Electronics Supply Center, we found reason to question the introduction of 34 of the 100 items because:

--For 14 items, the catalog and supply systems already contained duplicate or slightly better items in terms of tolerances, voltage or temperature ranges, and reliability.

--For 15 items, similar items had been selected as standard by DOD and were being assigned stock numbers.

--For 5 items, FAA's descriptions were inadequate, so the Defense Electronics Supply Center could not have procured them.

The part number screening did not realize that the 15 new items were similar to DOD standard items because DOD's standardization decisions had not yet been recorded in the Federal catalog. The period between a standardization decision and cataloging action can be a few months to a year because the Defense Electronics Supply Center does not record a standardization decision or request a new stock number until it receives an order to purchase the item. Thus, civil agencies, such as FAA, which do not process their new item requests through the center, are not alerted to DOD's recent standardization decisions.

Following are examples of the ineffectiveness of part number screening in detecting similar items.

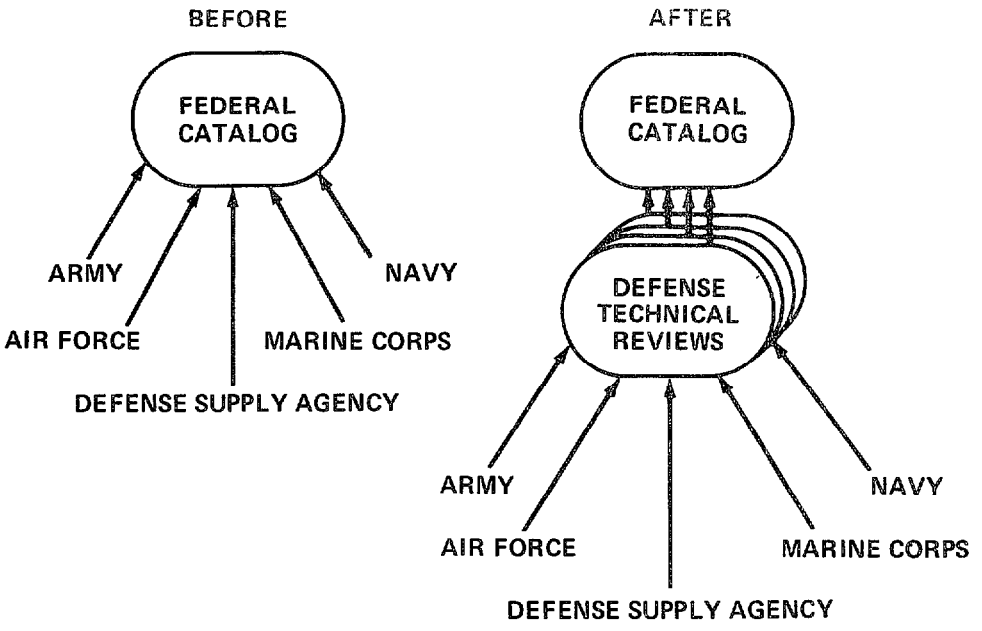
--A company makes a fixed ceramic capacitor which has been in the Federal catalog and supply system since 1960. In February 1974 FAA obtained a new stock number and cataloged a capacitor made by another company. The two capacitors' technical characteristics are identical in terms of capacitance, tolerance, voltage, operating temperature ranges, length, and diameter. However, differences in the manufacturers' codes and part numbers prevented the part number screening from detecting this.

--A manufacturer of equipment for FAA purchased fixed film resistors and renumbered them with its manufacturer's code and part number. The part number screening failed to alert FAA to the fact that other fixed film resistors with preferred characteristics and higher reliability were already in the Federal supply system.

CERTAIN ITEMS NOT SUBJECTED TO DOD TECHNICAL REVIEWS

Before DOD established its technical review activities in 1966, each of the military service catalog activities forwarded its request for new Federal stock numbers directly to the Defense Logistics Services Center. These items were therefore subjected only to part number screening to determine if they already had stock numbers. No DOD-wide technical reviews of item characteristics were made to prevent the entry of similar items.

DOD TECHNICAL REVIEW PROGRAM



From 1966 until their decentralization on March 19, 1975, 10 Army, Navy, Air Force, and Defense Supply Agency inventory control points made technical reviews of new items entering the 76 high-growth Federal supply classes. In these reviews, which usually took about 8 days, specialists with technical knowledge of particular items:

--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.

