

Audit



Report

DOD ELECTRONIC MALL IMPLEMENTATION PLANNING

Report No. D-2000-056

December 15, 1999

Office of the Inspector General
Department of Defense

Additional Copies

To obtain additional copies of this audit report, contact the Secondary Reports Distribution Unit of the Audit Followup and Technical Support Directorate at (703) 604-8937 (DSN 664-8937) or fax (703) 604-8932 or visit the Inspector General, DoD, Home Page at: www.dodig.osd.mil.

Suggestions for Future Audits

To suggest ideas for or to request future audits, contact the Audit Followup and Technical Support Directorate at (703) 604-8940 (DSN 664-8940) or fax (703) 604-8932. Ideas and requests can also be mailed to:

OAIG-AUD (ATTN: AFTS Audit Suggestions)
Inspector General, Department of Defense
400 Army Navy Drive (Room 801)
Arlington, VA 22202-2884

Defense Hotline

To report fraud, waste, or abuse, contact the Defense Hotline by calling (800) 424-9098; by sending an electronic message to Hotline@dodig.osd.mil; or by writing to the Defense Hotline, The Pentagon, Washington, DC 20301-1900. The identity of each writer and caller is fully protected.

Acronyms

BPA	Blanket Purchase Agreement
DLA	Defense Logistics Agency
E-CAT	Electronic Catalog
EMALL	Electronic Mall
GSA	General Services Administration
JECPO	Joint Electronic Commerce Program Office
NSN	National Stock Number



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

December 15, 1999

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
DIRECTOR, DEFENSE LOGISTICS AGENCY
NAVAL INSPECTOR GENERAL
DIRECTOR, JOINT ELECTRONIC COMMERCE
PROGRAM OFFICE
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on DoD Electronic Mall Implementation Planning
(Report No. D-2000-056)

We are providing this report for review and comment. The Defense Logistics Agency and the Joint Electronic Commerce Program Office did not respond to the draft report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Therefore, we request the Defense Logistics Agency and the Joint Electronic Commerce Program Office provide comments by January 25, 2000.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Tilghman Schraden at (703) 604-9186 (DSN 664-9186) (tschraden@dodig.osd.mil) or Mr. Terry Wing at (215) 737-3883 (DSN 444-3883) (twing@dodig.osd.mil). See Appendix E for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink, reading "Robert J. Lieberman".

Robert J. Lieberman
Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. D-2000-056
(Project No. 8LD-0040.01)

December 15, 1999

DoD Electronic Mall Implementation Planning

Executive Summary

Introduction. This report is the second of two reports on retail level purchasing practices. In an effort to reduce inventories and increase the use of commercial distribution systems, DoD implemented best commercial inventory initiatives for the purchase and distribution of military supply requirements. DoD expects the initiatives to transform its methods of procuring materiel into advanced private sector business practices. Among other benefits, the transformation should provide retail level organizations lower pricing as a result of leveraged buying power. The initiatives included a Defense Logistics Agency (DLA) electronic catalog pilot program ordering system (April 1997) and a DoD electronic mall (January 1998). The electronic catalog was incorporated into the electronic mall in January 1998 to provide virtual one-stop shopping over the Internet. Defense Reform Initiative Directive No. 43, "Defense-wide Electronic Commerce," May 20, 1998, established the Joint Electronic Commerce Program Office (JECPO). JECPO, under the direction and oversight of the DoD Chief Information Officer, serves as the primary entity to integrate electronic commerce in the DoD business cycle and to manage the DoD electronic commerce program. Orders for the electronic catalog products from April 1997 through January 20, 1999, were about \$553,000, and electronic mall sales since inception, including electronic catalog sales, through March 1999 were approximately \$40.7 million.

Objective. The overall audit objective was to determine whether retail level organizations in DoD were using the most economical and efficient source of supply when purchasing commercial brand name items through centralized Federal procurement programs. The specific objective of this report was to evaluate the DLA electronic catalog and the DoD electronic mall implementation planning. The first report in this series discussed other aspects of the DLA electronic catalog. We included a review of the management control program as it applied to the specific audit objective.

Although the electronic mall contains items available from the Services and DLA, we limited the scope of the audit to items in the mall that were available through DLA supply and procurement programs.

Results. The electronic mall is a work in progress and updates are constantly being made to improve its usefulness as a viable source of supply. However, management needed to address several implementation issues for the mall. Significant barriers to the Military Departments using the mall existed, duplication of General Services Administration supply programs was not minimized, and no metrics or system to

measure the effectiveness of the mall had been developed. Controls were inadequate to ensure that DoD did not pay twice for bank credit card fees, the mall had an inadequate integrated comparison shopping system, and the cost recovery rate charged appeared to be excessive. As a result, implementation of the electronic mall might not have progressed as efficiently as possible, there was no assurance that procurement resources were properly used, customers could be paying more than necessary for needed materiel, and depot stocks might not be drawn down. See the Finding section for details. See Appendix A for a discussion of the management control program and Appendix C for a discussion of implementation planning for the DLA electronic catalog.

Summary of Recommendations. We recommend that the Director, JECPO, in coordination with DLA and the Military Departments, identify significant barriers to customers using the electronic mall, determine the cost-effectiveness of actions needed to overcome those barriers, prioritize the actions, and establish target dates for their completion. We recommend that the Director, JECPO, and the Director, DLA, use blanket purchase agreements against General Services Administration Federal supply schedules, establish metrics and a system to measure the effectiveness of the electronic mall, establish controls to ensure that DoD does not pay bank credit card fees twice and that depot stocks are drawn down, issue guidance for electronic mall searches, and establish a cost recovery rate based on costs and sales.

Management Comments. We provided a draft of this report on October 8, 1999. DLA and JECPO did not respond to the draft report. Therefore we request that DLA and JECPO provide comments by January 25, 2000.

