Audit Report

OFFICE OF THE INSPECTOR GENERAL

EFFECTIVENESS OF DOD USE OF NONDEVELOPMENT ITEMS IN MAJOR DEFENSE ACQUISITION PROGRAMS

Report Number 92-107

June 22, 1992

Department of Defense

The following acronyms are used in this report.

AIWS.....Advanced Interdiction Weapon System
AMC.....Army Materiel Command
ASM-LOSAT...Armored Systems Modernization-Line-of-Sight Anti-Tank
ATARS.....Advanced Tactical Air Reconnaissance System
ATF.....Advanced Tactical Fighter
DAB.....Defense Acquisition Board
DFARS.....Defense Federal Acquisition Regulation Supplement
EMD.....Engineering and Manufacturing Development
F/A-18 E/F.....Fighter/Attack-18 E/F
FAR.....Federal Acquisition Regulation
FDS.....Fixed Distributed System
GAO.....General Accounting Office
JLC.....Joint Logistics Commanders
MBB.....Messerschmitt Boelkow Blohm GmbH
MDAP.....Major Defense Acquisition Programs
NDI.....Nondevelopmental Items
RAH-66.....Reconnaissance Attack Helicopter-66
RDT&E.....Research, Development, Test, and Evaluation
SD.....Standard Document
SRAM II.....Short Range Attack Missile II
USD(A).....Under Secretary of Defense for Acquisition

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June 22, 1992

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
DIRECTOR OF DEFENSE PROCUREMENT

SUBJECT: Audit Report on the Effectiveness of DoD Use of Nondevelopmental Items in Major Defense Acquisition Programs (Report No. 92-107)

We are providing this final report for your information and use. Comments on a draft of this report were not received from the Under Secretary of Defense for Acquisition. However, comments were received from the Director of Defense Procurement on some of the draft recommendations and were considered in preparing the final report. DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, all addressees must provide final comments on the unresolved recommendations by August 24, 1992. See the "Status of Recommendations" section at the end of the findings for the recommendations you must comment on and the specific requirements for your comments. The recommendations are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the material internal control weakness highlighted in Part I.

We appreciate the courtesies extended to the audit staff. If you have any questions on this audit, please contact Mr. Russell A. Rau, Program Director, at (703) 693-0655 (DSN 223-0655) or Mr. John Donnelly, Project Manager, at (703) 692-2934 (DSN 222-2934). The planned distribution of this report is listed in Appendix K.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosure

cc:
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force
Director, Defense Acquisition Regulations Council

Office of the Inspector General

AUDIT REPORT NO. 92-107 **June 22, 1992**
(Project No. 1AE-0047)

EFFECTIVENESS OF DOD USE OF NONDEVELOPMENTAL ITEMS IN MAJOR DEFENSE ACQUISITION PROGRAMS

EXECUTIVE SUMMARY

Introduction. The use of nondevelopmental items (NDI) can result in substantial cost savings, reduced technical risk, and more prompt fielding of equipment and systems from major Defense acquisition programs (MDAP). Public Law 99-661 requires that DoD use NDI to the maximum extent practicable, while Public Law 101-510 requires that DoD conduct market research into the availability of NDI before developing new items and specifications. DoD Instruction 5000.2, part 6, section L, implements these public laws. Additionally, DoD 5000.2-M requires Defense Acquisition Board (DAB) oversight of consideration and use of NDI on MDAP for which the DAB has cognizance. The Deputy Secretary of Defense issued a strong endorsement of expanded use of NDI on April 24, 1992.

Objectives. The audit objectives were to evaluate the Military Departments efforts in considering the procurement of NDI during development of MDAP and to review the adequacy of applicable internal controls.

Audit Results. The DoD has not fully complied with the Defense Acquisition Improvement Act of 1986 concerning use of NDI to the maximum extent practicable or with the DoD FY 1991 Authorization Act concerning the need for NDI research. We found that although adequate consideration was given to use of NDI at the system and part levels, there was generally neither evidence of surveys and investigations being performed at the subsystem and component levels nor adequate consideration of use of NDI by contractors. Highlights of the audit findings follow.

o Program offices generally did not formally perform and document the surveys or investigations at the subsystem and component levels to assess potential use of NDI (Finding A).

o Major weapon system contractors were not encouraged to propose NDI solutions at the subsystems and component levels, and therefore contractors did not actively seek NDI solutions. Major Defense contractors' technical expertise and awareness of market conditions could have resulted in NDI solutions (Finding B).

o The DoD neither published comprehensive NDI data bases of major subsystems and components nor designated authoritative activities as references on specific NDI. Therefore, program offices lacked information needed to conduct a thorough research of available NDI (Finding C).

As a result, DoD may not realize significant opportunities to reduce program costs, protect program schedules, and control technical uncertainty.

Internal Controls. Internal controls were not sufficient to ensure that program offices and major Defense contractors performed NDI research and considered use of NDI to the maximum extent practicable. See the "Internal Controls" section in Part I.