--Reviewed catalog data on items already in the system to insure its accuracy and completeness.

--Conducted item reduction studies of similar items and eliminated unnecessary items.

The reviews had been successful in identifying proposed items as duplicates of items already in the supply system. In fiscal year 1974, of 173,600 items reviewed,

33,400 (19 percent) were found to be duplicate or similar in form, fit, and function to items already in the supply system. Since 1966 the reviews have identified about 24 percent of all new proposed items as exact or possible duplicates of items already in the supply system.

On March 19, 1975, DOD decentralized the defense technical review activities for the following reasons:

--Routing catalog data through a technical review activity was hampered by the absence of uniform submittal processes.

--Additional time required to process through a centralized technical review activity contributed to major problems throughout the supply system.

--The new cataloging system data flow; i.e. directly from the originator to the Federal catalog and back, was expected to solve the above problems without greatly reducing the effectiveness of the item entry control program, principally because of the increased screening capability of the new cataloging system. (See p. 9.)

--A relatively low payoff (5 percent duplicates or replacements) was being obtained by the technical review activities for service-managed[1] items.

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[1]Items in DOD are principally managed by the military services (Army, Navy, Air Force, or Marine Corps) and the Defense Supply Agency Centers. Overall the centralized technical review activities were reporting that 24 percent of the new items proposed for entry to these managers were duplicate or similar to items already in the supply systems. DOD is now indicating that, of the new proposed items to be managed by the military services, only 5 percent were duplicate or similar. This means that a significantly higher percentage of duplicate and similar items is being designated for management by the Defense Supply Agency.

CONCLUSIONS

The current logistics item entry controls are not fully effective because:

--Part number screening, on which some civil agencies rely heavily, does not identify similar items already in the cataloging and supply systems.

--FAA, GSA, and DOD independently review and enter similar items into the Federal catalog system without knowledge of each other's recent standardization decisions.

--The defense technical review activities have demonstrated an ability to stem the proliferation of similar items entering 76 Federal supply classes; however, these activities have been decentralized.

The many duplicate or similar items the logistics controls have detected indicate that the controls are somewhat effective but also demonstrate the overall weakness of the item entry control program, because such items should have been detected much earlier.

RECOMMENDATIONS

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.

AGENCY COMMENTS

GSA agreed with our recommendation but has not withdrawn the exception granted to FAA and the Coast Guard, which allows them to bypass the GSA item entry controls.

The Department of Transportation expressed concern that increasing the spectrum of item entry review would require large amounts of resources in most agencies. The Department did not agree that FAA had unnecessarily introduced 34 new items into the Federal supply system.

Our recommendation is not intended to increase the resources committed within each agency to item entry control.

We would prefer that existing resources be consolidated at one agency. For example, resources--people, facilities, and files of technical data related to electronics items--are currently being used to conduct item entry functions at the Defense Electronics Supply Center, the Army Electronics Command, and FAA's Aeronautical Center. At each of these locations, item entry decisions are being made on similar items, but the quality of the decisions varies widely. By consolidating the Government's expertise on electronics items, it would only be necessary to maintain one technical library and educate and keep up to date one group of people working together at the same location. All Federal agencies and our allies would work through the central item control point. For each Federal supply class or similar groups of classes, central item entry control offices would be established in an appropriate agency--office supplies at GSA; industrial supplies at the Defense Industrial Supply Center, etc.

DOD's March 19, 1975, action to decentralize the defense technical review activities does not conform to what we anticipated in our recommendations. DOD's belief that the increased screening capability of the new cataloging system will improve item entry control appears to be correct, but this capability is not now available. The first class of items on which the new screening capability will operate will not be available until January and February 1976. Implementing the screening capabilities on most items in the Federal catalog system will take years.

The Department of Transportation disagreed with our statement that FAA unnecessarily introduced new items into the Federal supply system. Specifically the Department believes that 14 FAA items which we said were either duplicates or slightly better substitute items were not in the Federal catalog records and were not shown to be preferred items. On rechecking, we found that each of those items was cataloged before October 1972, some as far back as 1960. Each item was assigned a national stock number and a standardization status code designating it as a preferred item. In fact, FAA is recorded in the catalog system as a user on three of the items and has designated them as preferred.