Table of Contents

Executive Summary	i
Introduction	
Background	1
Objective	2
Finding	
Electronic Mall Implementation Planning	3
Appendixes	
A. Audit Process	
Scope and Methodology	13
Management Control Program	14
B. Summary of Prior Coverage	16
C. Electronic Catalog Implementation Planning	17
D. Barriers to Electronic Mall	20
E. Report Distribution	23

Background

In an effort to reduce inventories and increase the use of commercial distribution systems, DoD implemented best commercial inventory initiatives for the purchase and distribution of military supply requirements. DoD expects the initiatives to transform its methods of procuring materiel into advanced private sector business practices. Among other benefits, the transformation should provide retail level organizations lower pricing as a result of DoD leveraged buying power.

This report, the second of two reports on retail level purchasing practices, discusses implementation planning for two commercial inventory initiatives: the Defense Logistics Agency (DLA) electronic catalog (E-CAT), implemented in April 1997, and the DoD electronic mall (EMALL), implemented in January 1998. Inspector General, DoD, Report No. 99-184, "Financial Impacts of Defense Logistics Agency Electronic Catalog and Office Supplies Initiatives on Retail Level Purchasing," June 11, 1999, discussed the DLA process for developing the E-CAT cost recovery rate and the process used to bill retail organizations and pay vendors for materiel ordered through the E-CAT. The E-CAT was incorporated into the EMALL in January 1998.

Although the EMALL contains items available from the Services and DLA, we limited the scope of the audit to items in the mall that were available through DLA supply and procurement programs.

DLA Mission. DLA is the central combat support agency that manages supplies in various commodity areas such as clothing, construction materiel, electronic supplies, food, fuel, general supplies, and medical supplies. DLA uses four supply centers to procure supplies. The supply centers consolidate requirements and procure the supplies in sufficient quantities to meet customer needs. Supplies are stored and distributed through a complex of depots or delivered directly to the customers from vendors through the direct vendor delivery program.

Electronic Technology in DoD. The Federal Acquisition and Streamlining Act of 1994 simplified and streamlined the Federal Government acquisition process by requiring the Government to transition from a paper burdened acquisition process to a more efficient process using electronic commerce and electronic data interchange technologies. In November 1997, the Defense Reform Initiative report stated that DoD would expand the use of electronic catalogs and electronic shopping malls to put buying decisions into the hands of the people who need the products.

DoD EMALL. The DoD EMALL is an Internet requisitioning and ordering system that became operational on January 29, 1998, and its purpose is to provide a single Defense-wide point of entry for all DoD electronic catalogs, allowing one-stop shopping for an array of products and services. Through the EMALL, military customers and other authorized users can search for their requirements and order needed supplies either from the DoD supply system or directly from vendors.

Joint Electronic Commerce Program Office. Defense Reform Initiative Directive No. 43, "Defense-wide Electronic Commerce," May 20, 1998, established the Joint Electronic Commerce Program Office (JECPO). JECPO, under the direction and oversight of the DoD Chief Information Officer, serves as the primary entity to integrate electronic commerce in the DoD business cycle and to manage the DoD electronic commerce program. JECPO responsibilities include ensuring consistent planning and implementation of electronic commerce; partnering with the Services, Defense agencies, and DoD customers as they transition to electronic commerce strategies and techniques in their respective business practices; and providing program oversight for all JECPO-funded electronic commerce projects. The Directors of the Defense Information Systems Agency and DLA provide support, including all necessary administrative, financial, logistical, and personnel support, to JECPO.

General Services Administration Mission. The General Services Administration (GSA), established in 1949 to supply personal property to Government organizations, operates a worldwide supply system to contract for and distribute personal property and services to Federal agencies. GSA provides items to its customers through several supply programs that include Federal supply schedules. Under the Federal supply schedule program, GSA enters into contracts with vendors to provide supplies and services at stated discounted prices for a given period. The contract price for the materiel ordered includes a 1 percent GSA cost recovery rate. The cost recovery rate covers administrative costs to manage the program, including costs for market research, procurement planning, solicitation and award of procurement instruments, and contract administration.

Objective

The overall audit objective was to determine whether retail level organizations in DoD were using the most economical and efficient source of supply when purchasing commercial brand name items through centralized Federal procurement programs. The specific objective of this report was to evaluate the DLA E-CAT and DoD EMALL implementation planning. We also included a review of the management control program as it applied to the specific audit objective. See Appendix A for a discussion of the scope and methodology and our review of the management control program. See Appendix B for the summary of prior coverage and Appendix C for a discussion of the DLA E-CAT implementation planning.

Electronic Mall Implementation Planning

The EMALL is a work in progress and updates are constantly being made to improve its usefulness as a viable source of supply. However, management needed to address several implementation issues, which were:

- barriers to the Military Departments using the EMALL,
- duplication of GSA supply programs,
- development of metrics and a system to measure effectiveness of EMALL,
- possible duplication of bank credit card fees,
- inadequate integrated comparison shopping system, and
- accuracy of cost recovery rate.

Those unresolved implementation issues existed because the normal implementation planning process was not followed. As a result, the implementation of the EMALL might not have progressed as efficiently as possible, there was no assurance that procurement resources were properly used, customers could be paying more than necessary for needed materiel, and depot stocks might not be drawn down.

Overview of EMALL

EMALL Objectives. Stated DoD objectives of the EMALL include:

- providing attractive pricing;
- accumulating demand history for logistics planners;
- maximizing use of Government credit card;
- providing one-stop shopping, allowing customers to do real-time comparison shopping among multiple sources of supply;
- reducing repetitive small purchases by establishing long-term contract vehicles; and
- providing customers a single registration to enter all stores and catalogs and to view the status of all orders.

EMALL Anticipated Benefits. Anticipated benefits of the EMALL include competitive pricing, cost savings, flexibility in selecting sources of supplies, greater buyer productivity, obtaining data for inventory management and war planning, and reducing lead times and inventory. On June 18, 1999, a contractor, contracted by DLA, provided an "Economic Analysis of the DoD EMALL" that estimated the EMALL would start to generate savings to DoD in FY 2003 and that cumulative savings from FY 1999 through FY 2005 would be approximately \$48.5 million.