Potential Benefits of Audit. This report identifies no potential monetary benefits (Appendix I). However, implementing our recommendations can result in lower acquisition program costs, less risk, and more prompt fielding of weapons systems.

Summary of Recommendations. We recommended revisions to existing acquisition directives, regulations, and guides to ensure that program offices and Defense contractors perform NDI research and propose NDI solutions.

Management Comments. The Under Secretary of Defense for Acquisition (the Under Secretary) did not respond to the draft report; however, the Director of Defense Procurement (the Director) responded but did not concur with Recommendations B.2.a. and B.2.b. Based on the Director's comments, we revised recommendation B.2.a. The complete text of the Director's comments are in Part IV. We request that the Under Secretary provide comments and that the Director reconsider her position and provide additional comments to the final report by August 24, 1992.

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The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report. Copies of the report can be obtained from the Information Officer, Audit Planning and Technical Support Directorate, at (703) 614-6303 (DSN 224-6303).

PART I - INTRODUCTION

Background

Public Law 99-661, the Defense Acquisition Improvement Act of 1986, and DoD Directive 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991, part 6, section L, define nondevelopmental items (NDI) as:

(1) any item available in the commercial marketplace;

(2) any previously developed item in use by a Federal, State, or local agency of the United States or a foreign government with which the United States has a mutual defense cooperation agreement;

(3) any item described in subparagraph (1) or (2) above that requires only minor modification to meet the requirements of the procuring agency; or

(4) any item currently being produced that does not meet the requirements of subparagraph (1), (2), or (3) above solely because the item is not yet in use or is not yet available in the commercial marketplace.

There have been numerous studies and reports on the benefits of using NDI. The Grace Commission Study (1984), the Packard Commission Study (1986), the Defense Science Board Study (1987), the General Accounting Office Report (1989), and the Defense Management Report (1989) all recognized the benefits of procuring NDI. For example, the Defense Management Report determined that DoD should enhance its ability to acquire high-value commercial products incorporating the most up-to-date technology. The NDI benefits include:

- reduction of development costs,
- quicker delivery and fielding of weapon systems,
- reduction in weapon systems performance risks,
- use of state-of-the-art technology available in the commercial marketplace, and
- increase in competition.

Congress, responding to various NDI studies and reports, enacted the following laws.

- Public Law 99-661 established a statutory preference for NDI in DoD and required that the Secretary of Defense ensure that DoD defines and fulfills its requirements for the procurement of supplies through NDI to the maximum extent practicable.

o Public Law 101-189, the National Defense Authorization Act for FYs 1990 and 1991, required that the Secretary of Defense develop contract clauses to increase the procurement of commercial items; use, when applicable, standard commercial warranties; analyze impediments to the acquisition of NDI; and establish a training program on NDI acquisitions.

o Public Law 101-510, the National Defense Authorization Act for FY 1991, required that DoD conduct NDI market research to determine whether NDI are available or could be modified to meet agency needs before developing a new specification for a developmental item.

Objectives

The objectives of the audit were to:

o evaluate OSD and Military Department efforts in considering the procurement of NDI during development of major Defense acquisition programs (MDAP);

o determine whether DoD has established data bases and adequately distributed information on the data bases to assist program offices in performing NDI market research and investigations;

o determine whether contractors are directed, motivated, or otherwise participated in maximizing the consideration and use of NDI;

o selectively follow up on General Accounting Office (GAO) report recommendations; and

o review the adequacy of applicable internal controls.

Scope

Universe and sample. We judgmentally selected 9 MDAP to audit from a defined universe of 21 programs as of December 31, 1990. We defined the universe by including programs that had completed not more than half of development work and that required at least $100 million to complete development. Our selection provided a comparable number of programs in each Military Department. The nine programs are discussed in Appendix A.

Audit period, standards, and locations. This economy and efficiency audit was made from June 1991 to February 1992. The audit was performed in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD, and accordingly included such tests

of internal controls as were considered necessary. The activities visited or contacted during the audit are shown in Appendix J.

Audit work. We evaluated the NDI oversight established by OSD and the Military Departments. We met with OSD and Military Department NDI focal points to determine the extent to which they established NDI policies and procedures and their responsibilities in implementing the policies. We reviewed selected documentation submitted for Defense Acquisition Board (DAB) milestone decisions and the resulting decision memorandums for evidence of NDI oversight.

We did not audit the effectiveness of DoD's evaluation of foreign NDI because separate audit coverage was conducted in this area by the Inspector General (see "Prior Audits and Other Reviews" section in Part I).

We evaluated NDI research and investigative efforts performed by selected program offices and prime contractors. We also examined contractual documents for evidence of NDI consideration in the solicitation, source selection, and contracts award processes. We determined the extent to which program offices and prime contractors adhered to established NDI policies and procedures. Finally, we reviewed program office consideration and use of NDI data bases.