The Department also believes that six items we reported to be substitutes will definitely not work in the FAA equipment. Two of the FAA items are microcircuits, each with a 16-pin dual in-line packet. The item we reported to be a substitute for both the FAA items was cataloged in July 1972.

The part number--M738510-00602BEC--is recorded in the catalog file. The general item description section of the catalog file erroneously listed the item as a 14-pin packet. However, in reading the part number, which is a significant numbering system, the second from last alpha character "E" indicates that the part has a 16-pin dual in-line packet, same as the FAA item. The Defense Electronics Supply Center item entry technicians verified our work and initiated a catalog change to correct the erroneous catalog data.

Three of the six items questioned by the Department of Transportation were .25 watt resistors. FAA entered three resistors rated at .27 watt at 70°C which are one-fourth of an inch long and one-tenth of an inch in diameter. According to FAA catalogers, the wattage and size of the items is important because the parts go into a foreign-made message switching device. The substitute resistors we identified were cataloged at .125 watts at 125°C and were three-eigths of an inch long and one-eigth of an inch in diameter. If our reported substitute items are derated to 70°C--same as the FAA items--they are also then rated at .25 watt. The Defense Electronics Supply Center item entry control technicians also explained that during equipment design sufficient room is allowed around all resistors to provide for cooling of these devices. Therefore, the slight difference in length and diameter is insignificant in terms of the substitute items fitting into the equipment.

On the sixth item, FAA introduced a 560 ohm resistor. During its study of our findings, FAA was given the wrong stock number for our reported substitute item. Defense Electronics Supply Center item entry control technicians subsequently reported to us that an acceptable substitute item for the FAA 560 ohm item has been available in the Federal catalog and supply system for the past 6 years.

CHAPTER 5

SCOPE OF REVIEW

We studied the legislation establishing the Government's standardization programs at the agencies listed below. We reviewed their policies, directives, and procedures involving item entry control, cataloging, and standardization. We spoke with agency officials and officials of various Government contractors.

Our review, made from January through December 1974, included visits to the following locations.

General Services Administration:
Headquarters, Federal Supply Service
Washington, D.C.

Department of Transportation:
Headquarters, FAA
Washington, D.C.

Aeronautical Center, FAA
Oklahoma City, Oklahoma

Department of Defense:
Office of the Assistant Secretary of Defense
(Installations and Logistics), Washington, D.C.

Defense Materiel Specifications and Standards
Board, Alexandria, Virginia

Department of the Army:
Headquarters, Army Materiel Command
Alexandria, Virginia

Army Electronics Command
Fort Monmouth, New Jersey

Army Satellite Communications Agency
Fort Monmouth, New Jersey

Defense Supply Agency:
Headquarters, Defense Supply Agency
Alexandria, Virginia

Defense Industrial Supply Center
Philadelphia, Pennsylvania

Defense Electronics Supply Center
Dayton, Ohio

Defense Logistics Services Center
Battle Creek, Michigan

APPENDIX I

UNITED STATES OF AMERICA
GENERAL SERVICES ADMINISTRATION
WASHINGTON, DC 20405

JUL 23 1975

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, DC 20548

Dear Mr. Staats:

Thank you for your letter of May 29, 1975, transmitting your draft report "Effective Item Entry Control Can Reduce Logistics Costs."

Your report acknowledges the slower growth trends of items in the General Services Administration's (GSA) classes. Despite the lesser magnitude of growth in our classes, we are concerned about item entry control. Two task groups have been constituted since 1970 to evaluate and offer recommendations for improving GSA's item entry processes. We shall continue to seek methods for furthering Government supply efficiency and economy through enhancements to our item entry control methodology.

We are pleased to provide you, as an attachment to this letter, our comments to the specific recommendations made.

Sincerely,

Dwight A. Ink
Deputy Administrator

Enclosure

APPENDIX I

GSA Comments on Draft Report to the Congress:
Effective Item Entry Control Can
Reduce Logistics Costs

(Code 947118)

GAO Recommendation. 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, but the following changes should be made.

--The lists should include the Government's standardization decision on each item.

--A consolidated list of all catalog items, including those used by civil agencies, should be printed on microfiche.

--The lists should be made available to design contractors upon demand.

--Government agencies should contractually require designers to use the lists or the new computer screening technique as their principal source of items in all design work.