EMALL Sales. EMALL sales, including E-CAT, since inception of both programs through March 1999, totaled about \$40.7 million. However, about \$39.8 million (98 percent) of the sales were for clothing and textile items ordered through the Defense Supply Center Philadelphia Automated System for Cataloging and Ordering Textiles (the System). The System provides customers with an electronic catalog to order and purchase clothing and textile items and was incorporated in the EMALL in January 1998 to comply with the DoD policy of having a single point of entry for all DoD electronic catalogs.

Normal Implementation Planning Process. Normal implementation planning coordinates and integrates the efforts of all personnel responsible for implementing a system through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. Planning includes developing the overall strategy for managing a program, and its purpose is to ensure that the Government meets its needs in the most effective, economical, and timely manner.

EMALL Implementation

The EMALL is a work in progress and updates are constantly being made. The EMALL is being developed in stages, and will eventually have four electronic corridors (commodities, education, information technology, and services). The commodities corridor is currently on line. It offers about 2 million national stock number (NSN) items stored in depots or available directly from vendors and about 300,000 items listed in commercial catalogs. The items in the catalogs are similar to or, in some cases, the same as the NSN items. The information technology corridor also is operational, and the other two corridors are either under development or in the design phase.

Management needed to address several implementation issues during this work in progress. Specifically, management needed to address barriers to the Military Departments using the EMALL, duplication of GSA supply programs, development of metrics and a system to measure the effectiveness of the EMALL, payment of bank credit card fees, inadequate integrated comparison shopping, and the accuracy of EMALL cost recovery rate. Those issues were not addressed before EMALL was implemented because the normal implementation planning process was not followed.

EMALL Implementation Planning. JECPO and DLA personnel advised us that the EMALL went on line in January 1998, even though they were aware that enhancements and improvements were required. The decision was made to wait until after the EMALL went on line to take actions such as initiating studies to identify barriers to the Military Departments using the EMALL, performing an economic analysis of the EMALL, marketing the EMALL with potential users, testing the EMALL at customer locations, and training Military Department personnel. The alternative was to delay the EMALL until the enhancements and improvements were addressed. The alternative was not considered viable because of the DoD direction to aggressively adopt best business practices.

Streamlined implementation of the EMALL, although desirable to allow rapid implementation of best business practices, did not allow usage of the normal implementation planning process. We agree that DoD must aggressively adopt best business practices. However, we question the appropriateness of the decision to go on line before addressing barriers to the Military Departments using the EMALL because of the impact the barriers could have on potential users and the unknown cost of addressing the barriers. Our position is supported by the conclusions of two EMALL studies (December 1997 and November 1998) conducted by the Scranton Electronic Commerce Resource Center and the Office of Management and Budget 1999 annual report to Congress, "Electronic Purchasing and Payment in the Federal Government."

Scranton Electronic Resource Center December 1997 Report. The report stated that: "Before EMALL is rolled out and marketed on a widespread basis, DLA should be very certain that all facets of the system are fully operational and capable of handling an increased order volume. Customers who have a poor first experience will be extremely difficult to win back. In addition, their word of mouth can undermine further marketing efforts."

Scranton Electronic Resource Center November 1998 Report. The study stated that: "It takes 30 years to get a customer and 30 seconds to lose one. The EMALL must be as near perfect as possible before 100% market introduction. Anything less will result in large-scale customer disinterest, alienation, and finally, non-participation."

Office of Management and Budget 1999 Annual Report. The report stated that: "Agencies will need to continue to be mindful to avoid the pitfalls of seeking to apply electronic commerce technology without first addressing the need to restructure their business processes and assessing the benefits to be attained by making the investment."

Barriers to Using the EMALL. The EMALL was put on line even though there were significant barriers to the Military Departments using the EMALL and cost-benefit data to address the barriers were not developed. Barriers to using the EMALL were identified before and after the EMALL was available for customer use. The barriers were identified by either the Military Departments or through studies contracted by JECPO and DLA. The barriers included the lack of EMALL integration with the Military Department financial and supply legacy systems and the cost to integrate the systems, the high cost

recovery rate charged customers, and shortcomings caused by rolling out the EMALL before all facets of the EMALL were fully operational. A summary of all barriers identified is in Appendix D. Neither JECPO nor DLA had developed cost data so that a cost-benefit analysis could be performed to determine the cost-effectiveness of addressing the barriers.

To determine the Military Departments' current position on using the EMALL, we met with senior supply and procurement personnel in March 1999. All of the Military Departments stated that JECPO was aware of their concerns.

Army. The Army had not given its approval to use the EMALL as a source of supply. The major concerns of the Army involved the ability of Army legacy systems to interface with EMALL systems, the control of authorized access to the EMALL by only appropriate personnel, and the possibility of overobligating funds.

Navy. The Navy did not have any restrictions on using the EMALL. Navy personnel questioned the value of the EMALL and had concerns that included the ability of Navy legacy systems to interface with EMALL systems, limited comparison shopping, high cost recovery rate, and slow response time for searching and ordering through the EMALL. Additionally, Navy personnel stated that the EMALL was not user friendly.

Air Force. With the exception of purchasing clothing and textile items and allowing some Air Force Reserve units to shop on the EMALL, the Air Force had been reluctant to allow its organizations to use the EMALL. Major issues included the ability of Air Force legacy systems to interface with EMALL systems, high cost recovery rate, the ability to have EMALL orders shipped directly to a customer rather than to a central receiving area, and time (faster to buy items locally).

Marine Corps. The Marine Corps officially began using the EMALL in October 1998. Concerns of the Marine Corps included the ability of Marine Corps legacy systems to interface with EMALL systems, high cost recovery rate, and time (faster to buy items locally).

