

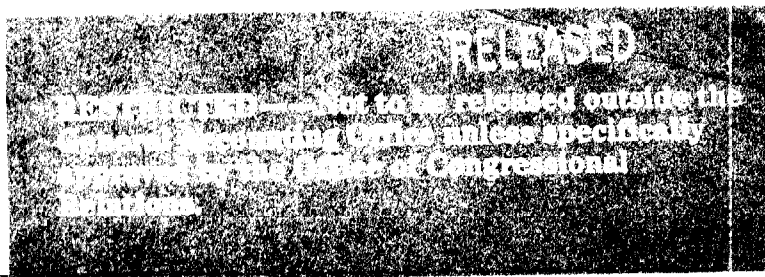
August 1991

ADP PROCUREMENT

DOD's Approach to Providing Logistics Data on Compact Disk Is Justified



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United States
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Information Management and
Technology Division

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August 28, 1991

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Ted Stevens
Ranking Minority Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Barbara A. Mikulski
United States Senate

In November 1989, the Defense Logistics Agency (DLA) initiated a competitive procurement to publish and distribute the federal supply catalog using compact disk-read only memory (CD-ROM) technology. You expressed concern about whether DLA had followed federal laws and regulations in conducting this procurement.

As agreed with your offices, our report focuses on whether DLA followed the Federal Information Resources Management Regulation (FIRMR) and the General Services Administration's (GSA) guidance in conducting its requirements analysis and in analyzing the alternatives to satisfy those requirements. In addition, we agreed to determine whether DLA developed its requirements so as to encourage the use of nondevelopmental items¹ to the maximum extent practicable, as required by 10 U.S.C. Sec. 2325.

Results in Brief

DLA followed the FIRMR and GSA's guidance in conducting its requirements analysis and in analyzing the alternatives to meet its mission requirements—to publish and distribute the federal supply catalog. The requirements analysis adequately identified and documented the functions that DLA needed to meet its mission. DLA's alternatives analysis adequately identified and evaluated alternatives to meet those needs and adequately supported the alternative it selected. Further, DLA's

¹Nondevelopmental items include commercial products, items already in commercial production, or items already developed for and in use in the public sector, or any such item that with minor modifications can meet the acquiring agency's needs.

acquisition approach encouraged the use of nondevelopmental items to the maximum extent practicable.

Background

The Defense Cataloging and Standardization Act, 10 U.S.C. Sec. 2451 et seq., requires the Secretary of Defense to develop, maintain, and distribute a single catalog system of federal supply items. The Secretary has delegated the fulfillment of this requirement to DLA. The catalog identifies parts and supplies needed by federal agencies and the North Atlantic Treaty Organization (NATO). The information in the catalog includes proprietary data and NATO stock numbers that are not releasable to the general public.

Currently, the catalog is produced on microfiche and hard copy; however, since 1981, DLA has been investigating using optical disk technology to replace microfiche. DLA wants to use a CD-ROM system for several reasons, including making information searches faster and easier, reducing costs, and replacing an outdated technology that only one vendor is currently capable of totally supplying. Several commercial vendors already market portions of the federal supply catalog on CD-ROM systems.

DLA's procurement of a CD-ROM system has been controversial from the start. Several vendors maintain that a DLA CD-ROM catalog would directly compete with their own CD-ROM catalogs. This group also claims that DLA has violated federal laws that encourage Defense to use existing products, rather than develop new ones.

In 1987, DLA began developing a prototype, known as FED LOG, to define its requirements for CD-ROM-based publication of federal logistics data. In March 1990, we issued a report² on the prototype. We concluded that although some of the contracting arrangements DLA used during the prototyping were inappropriate, the prototype itself was an appropriate way for DLA to define its requirements.