GSA Comment. We concur with this recommendation which is consistent with both the spirit and literal statement of policy as presented in the Federal Catalog System Policy Manual: "The Federal Catalog System is designed to promote optimum interchange of Federal Catalog System data between and among all DOD components, Civil Agencies, NATO, and other foreign countries and industry." A long-standing program of the Federal Catalog System, the Provisioning Screening Program, is designed to be used by both Government and industry to search the Central Catalog File through the input of National Stock Numbers (NSN) and/or manufacturer's codes and part/reference numbers to determine the existence of stock numbered items and obtain associated data.

This recommendation strengthens and more firmly structures industry's use of the Government's logistics data base by enforcing its application to the equipment design process, and we will cooperate with the Department of Defense and the Federal Aviation Administration in its implementation.

GAO Recommendation. We recommend that the Administrator of General Services and 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.

-- Agree to common, Government-wide definitions of "nonstandard" and "nonpreferred" items.

GSA Comment. We concur with these recommendations. Progress has been made in defining terms. The Joint DOD/GSA Item Reduction Steering Committee, which first convened in March 1975, recognized the need for a uniformly understood standardization coding structure. Agreement has been reached and the definitions will be published in a joint DOD/GSA policy manual governing the item reduction program. In addition, we will cooperate with the Department of Defense and the Federal Aviation Administration to develop advisory services as recommended.

GAO Recommendation. 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.

GSA Comment. A uniform and centralized item entry control program for all Federal agencies has been the motivating objective of the Federal Catalog System. Specific enhancements are directed toward design control utilization; for example, the design selection capability being incorporated into the basic cataloging tool, the Federal Item Identification Guide. In addition, with implementation of the parametric screening capability of the Federal Catalog System, currently scheduled for October 1975, the potential for preliminary, centralized, characteristic screening of new items will be effectively accomplished at the Defense Logistics Services Center (DLSC). Those organizations (DOD, GSA, FAA, and Coast Guard) authorized to submit new items to DLSC for the assignment of National Stock Numbers shall also have at their disposal the tools by which improved item entry control may be effected. Recognizing this, the Department of Defense has disbanded the Defense Technical Review Centers.

APPENDIX II

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

SS
INSTALLATIONS AND LOGISTICS

13 AUG 1975

Mr. Fred J. Shafer
Director, Logistics &
Communications Division
General Accounting Office
Washington, D. C. 20548

Dear Mr. Shafer:

This is in response to your letter of May 20, 1975 forwarding the General Accounting Office Draft Report entitled "Effective Item Entry Control Can Reduce Logistics Costs," Code 947118 (OSD Case #4092).

We have reviewed the Draft Report and agree with the findings, conclusions and recommendations, with minor exceptions. Our comments, keyed to specific recommendations and additional general comments, observations and conclusions, are furnished in the enclosure.

As an overall statement, however, we would like to point out that, based on the assumption that to be effective, item entry control must start at the design stage, many policy decisions have been made and implemented to improve controls and procedures; e.g., increase the number of military standards in the piece part area to display our standard parts, develop a nonstandard part review program, institute a military parts control program, etc. These, plus the fact that Department of Defense (DoD) design contractors have internal standardization programs to limit their designers' selection, have not substantially reduced proliferation.

When equipments are procured, many piece parts are required for supply support. The technical data submitted for piece parts used in DoD design contracts permit item entry control techniques to be employed as well as the preparation of complete item identifications. If item entry control has not been successful, as the Draft Report implies, there may be other contributing causes of proliferation.

In procurements of commercial or modified commercial equipments, the design has been completed by the manufacturer and the Government cannot impose a requirement for the use of Government standard or preferred items. In these types of contracts the technical data submitted under this condition are lacking and are a reason for the high percentage of reference type item identifications. In addition, when the Government

APPENDIX II

... an equipment to a military performance type specification, design ... is lacking, in which case the piece parts in the equipment will ... from procurement to procurement.

... considering the above, the Defense Materiel Specifications and Standards Office plans to initiate in the near future a study to determine the many different causes of proliferation. This study will determine the ratio of items entering the logistics system as a result of new military ... controlled design versus the number entering the system due to other actions. It will also identify the other important reasons for growth in the range of items managed by DoD. Once the reasons have been established the item entry control program can be directed to combat the root cause of proliferation.

It should be noted that the overall number of items managed by the DoD has decreased from a high of 4.085 million items in 1969 to 3.758 million in March 1975. Our goal is to reach 3.6 million by the end of FY 1976.