GSA Federal Supply Schedules. JECPO and DLA can reduce procurement costs (personnel and materiel) by using existing GSA contract vehicles to increase vendor participation in the EMALL. Inspector General, DoD, Report No. 98-037, "Dual Management of Commercially Available Items - Battery, Food Service, and Photographic Products," December 12, 1997, and Report No. 97-205, "Dual Management of Commercially Available Items - Defense Logistics Agency Electronic Catalog Pilot Program," August 15, 1997, reported that DLA and GSA were procuring similar or the same brand name commercial items, sometimes from the same vendors. The DLA position was that competition with GSA provided customers additional sources of supply and if the same vendors or the same items were included in both agencies' supply programs, then customers were in the best position to determine best value. Additionally, it was planned that the EMALL would provide customers

comparison shopping of items stocked by DoD, items delivered directly from DoD vendors, and items included in the GSA Advantage System (an Internet shopping service that, when completed, will contain approximately 4 million items). JECPO personnel advised us that the GSA Advantage System was scheduled to be included in the EMALL in October 1999.

Although the ability to have various choices in selecting vendors and items is important, that ability does not leverage the Government's buying power because DLA and GSA separately contract with vendors. We also recognize that it might not be cost-effective to eliminate all duplication between the two agencies. A PricewaterhouseCoopers study, "Migrating to End-to-End Electronic Commerce," that was conducted as a followup to a March 1998 Office of Management and Budget report, "Assessment of Current Electronic Commerce Activity in Procurement and Electronic Commerce for Buyers and Sellers," further emphasized that assertion. The study stated that "while interoperability and search engines have an important role to play in enhancing the market research process for all acquisitions, they can not serve as a substitute for acquisition strategies that effectively leverage buying power and deliver high value through the negotiation of large discounts and advantageous terms reflecting the seller's expectation of receiving a substantial portion of the government's business."

We believe that DLA has the potential to reduce EMALL procurement costs and leverage the Government's buying power by issuing blanket purchase agreements (BPAs) against GSA Federal supply schedules. The Federal supply schedule program provides customers with more than 4 million products from more than 6,000 vendors. Under the GSA Federal supply schedule program, GSA awards an indefinite-quantity, indefinite-delivery contract to a vendor. In awarding the contract, GSA determines the price to be fair and reasonable, ensures compliance with all applicable laws and regulations, and negotiates volume discounts. Organizations place orders directly with vendors, and deliveries are made directly to customers. A BPA enables organizations to negotiate discounts in addition to those negotiated by GSA and to set up accounts with a vendor so that recurring purchases from contracts can be placed and processed with a minimum of time and paperwork. The Army, the Navy, the Air Force and DLA have already set precedents for using BPAs, and the Office of Management and Budget has stated that agencies are increasingly using existing contract vehicles to reduce procurement costs.

Army, Navy, and Air Force BPAs. The Army, the Navy, and the Air Force established BPAs in the information technology corridor of the EMALL for customers to order needed information technology equipment. Some of the benefits of using BPAs identified by the Services included better prices by dealing directly with original equipment manufacturers and renegotiating GSA discounted prices, flexibility to add items and change terms, and reduced award time because GSA had negotiated most of the clauses and determined price reasonableness.

DLA BPA. On October 21, 1998, DLA issued a BPA against a GSA Federal supply schedule, "Office Supplies - Next Day Delivery," for a vendor to supply office supplies. The supplies in the BPA included such items as binders, diskettes, and paper. DLA combined common supplies into 14 commodity groups and negotiated a discount for each of the groups.

Office of Management and Budget 1999 Annual Report. The Office of Management and Budget 1999 annual report stated that limited resources and a decreasing acquisition work force have caused agencies to turn increasingly to existing contract vehicles awarded by their own agencies to meet their needs. Multiple-award schedule contracts and multiple-award task and delivery order contracts offer agencies the opportunity to effectively and efficiently use market competition in placing orders to meet a variety of needs without having to undertake the expense and time associated with awarding a new contract vehicle. Agencies clearly recognize the value of providing easy and quick access to existing contract vehicles that potentially can satisfy their needs.

On July 28, 1999, the Commander of the Defense Logistics Support Command issued a memorandum to DLA supply centers regarding efforts to expand the EMALL. Included in the memorandum were guidelines for increasing vendor participation in the EMALL and FY 1998 Government credit card data showing credit card sales to DoD of approximately \$588 million by the top 100 vendors. The memorandum stated that contracting arrangements for the EMALL will evolve as experience is gained. Although multiple-award, indefinite-delivery type contracts are preferred, contracting organizations should also consider the use of BPAs when vendors are unable to comply with the requirements of an indefinite-delivery type contract, or when resolution of compliance issues would cause delays. We commend DLA for considering the use of BPAs; however, we believe BPAs should be the norm, not the exception, and that BPAs provide an excellent opportunity to increase vendor participation in the EMALL. We reviewed the top 100 vendors listed in the memorandum and found that 50 of the vendors were included in the GSA Federal supply schedule program. In FY 1998, those vendors made credit card sales to DoD of about \$318 million.

Effectiveness of the EMALL. JECPO and DLA had not developed metrics or a system to measure the effectiveness of the EMALL. The Government Performance and Results Act (the Act) of 1993 was enacted to improve Federal program effectiveness and public accountability by promoting a new focus on customer satisfaction, quality, results, and service. Until metrics and a system are developed, management will not have a basis to determine if the EMALL is achieving its anticipated benefits.

The Act also required agencies to develop an annual performance plan that included establishing performance goals and performance indicators. In its May 1999 draft performance plan, DLA stated that, as a result of the EMALL and other Internet methods of electronic commerce, DLA would reduce FY 1999 inventory levels of market-ready items by 50 percent. The plan projected that by FY 2005, 95 percent of its inventory of market-ready items would be eliminated. However, DLA did not identify market-ready items in its inventory so that it could measure any inventory reductions as a result of the EMALL.

Bank Credit Card Fee. There was no assurance that DoD was not paying bank credit card fees twice. Banks charge fees for processing credit card orders. Normal business practice is for vendors to include the fee in their catalog prices and pay the fee to the bank directly. However, when customers order materiel from the EMALL and elect to pay by Government credit card, DLA pays the fee (2.125 percent). If a customer uses a Government credit card for materiel that the vendor has priced to cover the bank credit card fees, then those fees are paid twice, once by DLA and once by the customer.