For three systems, we evaluated limited NDI information (see Appendix A, footnote 2). Specifically, we did not evaluate program office NDI acquisition planning or Defense contractors' NDI research and investigative efforts for the three systems. In addition, we did not examine contractual documents for the Fighter/Attack-18 E/F (F/A-18 E/F) because they were unavailable for audit (see Appendix E, footnote 8). We did not evaluate Defense contractor NDI research and investigative efforts for the Advanced Interdiction Weapon System (AIWS) program because the Engineering and Manufacturing Development (EMD) contract had not been awarded at the time of the audit.

Internal Controls

Controls assessed. We evaluated NDI acquisition policies and procedures to determine if internal controls were established to ensure that potential NDI solutions were considered to the maximum extent practicable during the development phases of MDAP. Specifically, we evaluated the adequacy of OSD and Service regulations and the NDI oversight process.

Internal control weakness. The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. The OSD controls were either not established or not effective to ensure that potential NDI solutions were considered to the maximum extent practicable. The OSD controls

were also not established to ensure participation of major contractors in the search for NDI solutions and to ensure that existing NDI data bases were investigated for possible NDI applications. Specific internal control weaknesses are discussed in each finding. Recommendations in this report, if implemented, will correct the weaknesses. We could not determine the monetary benefits to be realized by implementing the recommendations (Appendix I). The monetary benefits were not readily identifiable because potential savings can only be determined by performing NDI research, identifying NDI candidates, and conducting tradeoff studies. In addition, program offices that did conduct NDI research found no NDI solutions, did not estimate NDI savings, or had not yet performed tradeoff studies to determine whether a proposed NDI solution was viable. However, implementation of our recommendations should result in lower development and, possibly, production costs. At the time of the audit, DoD was in the process of developing a methodology to track commercial NDI acquisitions because no system existed.

Copies of this report will be provided to the senior officials responsible for internal controls within the OSD and the Military Departments.

Prior Audits and Other Reviews

The five audits and reviews identified as related to the audit objectives are summarized in Appendix B. Of particular relevance is a report issued by the Joint Logistics Commanders (JLC) in December 1988. Specifically, the JLC ad hoc group on NDI was established in March 1988 to develop recommendations for the effective implementation of the NDI acquisition initiative and to recommend mechanisms to share NDI market information. The ad hoc group recommended that DoD document and disseminate data bases to program managers and that DoD use an existing structure to collect and exchange NDI information.

PART II - FINDINGS AND RECOMMENDATIONS

A. NDI USE AND OVERSIGHT

Program offices for MDAP did not consider use of NDI to the maximum extent practicable. Program offices performed NDI investigations at the system and part levels but generally did not formally perform and document NDI surveys or investigations at the subsystem and component levels. Only three of nine program offices reviewed documented some NDI research at the subsystem and component levels (see Appendix C). Two program offices documented NDI research before starting EMD; one program office initiated NDI research after the prime contractor encountered development problems. Adequate guidance and oversight were not provided to ensure that NDI was considered at all levels during program development, and program offices did not comply with available guidance. Program officials were unaware of NDI research requirements or cited resource constraints and misplaced reliance on design contractors as reasons for noncompliance. As a result, DoD may have lost significant opportunities to reduce program costs, protect program schedules, and control technical uncertainty.

DISCUSSION OF DETAILS

Background

According to Standard Document-2 (SD-2), "Buying NDI," October 1990, DoD should consider use of NDI in the development of MDAP at systems, subsystems, components, and parts levels to decrease program costs, schedule risk, and technical uncertainty. The NDI, for example, may be selected in lieu of developing a totally new system. The NDI may also offer a partial alternative to development at the subsystem, component, or part levels of the weapon system. The NDI solutions at the system level must be sought and investigated early in the acquisition cycle, while NDI solutions below the system level may be incorporated into the system at various design stages during the development phase. However, as system development progresses, NDI opportunities at the subsystem and component levels decrease.

Program offices should use market research to identify potential NDI solutions. Market research consists of two related techniques: market surveillance and market investigation. The former are those techniques used to maintain a current knowledge of market availability within a particular area of technical expertise. The latter is a detailed analysis to determine whether a specific NDI candidate should be pursued during development. The SD-2 provides detailed guidance on conducting NDI market surveillance and investigative analyses.

Criteria. Public Law 99-661 requires that the Secretary of Defense ensure that DoD defines and fulfills its requirements for the procurement through NDI to the maximum extent practicable.

Public Law 101-510 amended Public Law 99-661 to require that DoD conduct market research before developing new specifications to determine whether NDI are available or could be modified.

DoD Instruction 5000.2, part 6, section L, "Nondevelopmental Items," February 1991, states that NDI should be used to the maximum extent practicable and NDI research should be conducted before development begins. While DoD Instruction 5000.2 provides no procedural guidance on NDI considerations, it does authorize publication of a NDI manual. However, the NDI manual had not been published as of February 1992, although it has been in process since 1987.

Army Regulation 70-1, "Systems Acquisition Policy and Procedures," and Navy Instruction 4210.7A, "Effective Acquisition of Navy Material," provided generally adequate NDI guidance; however, they were not followed. The Army and Navy guidance was being revised at the time of the audit. The Air Force does not have separate NDI guidance.