We appreciate the opportunity to comment on this Report in draft form.

Sincerely,

Enclosure
As stated

JOHN J. BENNETT
Acting Assistant Secretary of Defense
(Installations and Logistics)

BEST DOCUMENT AVAILABLE

 BEST DOCUMENT AVAILABLE APPENDIX II

DEPARTMENT OF DEFENSE COMMENTS
ON
GAO DRAFT REPORT, CODE 947118
DATED JUNE 1975

"EFFECTIVE ITEM ENTRY CONTROL CAN REDUCE LOGISTICS COSTS"
(OSD CASE #4092)

A. Comments on Specific GAO Recommendations

1. GAO Recommendation, Page 5. "The Secretary of Defense and the Administrator of General Services should: --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 item identification lists are the best existing tools, but their use should be contractually required and they should be modified as outlined on page 20."

DoD Comment: The DoD is willing to assist in any way, with the General Services Administration (GSA) and 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 Military Parts Control Advisory Groups (MPCAGs) located at the Defense Electronics Supply Center (DESC) and at the Defense Industrial Supply Center (DISC) now provide such support to over 100 military contracts for electronic items, and fasteners and bearings. We are investigating the feasibility of adding standardization decisions to our Identification Lists (ILs). We do have reservations on this subject which we discuss in Item 5. Additionally, there is current action to considerably expand the number of contracts being supported by the MPCAGs. The use of MPCAGs is required by contract, and ILs could also be required by contract if determined advisable.

2. GAO Recommendation, Page 6. "The Secretary of Defense and the Administrator of General Services should: . . . --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."

DoD Comment: While we have MPCAGs only for electronic parts, and fasteners and bearings at present, we are currently reviewing other Defense Supply Agency (DSA) assigned Federal Supply Classes (FSCs) to determine potential. As a part of this review, at the request of the Air Force Systems Command, the Defense Construction Supply Center (DCSC) is providing parts control support for hoses and fittings through the DISC MPCAG. If determined to be feasible and if there is substantial payoff, expanded MPCAG support could be provided directly from DCSC.

3. GAO Recommendation, Page 6. "The Secretary of Defense and the Administrator of General Services should: . . . --Agree to common, Government-wide definition of 'nonstandard' and 'preferred' items."

DoD Comment: We concur that Government-wide definitions for "nonstandard" and "preferred" items are highly desirable and are willing to participate in discussions leading to standard definitions.

4. GAO Recommendation, Page 6. "The Secretary of Defense and the Administrator of General Services should: . . . --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 items requests through these centrally operated systems."

DoD Comment: All items in FSCs assigned to DSA for supply management are subjected to uniform item entry control procedures applicable to military users only (see additional comment number 7).

5. GAO Recommendation, Page 20. "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, but the following changes should be made."

a. "--The lists should include the Government's standardization decision on each item."

DoD Comment: We concur that the proper tools must be placed in the hands of the design community for design selection. We question that the best tools are ILs or the new computer screening techniques. The ILs are limited in the number of characteristics that can be displayed in comparison to the number of characteristics in the Total Item Record (computer screening). At this time the ILs and computer screening do not have the capability of readily showing where the technical data (other than specifications) that control the item of supply can be obtained by the design contractor. It is believed that mandatorily using either of these techniques would increase research and development costs. We believe it is advisable to defer further decisions and actions in this matter until the study described in our letter has been completed and reviewed. A DoD Instruction and a parallel GSA Federal Property Management Regulation (FPMR) which will align the Civil Agencies with the policies and code structure of the DoD Standardization Manual are targeted for issue by March 1976. In view of the above, it can be assumed that the standardization status of civil items will be recorded in, and available from the Total Iten Record (TIR) on a progressive basis.

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b. "--A consolidated list of all catalog items, including those used by civil agencies, should be printed on microfiche."

DoD Comment: Concur. The current Defense Integrated Data System (DIDS) program has scheduled the inclusion of Civil Agency items for publication in the IL.

c. "--The lists should be made available to design contractors upon demand."

DoD Comment: Consolidated ILs for DoD are currently produced by the Defense Logistics Services Center (DLSC) in microform media. Arrangements have been made for DLSC to publish a consolidated DSA catalog for Civil Agencies as specified in Section II of the DIDS Procedures Manual.