Three solicitations that DLA issued to increase vendor participation in the EMALL and to expand the E-CAT concept, two in March 1998 and one in September 1998, required that vendors provide a priced commercial catalog inclusive of pricing support for purposes of loading into the EMALL. The solicitations also required that vendors describe how prices were developed, explain the process for determining markup, and list all charges included in the prices. We contacted the contracting officers to determine if the vendors provided sufficient detail to determine if the vendors included costs associated with bank credit cards fees in their catalog prices. The contracting officers stated that the vendors did not provide sufficient detail to make that determination. We also contacted personnel from the Defense Supply Center Richmond to determine if credit card fees were included in commercial catalog prices for E-CAT items that were incorporated into the EMALL. We were told the E-CAT vendors did not provide that type of information.

DoD had no assurance that EMALL vendors excluded the credit card fee from their EMALL prices. Based on the data in the June 1999 economic analysis of the EMALL, vendor credit card fees from FY 1999 through FY 2005 are estimated to be approximately \$24.8 million.

Integrated Comparison Shopping. Comparison shopping was not yet fully implemented in the EMALL and, where it was available, customers could be paying more than necessary for needed supplies because key data needed to provide comparison shopping was not fully integrated in EMALL. Customers can use a variety of criteria to search for an item on the EMALL. The criteria include:

- NSN;
- manufacturer's part number;
- vendor name;
- drilling down – using categories based on Federal supply groups; and
- key words – using classification structures from individual suppliers.

NSN and Part Number Searches. The EMALL contains DLA-managed items, identified by NSN, and vendor catalog items, identified by part number. Because there were only a few vendors on the EMALL, item searches that produced multiple sources of supply generally included only NSN items that EMALL data files had cross-referenced to vendor part number items. JECPO and DLA recognized that such cross-referencing was not available for many of the 2 million NSN items in the EMALL and a contract was issued in February 1999 to a vendor to develop a prototype to address the problem. The prototype, estimated to be completed in November 1999, will require evaluation and testing prior to cross-referencing the vendor part numbers in EMALL NSN data files.

Customers needed to be made aware that all NSNs are not cross-referenced to vendor part numbers and that the method used to search for items can impact the ability of customers to find the best price for EMALL items. For example, our search for NSN 6850-01-262-6064, a toner cartridge, found one source of supply, the Defense Supply Center Richmond, with a unit cost of \$17.50. However, when we searched by the vendor part number associated with that NSN, we again found only one source of supply, a vendor with a unit cost of \$94.16. The EMALL NSN data files did not contain the vendor part number. The difference in price was that the Defense Supply Center Richmond item was remanufactured. In fully integrated comparison shopping, either search should have provided the two sources of supply for customers to determine best value.

Another impact of the lack of cross-referencing was potential excess inventory. For NSN 6850-01-262-6064, the Defense Supply Center Richmond had 32,173 cartridges on hand (7.8 years of supply based on quarterly demand). If customers searched only by vendor part number, the depot stock would not be drawn down and could become subject to disposal. Additionally, without cross-referencing the vendor part number, DLA could not identify NSNs in depot inventory that were also available from vendor catalogs to determine if the DLA sales price was competitive with vendor pricing. That determination must be made before actions, such as price reductions, can be considered to minimize the potential of depot stocks to become excess and sent to disposal.

Keyword Searches. Keyword searches that provided multiple results were, in some instances, not efficient or practical to use. For example, a search on the keyword "toner" found that there were 757 items available. The items were presented on the computer screen with approximately 15 items shown at one time. Users had to scroll down multiple screens to review all 757 items. A review of the search response found that there were two sources of supply for NSN 6850-01-213-0176, a toner kit. One source of supply was on page 1 of the results screen and the other source was not listed until we scrolled down to page 13 of the results screen. A more user-friendly and efficient search result would have been to group identical products together.

Cost Recovery Rate. The cost recovery rate that was charged to customers to recover the cost of administering the EMALL appeared excessive. When the EMALL was implemented, the cost recovery rate charged customers was 7.6 percent of the cost of the materiel ordered. The rate was based on the

lowest direct vendor delivery rate in effect as of April 1997 at the Defense Supply Center Richmond. In April 1999, senior JECPO and DLA personnel recommended that the DLA Executive Steering Group lower the rate to 3 percent. As of September 1, 1999, the rate was 7 percent.

The cost recovery rate should be set based on estimated costs and estimated sales, and it should be evaluated based on actual costs and actual sales. The EMALL has been in existence for about 20 months and sufficient data should be available to establish a cost recovery rate based on EMALL costs and sales. Additionally, the EMALL cost recovery rate computation was addressed in the "Economic Analysis of the EMALL," June 18, 1999, performed by KPMG for DLA. The analysis collected and projected cost and sales data and stated that the cost recovery rate, based on DLA costs, should be 1.5 percent.

Summary

We recognize that the EMALL is a fundamental component of the DoD overall acquisition reform and electronic commerce strategy. However, the EMALL went on line in January 1998, even though there were significant barriers to using the EMALL. Actions taken by JECPO and DLA after the EMALL went on line partially address some of the issues we identified. However, JECPO and DLA need to prioritize the issues such as the EMALL interface with Military Department legacy systems and the problems identified with comparison shopping and the bank credit card fee to ensure that the most important tasks are done in a timely manner and that costs incurred for implementing the tasks will achieve the desired benefits. For example, the most significant concern of the Military Departments is the interface of the EMALL with their legacy systems. JECPO and DLA must determine the costs associated with the interfacing and weigh the value to DoD, considering the estimated savings of \$48.5 million that the EMALL is projected to achieve through FY 2005. Regarding duplication of GSA supply programs, we believe that there is significant potential for DoD to reduce its procurement costs through the use of BPAs against GSA Federal supply schedules.