DoD 5000.2-M, "Defense Acquisition Management Documentation and Reports," February 23, 1991, requires that program offices present to the DAB Committee at Milestone I the most promising concept and identify existing military or commercial NDI subsystems that will be evaluated for use or possible modification during the next phase. Further, DoD 5000.2-M requires that program offices at Milestone II present to the DAB Committee the most promising design; identify which subsystems, components, or materials require new or additional development; and discuss why an existing military or commercial NDI subsystem, component, or material cannot be used. Program offices are specifically required to document the results of NDI research and their NDI candidates in the Integrated Program Summary, which is the primary decision document used to facilitate top-level acquisition decisionmaking. In addition, DoD 5000.2-M requires that the DAB Committee prepare its Integrated Program Assessment in the same format as the Integrated Program Summary. The NDI requirements associated with the Integrated Program Summary suggest that NDI research should be conducted during the Demonstration and Validation phase of the acquisition cycle to identify promising NDI applications, with identification of the NDI candidates occurring before entry into the EMD phase.

The SD-2 includes detailed guidance on conducting NDI research solicitation and source selection procedures for NDI, test and evaluation of NDI, integrated logistics support, and product assurance. For MDAP, the SD-2 states:

> A predominant use of NDI is related to the insertion of NDI at subsystem, equipment, component, and piece part levels in major developmental programs. These opportunities should be explored as

> part of system engineering and system integration processes. . . . There are considerable opportunities for system-level NDI acquisition strategies where the requirements may call for stand-alone systems such as sonar, radar, radio, navigation, and other electronic systems.

We consider the SD-2 to be complete and well-prepared. However, as discussed below, it is underutilized.

NDI Surveys and Investigations

The SD-2 was not distributed to or used by program offices. In fact, in many instances it was not accessible to the program offices. Program offices usually did not maintain records of NDI surveys and investigations at the subsystem and component levels. Conversely, most program offices considered NDI alternatives at the system level very early in the program and directed development contractors to use NDI at the piece-part level. Appendix C includes specific details about program office NDI research efforts.

Lack of NDI research. Program offices could not conclusively demonstrate that surveys and investigations were performed. Only three of nine program offices documented some NDI research at the subsystem and component levels, but the research was limited to specific segments of the work breakdown structure. One of the three research efforts was initiated after development problems occurred. Another program office tasked the contractor to perform trade studies, which had limited NDI applicability. The third program office performed NDI research for two subsystems. The remaining six program offices did not document NDI research at the subsystem and component levels.

Program managers were often not aware that NDI research was required at the subsystem and component levels. Program officials cited resource constraints and reliance on the initiative of the design contractor as other reasons for not performing the research.

The three program offices that performed NDI research at the subsystem and component levels identified NDI candidates. Although the three program offices expect reduced development costs if potential NDI candidates are included in the system, they did not estimate potential savings. More information on the NDI research efforts and results are in Appendix C.

NDI research at system/part levels. Program offices usually performed NDI investigations at the system level and ensured that contractors performed NDI investigations at the parts level. The system level investigations consisted of a cost and operational

effectiveness analysis of the proposed program and various alternatives, including existing systems, to meeting a particular mission need and a comparison of the results of the analyses. DoD Instruction 5000.2 requires that cost and operational effectiveness analyses be performed in support of major acquisition milestones, and the analyses were performed for seven of nine programs included in our audit. The NDI investigations at the piece-part level were usually tasked to development contractors by requiring use of the DoD parts control program.

The program requires that contractors obtain Government approval before using any part that is not listed on the Government-approved parts list. Various contract clauses and data bases were used to ensure adequate NDI consideration by contractors at the piece-part level.

NDI-related activities. Program offices generally did not perform studies specifically designed to detect NDI solutions. Program offices did perform tasks or studies that could result in either less development or NDI solutions. For example, some program offices studied North Atlantic Treaty Organization and domestic commonality efforts while others performed trade studies. Commonality allows several program offices to share in developing items rather than each program office separately developing the same item. Trade studies are investigations of alternative technologies and may require requests for product information to industry sources.

NDI Guidance

The DoD did not have adequate guidance to ensure maximum use of NDI. In addition, program offices did not comply with the NDI provisions included in Service NDI Instructions, and Service Acquisition Executives did not monitor programs to ensure that a NDI approach was adequately considered.