The basic IL editions and related change bulletins and Federal Item Logistics Data Records (FILDRs) (DD Form 146) are distributed to all DoD activities, Civil Agencies, other Government Agencies, and commercial activities or individuals (engaged in supplying selected items under DoD contracts) upon request and after determination by a DoD contracting official, as specified in subsection 13 of the Federal Catalog System Policy Manual.

d. "--Government agencies should contractually require designers to use the lists or the new computer screening technique as their principal source of items in all design work."

DoD Comment: As previously stated, the lists are available to designers and are prepared to assist them in interrogating DIDS in their search for stocked items. The DIDS interrogation is currently being refined to be more responsive to the needs of the designer. In the meantime, we provide such support to designers on request through the cognizant MPCAG. As stated in paragraph 5. a., above, we believe further study is necessary before contractually requiring designers to use these tools.

6. GAO Recommendation, Page 23. "We recommend that the Administrator of General Services and the Secretary of Defense:"

a. "--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."

DoD Comment: Concur. Other FSCs will be reviewed for inclusion in the MPCAG Program. Those Classes that have high-growth, high interchangeability and substitutability potential, and a good technical data base will be considered.

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NOTE: Since mention was made in the text of this chapter of the report regarding Army participation in MPCAG activities, the following excerpt from Army's comments on the Draft Report is quoted:

"Army Position. Concur. The Army has taken action to increase the use of the Military Parts Control Advisory Groups (MPCAGs) at Defense Electronics Supply Center and at the Defense Industrial Supply Center. A proposed Army/Defense Supply Agency (DSA) agreement, describing working arrangements and procedures between Army developing agencies and the MPCAGs on the selection and control of parts, is being staffed. Signature by Army and DSA is expected within the next two weeks. Directives to implement the agreement will be issued within 45 days (from July 2, 1975).

Also, the Army Materiel Command (AMC) is providing the Army Member on the DoD Task Group on parts control. One objective of the task group is to develop common procedures for Army, Navy and Air Force, and to consolidate the several military standards on parts control into a single coordinated standard. The revision will include common definitions for 'nonstandard' and 'preferred' items to accomplish this recommendation."

b. "--Agree to common, Government-wide definitions of 'non-standard' and 'preferred' items."

DoD Comment: As previously indicated, we concur that standard definitions are highly desirable and we are willing to participate in discussions leading to them.

7. GAO Recommendation, Page 36. "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."

DoD Comment: Clarification and updating are required in the text of the Draft Report in this chapter. On page 33 the text states, "Currently 10 Army, Navy, Air Force and Defense Supply Agency inventory control points make technical reviews of new items entering the 76 high-growth Federal Supply Classes." The text then describes the activities of the Defense Technical Review Activities (DTRAs).

The ten DTRAs were disbanded on March 19, 1975. The decision to disband was based upon the following:

a. Routing catalog data through a DTRA was hampered by the absence of standard preparation and transmittal technique.

b. Additional time required to process through a DTRA contributed to significant problems throughout the supply system.

c. The DIDS data flow; e.g., directly from the originator to DLSC and return, was expected to solve these problems without significantly reducing the effectiveness of the item entry control program, principally because of the increased screening capability of DIDS; i.e., parametric screening and characteristic search.

d. The relative low payoff (5 percent duplicates or replacements) being obtained by the DTRAs for Service-managed items.

The disbanding of the DTRAs has not reduced significantly the effectiveness of the item entry control program for the following reasons:

a. Defense Supply Centers are continuing to perform a technical review of new items received through the Provisioning and non-Provisioning processes. That this review has been effective is evidenced by the results: 27 percent possible duplicates or replacements, and 26 percent errors detected.

b. Military Services/Agencies have been charged with item entry control responsibilities by the provisions of Paragraph 132.05 of the Federal Catalog System Policy Manual.

B. Additional General Comments, Observations, Conclusions

1. GAO Observation, Page 3. "The Military Parts Control Advisory Group was established to provide designers with advice on electronics item selection and to update military specifications and standards."

DoD Comment: As stated previously, it was because of the success of the MPCAG for electronics parts that a MPCAG for fasteners and bearings was established at DISC. Current support covers 12 contracts including the F-16 Aircraft.

2. GAO Observation, Page 13, Lines 6-14. "--Military specification C-39018 is listed as the source of data on fixed electrolytic capacitors.

--Military Standard 198 is listed as the source of engineering technical requirements for different types of capacitors.