The Federal Acquisition Regulation and the FIRMR require that information resources be acquired through full and open competition. In November 1989, DLA, through the Government Printing Office (GPO), initiated a competitive procurement by issuing a request for proposals (RFP) for a contractor to provide a CD-ROM-based catalog system and

²Information Technology: DOD's Federal Logistics Data on Compact Disc Program (GAO/NSIAD-90-101, Mar. 15, 1990).

related publishing and distribution. The RFP specified that the retrieval software—the heart of the system—had to be commercial off-the-shelf software. According to GPO officials, best and final offers have been received and are currently under evaluation by GPO.

There has been a recent bid protest of this procurement to GAO, which is still under consideration. The protester challenges the accuracy of the estimated number of FED LOG users specified in the RFP. Because this estimate is the subject of an ongoing protest, we did not evaluate it as part of this review.

Requirements Adequately Determined

Federal regulations require that, in acquiring information resources, the agency conduct a requirements analysis. This analysis is a process in which the agency's needs are identified in terms of the functions to be performed. GSA's guidance³ says the process involves gathering information on the organization's function or mission, its current information needs, its current system and its effectiveness, and its future needs. The result is a statement of requirements that identifies and documents the functions that must be performed to meet its needs.

DLA's requirements analysis adequately identified and documented the functions that DLA needed to meet its mission. The requirements analysis was based largely on the prototype effort, in which DLA actively involved users in developing the requirements. In addition, DLA met specific FIRMR requirements such as establishing a system life cycle, identifying the problems that will be solved by acquiring the new system, determining the nature of the data to be stored and distributed, determining the probable improvement in operational effectiveness and the economies that would be realized, and evaluating the current system to provide a baseline for evaluating proposed alternatives. DLA correctly stated its requirements in terms of the functions to be performed and the performance required, rather than how the functions should be performed.

Selected Alternative Appears Reasonable

The FIRMR also requires an alternatives analysis to be performed. The purpose is to use the previously completed requirements analysis as the basis to compare and evaluate the costs and benefits of various alternatives, and to determine which alternative is the most advantageous to

³A Guide For Requirements Analysis And Analysis Of Alternatives, General Services Administration, January 1990.

the government. GSA's guidance says the analysis should begin by identifying feasible alternatives and discarding those that are unlikely to satisfy the government's requirements. To select the most advantageous alternative, the agency must consider both cost and noncost factors for feasible alternatives.

DLA considered four alternatives. The first was to continue using microfiche. The second approach was to buy commercially available software so that DLA could prepare the data to be put on compact disks. Then, a commercial contractor would manufacture the disks. The third approach involved contracting with a single commercial source for the software and services needed to prepare the data, manufacture the disks, and distribute the CD-ROM-based catalog system. The fourth approach involved reliance on existing CD-ROM-based commercial products.

DLA eliminated the last alternative, the use of existing commercial products, for several reasons (more fully described in app. I). DLA found that these products do not contain proprietary and NATO-sensitive data, ensure that users have access only to data they are authorized to use, or provide a consistent, standard approach to meeting the government's needs. Further, buying from these vendors under existing arrangements does not provide the government with contractual controls to ensure that the data provided by the vendors are accurate, produced on a timely basis, and available in times of peace and war. And finally, having users buy individually from vendors at commercial prices does not ensure that the government is taking advantage of potential cost savings available through a consolidated procurement. In our view, eliminating this alternative was reasonable.

In looking at the other three alternatives, DLA decided the best method was to choose one vendor to meet its needs. DLA properly considered the factors required by the FIRMR. Its alternatives analysis showed that continuing to use an outdated microfiche-based system would be costly and inefficient—the other alternatives save money, improve productivity, and enhance military readiness. DLA's analysis of the remaining two alternatives appropriately considered cost and noncost factors, such as flexibility, security, technical risk, and schedule risk. The risks of doing the work in-house were judged to be higher than having one contractor provide the system and services because DLA lacked experience with CD-ROM technology. Since the costs of the remaining two alternatives were about the same, DLA concluded that the commercial services contract alternative, procured through a full and open competition, would be less

risky and would better meet the government's needs. DLA adequately supported choosing this alternative.