OSD guidance. DoD Instruction 5000.2, part 6, section L:[1]

o does not address specific NDI levels, thereby implying that NDI need be considered only at the system level;

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[1] DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991, canceled DoD Instruction 5000.2, "Defense Acquisition Program Procedures," September 1, 1987. DoD Instruction 5000.2, September 1, 1987, addressed NDI only at the system level. DoD Instruction 5000.2, part 6, section L, "Nondevelopmental Items," January 23, 1991, canceled DoD Directive 5000.37, "Acquisition and Distribution of Commercial Products, September 29, 1978, which covered only commercial off-the-shelf items.

o states that NDI research need only be conducted before a development effort starts, rather than conducted throughout the Demonstration and Validation and EMD phases of an acquisition;

o does not provide information or reference material on existing data bases to be investigated during NDI research;

o does not provide direct information or reference material on NDI research methodologies; and

o does not address contractor participation in identifying potential NDI solutions or refer acquisition personnel to other guidance on soliciting, motivating, and rating prospective contractors on potential NDI solutions.

Unlike DoD Instruction 5000.2, the OSD draft directive on NDI, "Acquisition and Logistics Support of Commercial and Other Nondevelopmental Items," released for comment in September 1989 but canceled before issuance, provided clearer guidance on various NDI opportunities at all levels of a major program (that is, system, subsystem, component, piece-part). The draft directive would have required that DoD Components consider commercial or other NDI at the system, subsystem, and component levels as well as in procurement of support equipment and supplies. The draft directive was intended to establish policies and procedures to implement provisions of the NDI statute as well as to implement provisions of the Defense Management Review concerning increased use of commercial products. The draft directive would also have required use of NDI as a continuing activity during system development rather than solely at the start of development, as implied in DoD Instruction 5000.2, part 6, section L. Although the OSD NDI focal point requested that the draft directive NDI provisions be included in DoD Instruction 5000.2, part 6, section L, the DoD Directive 5000 rewrite committee denied the request in favor of publishing a manual at a later date.

DoD NDI manual. Issuance of an NDI manual has been delayed. Although OSD stated that its draft NDI manual would be published by the end of 1988 and DoD Directive 5000.2, part 6, section L, authorized publication of an NDI manual, it had not been published when our fieldwork concluded. The OSD has informed various organizations since 1987 that issuance of an NDI manual is imminent.

o In response to requirements in the NDI statute, OSD advised the House and Senate Armed Services Committees in December 1987 that an NDI manual was being developed to provide detailed guidance and techniques for NDI acquisition. The OSD told Congress that the NDI manual would be issued by the end of 1988.

o On July 20, 1988, an NDI focal point advised the JLC ad hoc group on NDI that an NDI manual was being written but had been delayed because of the lack of contractor support, which in its opinion was required to write the NDI manual. The lack of contractor support was due to inadequate funding for the project. The NDI focal point also advised that an NDI directive was overdue.

o The GAO reported in February 1989 that the NDI manual was being reviewed by OSD and Military Department officials since 1987. The GAO reported that the NDI focal point was not able to devote sufficient time to NDI-related activities.

o In April 1991, the NDI focal point told us that the NDI manual would be published by April 1992. This date has now been slipped to November 1992.

High turnover at senior-level management was cited as a primary reason for delay in issuing the NDI manual. An OSD manual signed by the Under Secretary of Defense for Acquisition [USD(A)], which specifies that compliance is mandatory, would provide needed procedural guidance to field activities and exhibit high-level support for NDI initiatives.

SD-2, "Buying NDI." During the audit, we advised the NDI focal point that program offices were not using the SD-2, and in fact most were not aware of the SD-2 publication. Therefore, we suggested that it be forwarded to program offices. The NDI focal point agreed, and on August 13, 1991, provided a copy of the SD-2 to program executive officers. He advised the program executive officers that OSD was converting the SD-2 to a military handbook, authorized by DoD Instruction 5000.2. The NDI focal point subsequently told us that he had received numerous follow-up requests for copies of the SD-2. However, we found that most program offices that we visited after the OSD action were still not aware of the SD-2.

NDI Oversight

The DoD did not adequately ensure that potential NDI solutions were considered at all levels. While the DAB review process ensured that program managers performed adequate cost and performance tradeoffs at the system level, neither the Military Departments nor OSD established or enforced similar controls to ensure NDI consideration at the subsystem and component levels. In our opinion, the DAB review process should serve as the primary mechanism for providing NDI oversight in MDAP.

DAB NDI oversight. We were not able to evaluate fully the effectiveness of the DAB oversight process on subsystems and components of MDAP because none of the nine programs reviewed came before the DAB Committee after the August 23, 1991, effective date for implementation of the Integrated Program Summary/Integrated Program Assessment as contained in DoD

Instruction 5000.2-M. However, the Air Force presented Milestone II documentation to the DAB in the Integrated Program Summary format for one program, Advanced Tactical Fighter (ATF). We noted that the requirement of DoD Instruction 5000.2-M, part 4, section A, was not met because specific subsystems, components, or materials requiring new or additional development were not identified and an explanation to the DAB Committee was not provided as to why existing military or commercial NDI could not be used.

The DAB Committee assessments of program office NDI plans and applications may not be presented to the DAB for its consideration. Although DoD Instruction 5000.2-M states that the Integrated Program Assessment is to be in the same format as the Integrated Program Summary, there is no requirement for the appropriate DAB Committee to comment to the DAB on the appropriateness of program office NDI plans or applications. We believe that the DAB Committee should analyze program office NDI approaches and include the analysis in the Integrated Program Assessment for DAB consideration at the Milestone I and II decision points.