Recommendations

1. We recommend that the Director, Joint Electronic Commerce Program Office, in coordination with the Director, Defense Logistics Agency, and the Military Departments:
 - a. Identify key barriers to customers using the electronic mall. The various studies, correspondence with the Military Departments, and this report should be used as a basis for identifying the barriers.

b. Estimate the costs associated with fixing the barriers and the benefits that will be obtained to determine if the fixes are cost-effective. If the fixes are cost-effective, they should be prioritized and target completion dates should be established.

2. We recommend that the Director, Joint Electronic Commerce Program Office, and the Director, Defense Logistics Agency:

a. Use blanket purchase agreements against General Services Administration Federal supply schedules for vendors and items that have value to DoD customers in the electronic mall.

b. Establish metrics and a system to measure the effectiveness of the electronic mall.

c. Determine if vendor catalogs currently in the electronic mall include bank credit card fees in their prices. If the fees are included, negotiate with the vendors to eliminate the fees.

d. Establish controls to ensure that contracting officers evaluate vendor proposals to participate in the electronic mall to ensure that bank credit card fees are not included in vendor catalog prices.

e. Establish controls to ensure that when items are available from both depot stocks and vendor catalogs, and depot stocks are not competitively priced with vendor catalog prices, provisions are made to ensure that depot stocks are drawn down so that the potential for disposal of the stocks is reduced.

f. Issue guidance to Military Departments concerning electronic mall search queries. Guidance should include information related to national stock number items that are not cross-referenced to part number items in vendor catalogs and discuss the various screens that users must go through to ensure that all possible sources of supply for items are identified.

g. Establish a cost recovery rate for the electronic mall that is based on costs to operate the mall.

Management Comments Required

DLA and JECPO did not comment on the draft report. We request that DLA and JECPO provide comments on the final report.

Appendix A. Audit Process

Scope and Methodology

We reviewed the planning process for implementation of the DLA E-CAT and EMALL to determine whether the planning was coordinated and integrated through a comprehensive plan in a timely manner at a reasonable cost. We limited the scope of the audit to items in the EMALL that were available through DLA supply and procurement programs. The review included determining whether issues raised in Inspector General, DoD, Report No. 97-205 were addressed by DLA. We evaluated documentation relating to the development of the DLA E-CAT and EMALL. Specifically, we reviewed solicitations to expand the EMALL, EMALL milestone charts, studies conducted by vendors and the Scranton Electronic Commerce Resource Center regarding the EMALL, cost recovery rate data, and DLA supply and procurement records. The documentation reviewed covered the period from September 1995 through August 1999. We interviewed key DLA, JECPO, and Office of the Secretary of Defense personnel and discussed the implementation of the EMALL with the Military Departments. We also searched the EMALL and GSA Advantage System to comparison shop for judgmentally selected items.

DoD-Wide Corporate-Level Goals. In response to the Government Performance and Results Act, DoD established 2 DoD-wide corporate-level goals and 7 subordinate performance goals. This report pertains to achievement of the following goal (and subordinate performance goals).

Goal 2: Prepare now for an uncertain future by pursuing a focused modernization effort that maintains U.S. qualitative superiority in key warfighting capabilities. Transform the force by exploiting the Revolution in Military Affairs, and reengineer the Department to achieve a 21st century infrastructure. **Performance Goal 2.3:** Streamline the DoD infrastructure by redesigning the Department's support structure and pursuing business practice reforms. **(00-DoD-2.3)** **Performance Goal 2.4:** Meet combat forces' needs smarter and faster, with products and services that work better and cost less, by improving the efficiency of DoD's acquisition process. **(00-DoD-2.4)**

DoD Functional Area Reform Goals. Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to achievement of the following functional area objectives and goals.

- **Acquisition Functional Area. Objective:** Deliver great service. **Goal:** Simplify purchasing and payment by using purchase card transactions for 90 percent of all DoD micropurchases while reengineering requisitioning, funding, and ordering. **(ACQ-1.3)**

-
- **Acquisition Functional Area. Objective:** Foster partnerships. **Goal:** Decrease paper transactions by 50 percent through electronic commerce and electronic data exchange. (ACQ-2.3)
 - **Logistics Functional Area. Objective:** Streamline logistics infrastructure. **Goal:** Implement most successful business practices (resulting in reductions of minimally required inventory levels). (LOG-3.1)

High-Risk Area. The General Accounting Office identified several high-risk areas in DoD. This report provides coverage of the Information Management and Technology and Defense Inventory Management high-risk areas.

Use of Computer-Processed Data. We used computer-processed E-CAT and EMALL procurement data provided by DLA. To the extent that we reviewed the computer-processed data, we concluded that the data were sufficiently reliable to be used in meeting our objectives. We did not audit the system that produced the data.

Audit Type, Dates, and Standards. We performed this program results and economy and efficiency audit from March through August 1999 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD. Further details are available on request.

Management Control Program

DoD Directive 5010.38, "Management Control Program," August 26, 1996, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of the Management Control Program. We reviewed the adequacy of the management controls over implementation planning for the EMALL. We also reviewed management's self-evaluation of those controls.

Adequacy of Management Controls. We identified material management control weaknesses for the EMALL as defined by DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996. Management controls were not adequate to ensure that cost-benefit analyses were performed for barriers to using the EMALL, that performance metrics were established to measure the effectiveness of the EMALL, that bank credit card fees were not included in vendor catalog pricing, and that depot stocks were drawn down. Recommendations in this report, if implemented, will correct the material weaknesses. We did not determine the amount of monetary benefits because it is dependent on future review results and associated

management decisions. However, based on a vendor study regarding an economic analysis of the EMALL, credit card fees paid by DoD from FY 1999 through FY 2005 could be as much as \$24.8 million. We will provide a copy of this report to the senior official in JECPO and DLA responsible for management controls.

Adequacy of Management's Self-Evaluation. JECPO and DLA did not identify implementation planning for the EMALL as an assessable unit and, therefore, did not identify or report the management control weaknesses identified by the audit.