As can be seen, the specifications and standards are very general. They offer designers engineering data on the types and styles of capacitors but do not identify the capacitors in the Government's logistics system, the specific capacitors which the Government would like to continue using, or the manufacturers of preferred items."

DoD Comment: It should be noted that the Military Standard does restrict the range capacitors recommended for new design. Studies are also being conducted to determine how the MPCACs can best interface with DIDS in the identification of items preferred for new design, even though some of the preferred items may already be in the logistics system.

3. GAO Observation, Page 13, Lines 15-17. "Although qualified products lists do show the manufacturers of preferred items, not all specifications are accompanied by these lists. For over 31,000 specifications, there are only 1,750 qualified products lists."

DoD Comment: Qualified Products Lists (QPLs) do not normally accompany the specifications to which the item qualifies because:

a. They are prepared in considerably different time frames.

b. The QPL is subject to frequent changes, whereas the specification is not.

c. Both specifications and QPLs can be obtained on request from one central DoD location.

d. Contractors who have copies of QPLs normally also have copies of the complementing specifications.

It should also be noted that while there are only 1,750 QPLs, each QPL normally covers 200-300 items.

4. GAO Observation, Page 23, Lines 26-27. "This group (DESC MPCAG) gives advice only on electronics items, including only 14 of the 76 high-growth Federal supply classes."

DoD Comment: DESC MPCAG now provides support for all 21 electronics FSCs.

5. GAO observation, Page 24, Lines 12-14. "While the Air Force has helped to develop the group, the Navy and Army have been less enthusiastic but do have arrangements for using the group's service."

DoD Comment: Department-wide Army and Navy proposed agreements for the provision of parts control support by DSA are now in coordination, and these agreements are expected to be consummated during August 1975.

6. GAO Observation, Page 30, Lines 11-14. "--Technical reviews of item characteristics. About 75 percent of all new items cataloged are in 76 high-growth Federal supply classes. Each new item entering one of these classes is required to be processed through a DoD technical review activity."

DoD Comment: As indicated in previous comments the DTRAs have been disestablished.

7. GAO Observation, Page 31, Line 28, Page 32, 1-4. "The time between a standardization decision and cataloging action can be a few months to a year because DESC does not record a standardization decision or request a new stock number until it receives a requirement to purchase the item."

DoD Comment: DESC and other such Centers will soon have the capability (in DIDS) to record new preferred items as Permanent System Control Numbers (PSCNs) before they are purchased. This is expected to make standardization decisions available to all DIDS interrogators much earlier than is now possible.

GAO note: Page references in this appendix may not correspond to pages in the final report.

APPENDIX III

OFFICE OF THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590
July 30, 1975

Mr. Henry Eschwege
Director
Resources and Economic Development
Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Eschwege:

This is in response to your letter dated May 28, 1975, requesting our comments on the General Accounting Office draft report entitled "Effective Item Entry Control Can Reduce Logistics Costs." We agree with the general tenor of the report on the need for more effective item entry control. There are, however, some points that need to be discussed which tend to question the true Government-wide cost benefit ratio of more effective item entry control. These points are discussed in some detail in the enclosed Department of Transportation's reply.

Sincerely,

William S. Heffelfinger

Enclosure
(Two copies)

APPENDIX III

DEPARTMENT OF TRANSPORTATION REPLY TO GAO DRAFT REPORT OF JUNE 1975 B-947118 ON EFFECTIVE ITEM ENTRY CONTROL CAN REDUCE LOGISTICS COSTS

SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS

Item entry controls used by the Department of Defense (DOD) and the General Services Administration (GSA) have not been entirely effective. New and unnecessary items have been entered in the Federal supply system because the controls are often not used until after new equipment has been designed, are not applied to all items, are often slow, and are not always coordinated among Federal agencies. Each unnecessary item adds a logistics burden costing anywhere from a few hundred dollars to over $30,000.

The report recommends that the DOD and GSA: (1) work with design contractors to develop tools which will facilitate their use of items already in the Government's logistics system, (2) develop an advisory services capability for all high-growth Federal supply classes and require that all agencies use these services, (3) agree to common Government-wide definitions of "nonstandard" and "preferred" items, and (4) establish a uniform item entry 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.