Army NDI oversight. The Army's NDI oversight program did not work as intended. The Army established its NDI oversight program in June 1986 to ensure the application of NDI policy throughout the acquisition cycle and to all potential NDI levels, including NDI assemblies and components of major weapon systems. We observed that two of three Army program offices did no NDI research at the subsystem or component levels, and no NDI oversight was provided because the office designated to perform the NDI oversight was reorganized. The Army Audit Agency reported the lack of NDI oversight and made appropriate recommendations. As a result, the Army was revising its acquisition regulations and may eliminate the NDI oversight function.

Navy NDI oversight. The Navy's NDI oversight program also did not work as intended. The Navy established an NDI advocate in January 1987 to maximize the use of NDI. The advocate was to monitor NDI-related activities and report to the Secretary of the Navy on their effectiveness. However, the office designated to perform the NDI oversight was reorganized and did not perform the oversight. In February 1992, the Navy was also revising its acquisition regulations to correspond with the DoD Directive 5000.1, "Defense Acquisition," February 23, 1991, and DoD Instruction 5000.2.

Effects of Not Performing NDI Research

We could not quantify the precise effects of not performing research at the subsystem and component levels because program offices generally did not perform NDI research. The resulting lost opportunities could only be identified through actually performing the NDI market research based on information available

before the decision to proceed with subsystem or component development, which is not realistic. Nevertheless, we feel that the lack of an effective process for identifying and evaluating NDI candidates can result in the loss of significant opportunities to reduce program cost, protect program schedules, and reduce technical uncertainty associated with MDAP development. The Packard Commission, Defense Management Review, GAO, Congress, and others have concluded that appropriate use of NDI yields considerable benefits in terms of cost, schedule, and risk reduction.

Conclusion

The DoD has not fully complied with Public Law 99-661 concerning use of NDI to the maximum extent practicable or with the Public Law 101-510 concerning the need for NDI research before development of new specifications (that is, proceeding with a developmental item). The Military Departments generally performed little or no NDI research at the subsystem and component levels, and NDI oversight was inadequate. Guidance on conducting research was needed and the DAB oversight process needed strengthening to ensure continuing NDI consideration at DAB milestone reviews. Corresponding procedures are required for component-managed programs. Additionally, the appropriate DAB Committees should document their assessments of potential subsystem and component NDI research and solutions for DAB deliberations. Finally, the Acquisition Decision Memorandum should document decisions regarding NDI research and NDI candidates. We consider clear documentation of DAB Committee assessments and DAB decisions regarding NDI to be required to ensure compliance with public law.

In order to provide NDI guidance to the field activities, we recommended certain changes to DoD Instruction 5000.2, part 6, section L, instead of recommending incorporation of the changes into the NDI manual, authorized by section L, because provisions of DoD Instruction 5000.2 are mandatory while provisions of an NDI manual may not be mandatory.

RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Under Secretary of Defense for Acquisition:

1. Revise DoD 5000.2-M, "Defense Acquisition Management Documentation and Reports," February 23, 1991, to require that Defense Acquisition Board Committees specifically address in the Integrated Program Assessment the nondevelopmental items candidates for research and the results of nondevelopmental items research at Milestone I and II, respectively.

2. Revise DoD Instruction 5000.2, part 6, section L, "Nondevelopmental Items," February 1991, to:

a. Require that nondevelopmental items research and investigative efforts at the subsystem and component level continue throughout development, with promising candidates identified and approved through the Defense Acquisition Board review process;

b. Require that nondevelopmental items solutions be considered at all levels including system, subsystem, component, part, and support equipment levels, commensurate with the phase of the acquisition process;

c. Require program offices to use the nondevelopmental items manual authorized by DoD Instruction 5000.2, part 6, section L, for nondevelopmental items research and investigative policies and procedures when published and that program offices use Standard Document-2, "Buying NDI," October 1990, in the interim;

d. Include nondevelopmental items candidates identified by program office nondevelopmental items investigations in solicitations for contractor consideration; and

e. Require that program managers document the methodology, scope, and results of nondevelopmental items surveys and investigations at the subsystem and component levels.

3. Publish the nondevelopmental items manual authorized by DoD Instruction 5000.2, part 6, section L, by its scheduled publication date of November 1992.

4. Include a provision in the nondevelopmental items manual authorized by DoD Instruction 5000.2, part 6, section L, requiring that program executive officers monitor nondevelopmental items research efforts identified in the Integrated Program Summary.