Appendix B. Summary of Prior Coverage

During the past 5 years, the Inspector General, DoD, issued the following related reports.

Report No. 99-184, "Financial Impacts of Defense Logistics Agency Electronic Catalog and Office Supplies Initiatives on Retail Level Purchasing," June 11, 1999.

Report No. 98-202, "Dual Management of Commercially Available Items – Construction, Material Handling, and Related Equipment," September 18, 1998.

Report No. 98-144, "Dual Management of Commercially Available Items – Information and Imaging Solutions," June 3, 1998.

Report No. 98-037, "Dual Management of Commercially Available Items – Battery, Food Service, and Photographic Products," December 12, 1997.

Report No. 97-205, "Dual Management of Commercially Available Items – Defense Logistics Agency Electronic Catalog Pilot Program," August 15, 1997.

Appendix C. Electronic Catalog Implementation Planning

The E-CAT concept was expanded beyond the pilot program without demonstrating that the program objectives were met and anticipated benefits would materialize. The program was expanded to increase vendor participation in the EMALL. However, before expansion, DLA did not obtain information to assess customer satisfaction or dissatisfaction with the E-CAT concept and did not determine lessons learned to assist in designing and implementing the EMALL. We are not making a recommendation regarding those issues because the E-CAT has already been incorporated in the EMALL.

Overview of E-CAT

DLA E-CAT. In April 1997, DLA initiated an E-CAT pilot program that provided retail organizations on-line capability to order commercially available, common-use items, such as cleaning supplies, office products, and tools, for direct shipment from suppliers to the retail organization. Four retail organizations and seven vendors were included in the pilot program. If successful, DLA planned to expand E-CAT for use as a major buying tool for its customers. The E-CAT was incorporated into the EMALL in January 1998.

E-CAT Pilot Program Objectives. Some stated DLA objectives of the E-CAT pilot program were to:

- evaluate end-user satisfaction and acceptance of an interactive purchasing tool;
- increase DLA sales;
- identify the issues relating to the operation of an E-CAT in the context of a framework of financial legislation, policy, and systems;
- provide lessons learned for the possible expansion of the E-CAT program; and
- validate the concept of an E-CAT as a tool for procurement of part number items in lieu of national stock number items.

E-CAT Anticipated Benefits. DLA anticipated that benefits of the pilot program would include lower item prices, inventory reductions, reduced logistics response time, and the ability to redirect resources of skilled work force personnel to more complex procurement tasks. In April 1996, a vendor, contracted by DLA, provided a preliminary functional economic analysis of

three supply alternatives, one of which was E-CAT. Estimated investment and operation costs for E-CAT from FY 1996 through FY 2005 were \$46.8 million. Estimated benefits from E-CAT over the same period were \$724 million.

Prior E-CAT Coverage

Inspector General, DoD, Report No. 97-205. Inspector General, DoD, Report No. 97-205 stated that portions of the E-CAT pilot program duplicated GSA supply programs and items procured through E-CAT could cost customers more than if the same items were procured through GSA. DLA partially concurred with the report, making the following statements.

- The pilot program was in an initial operations mode and it should be allowed to become fully operational before drawing conclusions on its value.
- The Inspector General should allow E-CAT to become fully operational (12 to 18 months) before drawing conclusions on its value and to do otherwise compromised the pilot test, removing the DLA capability to effectively evaluate this new supply support concept.
- The National Performance Review permitted competition among Federal agencies, and customers should be provided the right to elect the most suitable combination of availability, price, and service for themselves.

On February 13, 1998, as a result of resolution with DLA, we agreed to conduct a joint survey with DLA to determine whether the E-CAT should contain items also offered by GSA. As of June 1998, 14 months after the pilot program started, cumulative orders were only \$172,000. Because of the low dollar value of orders, we concluded that the benefits in conducting a joint survey at that time would be minimal.

Inspector General, DoD, Report No. 99-184. Inspector General, DoD, Report No. 99-184 stated that the four retail organizations included in the E-CAT pilot program either did not use the E-CAT or made minimal use of the E-CAT. As of January 1999, 21 months into the program, there had been only 272 orders, valued at approximately \$553,000, placed through the E-CAT. About \$540,000 (98 percent) of the orders had been submitted by one retail organization that was not in the pilot program. Reasons for limited use of the E-CAT by the four pilot program customers included that the DLA cost recovery rate (7 percent) was too high, that the program was not properly marketed, and that materiel could be obtained directly from vendors without paying the DLA cost recovery rate.

Analysis of E-CAT Pilot Program

DLA expanded the E-CAT concept without evaluating the pilot program objectives and without determining if anticipated benefits would materialize. The pilot program was to provide an opportunity to demonstrate specific capability of the E-CAT through proof of concept efforts before investing in the concept. When it became evident that the pilot program was generating insignificant sales, consistent with the objectives of the pilot program, DLA should have performed an analysis to determine why customers were not ordering through the E-CAT and then reevaluated the anticipated benefits of the program. Instead, before DLA could demonstrate that the E-CAT was a viable concept, E-CAT was expanded to increase vendor participation in the EMALL.

Vendor catalogs in the E-CAT were incorporated into the EMALL in January 1998. To increase vendor participation in the EMALL, DLA issued three solicitations to expand the E-CAT concept. Two solicitations were issued in March 1998 and one solicitation was issued in September 1998, 11 and 17 months, respectively, after the start of the DLA E-CAT pilot program. The solicitations, issued by Defense Supply Centers Columbus, Philadelphia, and Richmond, stated that DLA had launched an expanded Internet-based EMALL and was looking for vendors to offer spare parts, supplies, and equipment. Vendors could participate in the EMALL and offer products by two different methods. The first method, Part Net, is based on the vendors maintaining their own database located on their own server. The second method, Electronic Commercial Catalog System (or E-CAT), is based on vendors submitting a database that is maintained on a server operated by the Defense Logistics Support Command.