DLA's Procurement Maximizes Use of Nondevelopmental Items

Federal law (10 U.S.C. Sec. 2325) requires that the Secretary of Defense ensure that, to the maximum extent practicable, requirements are stated in terms of the functions to be performed, performance required, or essential characteristics. Further, it requires that the Secretary ensure that such requirements are defined so that nondevelopmental items may be procured and that they are procured to the maximum extent practicable. This statute was amended in 1990 to require that market research be done before developing specifications to determine whether nondevelopmental items are available or could be modified to meet agency needs.

DLA encouraged the use of nondevelopmental items to the maximum extent practicable in this procurement. In its RFP, DLA stated its requirements (specifications) functionally, or in terms of the performance required. Although DLA found that commercial products did not meet all of its needs, it believes the products could be modified to do so. DLA officials said they expected and wanted nondevelopmental items to be offered in response to the RFP. In fact, DLA required offerors to use currently available off-the-shelf retrieval software. The law requiring that market research be conducted was not enacted until after DLA completed its requirements determination. While DLA did not do a market survey in response to this law, it did conduct market research in determining that commercial products did not meet its needs, in the course of developing its requirements.

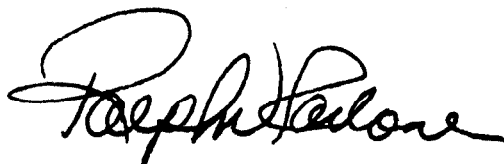
Agency Comments

Responsible officials of the Department of Defense, the Defense Logistics Agency, and the Government Printing Office provided comments on the findings and conclusions in this report. We have incorporated their comments where appropriate. They agreed with our conclusions.

We performed our work in accordance with generally accepted government auditing standards. Due to the time constraints of this assignment, this report is based primarily on our review of federal laws, regulations, and guidance; DLA's acquisition documentation; and interviews with Defense, DLA, GPO, and GSA officials and representatives from the private sector. A detailed explanation of our objectives, scope and methodology appears in appendix II.

As arranged with your offices, unless you publicly release the contents of this report earlier, we plan no further distribution until 30 days after the date of this letter. At that time, we will send copies of this report to the Secretary of Defense; the Director of the Defense Logistics Agency; the Director, Office of Management and Budget; appropriate House and Senate committees; and other interested parties. We will also make copies available to others upon request.

This report was prepared under the direction of Samuel W. Bowlin, Director, Defense and Security Information Systems, who can be contacted at (202) 275-4649. Other major contributors are listed in appendix III.



Ralph V. Carlone
Assistant Comptroller General

DLA's Explanation of Why Current Commercial Products Do Not Meet Its Requirements

According to DLA, a government-procured and -controlled federal catalog system data distribution capability will provide the following attributes that commercial products, as currently formatted and marketed, do not offer: (1) a complete data product, (2) DOD-assured data quality and accuracy, (3) DOD-approved and -controlled functionality, (4) data downloading capability, (5) guarantee of continuation of service over time, and (6) cost benefits associated with a consolidated acquisition. Each of DLA's reasons is discussed below.

1. Completeness of data. There are two classes of data included in the federal catalog system that are not releasable to the general public: (a) proprietary data, and (b) data on items that are assigned stock numbers by NATO countries. A total of over 300,000 items appears in these two categories. Item descriptions categorized as proprietary are limited-rights data protected from disclosure by the contractual terms under which they were acquired and by the Federal Trade Secrets Act, 18 U.S.C. Sec. 1905. Data about NATO-assigned stock number items are restricted from release to the private sector by international agreement.

The data in these two categories are functionally the same as the rest of the federal catalog system data. The data could be required by any catalog user. Forced physical segregation of these data would result in development of duplicative systems in order to provide a complete data base. The result would be that all FED LOG users would be required to purchase and understand two products in order to have all the data.

2. Data quality, accuracy, and timeliness. The government must ensure that authenticated, validated, timely, and accurate information, including proprietary and NATO data, is provided to government logisticians. Standardized and consistent logistics data are needed throughout the government so that at any time all users have access to the same data. Further, a single catalog distribution source is necessary in order to provide the management oversight required to assure high-quality data. Oversight of several vendors and products is not practical.