MANAGEMENT COMMENTS

We did not receive USD(A) comments to a draft of this report issued on April 16, 1992. However, on April 24, 1992, the Deputy Secretary of Defense issued a memorandum, "Encouraging Use of Commercial and Other Nondevelopmental Items" (Appendix H), that establishes DoD policy to use NDI to the maximum extent practicable. The memorandum states that this policy is designed to promote efficiency in the use of taxpayer resources, and provide timely and effective support for the Armed Forces. We believe that the memorandum, which also provides specific direction to implement the NDI policy, fully supports implementation of our recommendations.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

DoD Directive 7650.3, "Followup on General Accounting Office, DoD Inspector General, Internal Audit, and Internal Review Reports (IG)," September 5, 1989, requires that all audit recommendations be resolved promptly. Therefore, we request that USD(A) provide comments on the final report. See the "Status of Recommendations" section below for the recommendations you must comment on and the specific requirements for your comments.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
A.1.	USD(A)	X	X	X	IC
A.2.	USD(A)	X	X	X	IC
A.3.	USD(A)	X	X	X	IC
A.4.	USD(A)	X	X	X	IC

* IC = material internal control weakness

B. CONTRACTOR NDI SOLUTIONS

The DoD contractors for MDAP were not required to conduct NDI research or encouraged to propose NDI solutions. Only one of the five contractors visited performed some NDI research (see Appendix E). This condition occurred because NDI was not adequately considered in Government acquisition planning, and acquisition regulations did not require that DoD contractually involve major Defense contractors in searching for NDI solutions. As a result, contractors did not actively seek and propose NDI solutions, and potential NDI solutions may not have been considered resulting in potential deployment delays, increased costs, and higher risk.

DISCUSSION OF DETAILS

Background

Need for contractor participation. Contractor participation is critical to the success of NDI initiatives. Major DoD contractors have the experience, knowledge, and resources required to perform in-depth NDI research, including surveys and investigations. Contractors have ready access to market data and track technological advances, including products recently or about to be introduced into the market. The DoD must ensure, through the contractual process, that major Defense contractors' NDI expertise is adequately used. However, there is a potential bias against NDI in that use of NDI may limit the development efforts required to be performed by the contractor as well as reduce future production contracts if the NDI is produced by another manufacturer. In addition, use of NDI in prime contracts can lead to eventual Government breakout of the NDI subsystems and components to the original manufacturer, with a potential for associated loss of revenue.

Criteria. Neither DoD Directive 5000.1 nor DoD Instruction 5000.2 required contractor participation in the NDI process. Likewise, there are no specific provisions contained in the Federal Acquisition Regulation (FAR) or the Defense Federal Acquisition Regulation Supplement (DFARS) requiring contractor participation in the NDI process. However, SD-2 provides guidance from OSD on the need for contractor participation in the NDI process.

Standard Document-2. The SD-2 addresses the need to solicit prospective contractor participation in identifying NDI alternatives and to consider their responses carefully in awarding development contracts. The SD-2 states that:

o acquisition plans should reflect NDI program objectives, strategies, conditions, and constraints;

o requests for proposals should be structured to encourage industry to propose NDI alternatives to conventional research and development or production programs; and

o evaluation criteria for NDI should be explicitly stated in the solicitation document.

Concerning MDAP, the SD-2 states that contractual language should be inserted in the solicitation to encourage contractors to submit their plans for NDI subsystems and components to the Government for review and approval before commencing NDI research. Offerors should be required to submit their plans for identifying and qualifying NDI subsystems and components to the Government for review and approval before commencing NDI research. Consideration should also be given to inserting evaluation criteria that would enhance award potential for offerors with superior programs for the identification and insertion of NDI into the system.

The SD-2 also discusses tradeoffs to be considered in evaluating proposed NDI solutions. The SD-2 states that performance requirements should be stated as ranges rather than fixed points, thereby eliciting offerors to propose NDI solutions that may not meet all stated performance requirements and technical specifications. Program offices would perform cost and schedule tradeoffs within performance ranges to determine the viability of proposed NDI solutions. The user must approve proposed changes to operational requirements resulting from tradeoff evaluations. The SD-2 includes a sample NDI solicitation clause (see Appendix D) designed to elicit NDI alternatives at all levels of the work breakdown structure, including end item, subsystem, component and piece-part.

Federal Acquisition Regulation. The FAR did not specifically cover contractor participation in the NDI process. The FAR, part 10, "Specifications, Standards, and Other Purchase Description," prescribes policies and procedures for using specifications, standards, and other purchase descriptions, and related considerations of acquisition streamlining. Contractors, to the extent practicable, should be involved in acquisition streamlining. Acquisition streamling reduces the time and cost, and improves the quality of systems acquisition by tailoring specifications, standards, and related documents to exclude unnecessary requirements contained in these documents for the acquisition at hand. Further, FAR, part 10.002(b), requires ". . . requirements, whenever practicable, to be stated in terms of functions to be performed or performance required."

The FAR, part 11, "Acquisition and Distribution of Commercial Products," establishes policies and procedures for the acquisition of commercial products and the use of commercial distribution systems.

Defense Federal Acquisition Regulation Supplement. The DFARS also does not specifically cover contractor participation in the NDI process.