Conclusion

The E-CAT concept has the potential for DoD to reduce its infrastructure, to reduce inventory, and to lower prices for retail organizations. However, the success of E-CAT and any savings associated with the concept is dependent on retail organizations using the E-CAT as a source of supply. As noted, the sales in the pilot program were insignificant. Also, some retail organizations did not perceive the E-CAT as providing best value. The primary purpose of the pilot program was to collect data to evaluate the program prior to full implementation. We believe that had DLA monitored and evaluated the pilot program, DLA would have gained valuable information as to why the program was not being used and also would have been in a position to use the information in designing and implementing the EMALL. We are not making a recommendation regarding these issues because the E-CAT has already been incorporated in the EMALL.

Appendix D. Barriers to Electronic Mall

The following is a summary of barriers to the EMALL that were identified by the Military Departments and studies directed by JECPO and DLA.

Army Forces Command. In October 1997, the Army Forces Command issued guidance stating that there was a danger of overobligating funds when making purchases through the Internet. The guidance stated that only high-priority requisitions involving certain situations would be submitted to the EMALL. Additionally, the guidance stated that certification of funds would be accomplished before submitting the EMALL requisition.

Scranton Electronic Commerce Resource Center. A December 1997 study, "Analysis of Buyer Perceptions," conducted for the Scranton Electronic Commerce Resource Center, reported on the results of group meetings to introduce potential EMALL users to the technology and explore their perceptions of the EMALL. Findings of the study include the following.

- Military Department legacy system integration will present the largest obstacle to widespread use of the EMALL. Customers, for the most part, are unwilling to "double enter" their orders – first into the EMALL and then again into their local legacy system. Without legacy system integration, the EMALL was viewed very positively as a research tool to determine availability and status of desired items, but not as a useful way to order supplies.
- The ability to obtain status of an order is very important for EMALL credibility. Customers want to be able to check on the delivery date of items they have ordered.
- Before the EMALL is rolled out and marketed on a widespread basis, DLA should be very certain that all facets of the system are fully operational and capable of handling an increased order volume. Customers who have a poor first experience will be extremely difficult to win back. In addition, their word of mouth could undermine further marketing efforts.

Air Force. In December 1997, the Air Force notified DLA that it was intrigued with the EMALL program and stated that the EMALL had potential for low-demand, non-weapon system, materiel that typically is not stocked in base-level retail inventories. However, there were concerns that if users purchased materiel directly from the EMALL, the Standard Base Supply System could perceive declining demand or no demand and inappropriately eliminate, reduce, or fail to build stockages for essential materiel.

Scranton Electronic Commerce Resource Center. A November 1998 study, "Customer Marketing Plan for the DoD EMALL Project," conducted by the Scranton Electronic Commerce Resource Center, listed barriers that had to be addressed to successfully market the EMALL. Some of the barriers were as follow.

-
- Internal supply procurement systems: What will be the cost absorbed by the customer in order to participate and shop in the EMALL?
 - Change and reluctance to accept EMALL: DLA must provide the customer with a superior product versus what they are currently using – anything less will be catastrophic.
 - Customer dissatisfaction: Military and Government procurement systems are not currently well-received in the marketplace. It takes 30 years to get a customer and 30 seconds to lose one. The EMALL must be as near perfect as possible before 100 percent market introduction. Anything less will result in large-scale customer disinterest, alienation and, finally, nonparticipation.

PricewaterhouseCoopers. In March 1999 a vendor, PricewaterhouseCoopers, provided a report, “EMALL Barriers Study,” that identified key EMALL stakeholders and researched functional requirements and program issues. JECPO had contracted with the vendor in September 1998 to provide advice and documentation to enable JECPO to ensure that there was proper planning, coordination, and operation of the EMALL corridors. Among the vendor’s tasks were to identify cultural; regulatory; and statutory, policy, and procedural impediments to use of the EMALL and to develop program management documentation necessary to support EMALL development and deployment. Some of the impediments or barriers identified were that:

- each Service had its own policies on using the EMALL,
- customers lacked Internet connections,
- products were not easy to find on the EMALL, and
- customers used old hardware.

KPMG. In June 1999 a vendor, KPMG, provided a study, “Economic Analysis of the DoD EMALL.” DLA had contracted with the vendor in January 1999 to determine what were the costs of procuring non-NSN items directly from vendors with the Government credit card versus the EMALL approach. The objective of the study was to conduct an economic analysis that would:

- review the current practices used by personnel to access and purchase items from the commercial (part number) market,
- review the cost to deploy the EMALL system for today and forward, and
- generate alternatives to compare with DoD current practices and make a recommendation as to the best approach.

The analysis concluded that the EMALL demonstrated significant savings to DoD over the current practices, assuming similar item prices. If item prices decrease on the EMALL, savings would increase substantially. However, if

item prices are higher (as little as 5 percent) on the EMALL, the EMALL would become a less attractive alternative. Additionally, if EMALL sales are less than currently expected, the cost recovery rate would need to be increased.

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
Deputy Under Secretary of Defense (Logistics and Materiel Readiness)
Assistant Deputy Under Secretary of Defense (Logistics) Supply Chain
Integration
Director, Logistics Systems Modernization
Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
Deputy Chief Financial Officer
Deputy Comptroller (Program/Budget)
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
Director, Joint Electronic Commerce Program Office
Director, Defense Reform Initiative

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller)
Deputy Chief of Staff (Logistics)
Commander, Army Materiel Command
Auditor General, Department of the Army

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Commander, Air Force Materiel Command
Deputy Chief of Staff (Installations and Logistics)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
General Accounting Office
National Security and International Affairs Division
Technical Information Center,
Office of Federal Procurement Policy
Inspector General, General Services Administration

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Management, Information, and Technology,
Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International
Relations, Committee on Government Reform

Audit Team Members

The Readiness and Logistics Support Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report. Personnel of the Office of Inspector General, DoD, who contributed to the report are listed below.

Shelton R. Young
Tilghman A. Schraden
Terrance P. Wing
John W. Henry
James J. McDermott
David R. Hasz
Stuart W. Josephs
Major Robert Daugherty, U.S. Air Force