DEPARTMENT OF TRANSPORTATION POSITION

Although not directed to the Department of Transportation, we agree with the general tenor of the report on the need for more effective item entry control. There are, however, some points that need to be discussed which tend to question the true Government-wide cost benefit ratio of more effective item entry control.

Work being done today on item entry control involves relatively low expenditures with those resources concentrated on areas known to be cost effective. By increasing the spectrum of item entry review, many technical people would be required, of which some would be working in commodity areas with little potential for real standardization thus reducing the cost benefit ratio. In most agencies, it is

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unlikely that adequate technical resources are available to achieve the ultimate degree of item entry control envisioned by GAO. The added requirement for manufacturers to screen Government prepared catalogs will result in increased prices. An agency will be required to pay for this research which, in effect, also increases the time spent in the overall contract cycle.

We have reservations concerning the desirability of requiring designers to incorporate the use of Federal supply system preferred items in new products. Preferred items are sometimes more expensive than nonpreferred items because of their greater reliability/ adaptability, and requiring designer use of these items in new equipment can lead to overdesigned, more costly equipment without any offsetting benefits. Other problems which we believe could also develop are design delays resulting from the time lag between introduction of superior similar items known to the designer, but on which a standardization decision has not yet been made; the effect that standardization may have on stifling design improvements; possible reduced competition leading to sole source suppliers; and possible adverse impact on small businesses and minority business programs.

In summary, a comprehensive Government-wide item entry control program with associated contractor participation will require the dedication of a vast amount of technical resources and procurement dollars which inevitably will dilute much of the benefits cited in the subject report. We do not believe the report adequately addresses these costs nor the impact of lengthening the procurement cycle in arriving at the recommendations.

We also believe that the report should have given more emphasis to the Defense Integrated Data System (DIDS) implemented on March 31, 1975. This system provides a system of item identification and nomenclature to describe, classify and number each item included in the Federal supply system so that any given item is identified by a single stock number. Many of the problems described in the GAO report should be corrected by the implementation of this system. For example, the system has the capability of characteristic screening of new items to prevent duplicate numbers being assigned for the same or similar items.

We do not agree with GAO's statement that FAA unnecessarily introduced 34 new items into the Federal supply system. A review of the 14 items, which the GAO maintains are either duplicates of or similar to slightly better items already in the system, disclosed that none were duplicated nor were reflected in the Defense Logistics Services Center (DLSC) records as preferred items. Further, six items in the

system which GAO considered to be substitutes for some of the new items will definitely not function in the FAA equipment and cannot be used. Regarding the 15 items which the GAO states are similar to those already selected as standard by the DOD, at the time of procurement the FAA had no knowledge of the DOD selections since, as acknowledged in the report, these DOD decisions had not yet been recorded in the Federal catalog. In the remaining five instances where the GAO states that FAA's item descriptions were inadequate for catalog identification purposes, all data available to the FAA was included and was in accordance with Federal Item Identification Guides.

[See GAO note.]

William P. Davis
Deputy Assistant Secretary for Administration

GAO note: Deleted comments refer to material contained in the draft report that has been omitted from the final report.

PRINCIPAL DEPARTMENT OF DEFENSE AND GENERAL SERVICES ADMINISTRATION OFFICIALS RESPONSIBLE FOR THE ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
DEPARTMENT OF DEFENSE		
SECRETARY OF DEFENSE:		
James R. Schlesinger	June 1973	Present
William P. Clements, Jr. (acting)	Apr. 1973	June 1973
Elliot L. Richardson	Jan. 1973	Apr. 1973
Melvin R. Laird	Jan. 1969	Jan. 1973
Clark M. Clifford	Mar. 1968	Jan. 1969
Robert S. McNamara	Jan. 1961	Feb. 1968
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS):		
John J. Bennett (acting)	Apr. 1975	Present
Arthur T. Mendolia	Apr. 1973	Apr. 1975
Hugh McCullough (acting)	Jan. 1973	Apr. 1973
Barry J. Shillito	Feb. 1969	Jan. 1973
Thomas D. Morris	Sept. 1967	Jan. 1969
GENERAL SERVICES ADMINISTRATION		
ADMINISTRATOR OF GENERAL SERVICES:		
Dwight A. Ink (acting)	Oct. 1975	Present
Arthur F. Sampson	June 1972	Oct. 1975
Rod Kreger (acting)	Jan. 1972	June 1972
Robert L. Kunzig	Mar. 1969	Jan. 1972