3. Approved and controlled functionality. The military services require FED LOG to ensure that each service's users are allowed to access only the data for that service. For example, an Army logistician should search only the list of parts approved by the Army. In addition, FED LOG must not allow unauthorized activities, such as searching characteristic data to locate related or substitute items. Professional engineers review the technical data to make engineering decisions on whether

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Abbreviations

CD-ROM	compact disk-read only memory
DLA	Defense Logistics Agency
DOD	Department of Defense
FIRMR	Federal Information Resources Management Regulation
GAO	General Accounting Office
GPO	Government Printing Office
GSA	General Services Administration
IMTEC	Information Management and Technology Division
NATO	North Atlantic Treaty Organization
RFP	request for proposals

items can be interchanged and substituted. Defense considers it inappropriate for users to make these decisions on the basis of the limited characteristic data in the catalog system.

4. Data downloading capability. The military services have been and are developing automated interfaces to the FED LOG data base in order to enable computer systems to extract data. It is in Defense's interest to standardize these interfaces. Relying on multiple commercial products would require the services to develop and maintain a variety of interfaces.

5. Continuity of service. The federal catalog must be available over a continuum of time, in either peace or war. Continued availability of a commercial product for a specific category of information is not assured. Commercial vendors pursue products with a profit motive, and no assurance is provided that these products will continue to be offered. With a contract in place, Defense would be able to meet its mission to ensure continuous distribution of the catalog data.

6. Cost benefits of a consolidated acquisition. The FED LOG acquisition strategy is to provide the users with the most cost-effective method of obtaining the data. By combining the federal requirements, many of the costs associated with developing and delivering a CD-ROM-based catalog will be borne once. These costs include software development, modification, and maintenance. By using a competitive acquisition, the government will be assured of meeting its needs at the best price.

Objectives, Scope and Methodology

As requested by the Chairman and Ranking Minority Member of the Senate Appropriations Subcommittee on Defense and Senator Mikulski, we reviewed DLA's FED LOG procurement. Our objectives were to determine (1) whether DLA followed the Federal Information Resources Management Regulation (FIRMR) and the General Services Administration's (GSA) guidance in conducting its requirements analysis and in analyzing the alternatives to satisfy its requirements, and (2) whether DLA developed the specification so as to accommodate nondevelopmental items to the maximum extent practicable, as required by 10 U.S.C. Sec. 2325.

To determine if DLA followed the FIRMR¹ in conducting its requirements analysis and in analyzing the alternatives to satisfying its requirements, we used GSA's A Guide For Requirements Analysis And Analysis Of Alternatives and reviewed DLA's documentation supporting its analyses. As part of this review, we evaluated the adequacy of DLA's requirements determination, alternatives analysis (including its reasons for excluding commercial products from the cost analysis), and the alternatives' cost analysis.

To determine whether DLA encouraged the use of nondevelopmental items to the maximum extent practicable, as required by 10 U.S.C. Sec. 2325, we reviewed the RFP to determine if the specifications were stated in terms of functions to be performed, performance required, or essential physical characteristics.

We interviewed agency officials where appropriate. In addition, we met with GSA officials to obtain their views on the adequacy of the requirements analysis and the alternatives analysis. Further, we met with several vendors to obtain their views on this procurement.

We performed our review in July and August 1991. Our review was conducted primarily at DLA Headquarters, Cameron Station, Alexandria, Virginia. We also discussed these issues with officials from GPO and the Office of the Assistant Secretary of Defense for Production and Logistics.

Officials of DOD and GPO provided comments on our findings and conclusions. We have incorporated their comments where appropriate and have summarized their comments in the report.

¹The General Services Administration has issued a new version of the FIRMR that applies to solicitations issued on or after April 29, 1991. DLA's requirements-related activities in support of FED LOG were conducted under the prior version. Our references are to that earlier version.

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