The DFARS, part 207, "Acquisition Planning," requires that written acquisition plans for development acquisitions describe the market research efforts planned or undertaken to identify NDI that could satisfy the acquisition objectives. However, part 207 does not specify contractor participation in finding NDI solutions.

The DFARS, part 210, "Specifications, Standards, and Other Purchase Descriptions," defines NDI and states that, pursuant to United States Code, title 10, section 2325, it is DoD policy to fulfill requirements for items of supply through the acquisition of NDI to the maximum extent practicable. However, part 210 provides no contractual guidance on how to achieve the policy for subsystems and components of MDAP.

The DFARS, part 211, "Acquisition and Distribution of Commercial Product," permits contracting activities, with certain restrictions, to use purchase descriptions that allow offerors to furnish commercial products and allow the Government to use commercial distribution systems whenever these products or distribution systems satisfy DoD's needs. However, commercial products are only a subset of NDI.

NDI acquisition planning and contracting. Program offices did not emphasize NDI in acquisition planning and contracting. While three of six acquisition plans considered NDI, two plans had limited NDI strategies [Armored Systems Modernization-Line-of-Sight Anti-Tank (ASM-LOSAT) and Fixed Distributed System (FDS)]; the other [AIWS] had a comprehensive strategy including consideration of proposed NDI solutions that did not meet performance requirements or technical specifications. Three acquisition plans were not included in the audit scope (Appendix A, footnote 2).

While four of eight solicitations mentioned NDI, only one of the four solicitations (AIWS) encouraged development contractors to research NDI solutions at all major levels of the work breakdown structure. The ASM-LOSAT solicitation required that the development contractor evaluate use of an existing subsystem in lieu of new development. The ATF solicitation included an NDI provision for subcontractors; however, in our opinion, the contractor did not include the NDI provision in the one subcontract issued at the time of the audit. Finally, the FDS solicitation addressed NDI for the land portion but not the underwater portion; however, we concentrated our audit effort on the underwater segment because of the significant development costs involved.

None of the six solicitations reviewed included source selection evaluation criteria for contractor plans for identifying and qualifying NDI subsystems and components.[2] Therefore, prospective development contractors were not motivated to propose an NDI plan or specific NDI solutions because NDI proposals were not factored into the selection process.

Appendix E includes additional details on NDI acquisition planning and contracting.

Contractor consideration of NDI. Due to the absence of contractor requirements, major Defense contractors did not have policies and procedures on NDI research, prepare formal NDI plans for conducting NDI research, and document NDI research. As a result, NDI solutions were generally not proposed.

- Only one of five contractors visited had an NDI policy, but it was limited, and the contractor had no procedures for implementing the policy (ATF).

- None of the five contractors visited had formal NDI plans for conducting NDI research.

- Only one contractor performed NDI research, but the research was reactive because development and production problems caused a need to identify alternative sources [Advanced Tactical Air Reconnaissance System (ATARS)].

- Contractors generally did not identify specific NDI solutions at the component or subsystem levels. One contractor was evaluating a NDI subsystem alternative (ATF).

- Contractors did not contractually require that their major subcontractors seek NDI solutions at the subsystem or component levels. One prime contract required that the prime contractor encourage use of NDI in its subcontracts, but the prime contractor inserted a vague clause in its subcontracts, which did not, in our opinion, encourage subcontractors to use NDI (ATF). In another case, the prime contractor for ATARS inserted in its subcontracts the same limited NDI clause included in the prime contract (Appendix E, footnote 10). A Defense Plant Representative Office official told us the clause was vague and therefore unenforceable.

Appendix F includes additional details on major weapon system contractors' NDI policies, procedures, and practices.

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[2] We did not review solicitations for three programs because two program offices did not include source selection criteria and one program office was still developing the solicitation.

NDI-related activities. Though contractor procedures were not designed to elicit NDI solutions, contractors told us that they performed various investigations and analyses that may have identified NDI solutions. For example, contractors performed trade studies that may have required that contractors release requests for product information to industry. However, at the time of the audit, the contractors visited could not provide concrete examples of NDI solutions resulting from these activities, and could not provide documentation directly linking these activities to NDI applications.

Acquisition regulations. Acquisition regulations did not require that DoD contractually involve major Defense contractors in finding NDI solutions at the subsystem and component levels. While the SD-2 provided clear guidance, program offices did not use SD-2 and, in fact, eight of nine program offices were not aware that the document existed (Appendix G). In addition, the SD-2 does not have the force of a regulation or directive, and the DFARS contained no provisions requiring MDAP offerors to submit NDI plans during development.

Conclusion

Formal contractor NDI plans are needed. Program offices need to work with contractors early in the development cycle to agree on a plan to seek and identify potential NDI solutions at the subsystem and component levels. This plan needs contractual agreement to ensure adequacy and performance. The acquisition plan should spell out the need for including development contractors in the NDI research process, including contract incentives needed to ensure maximum contractor participation. The DoD should establish requirements for solicitation of NDI plans before award of both Demonstration and Validation and EMD contracts; and, to ensure adequacy, include sufficient weighting of the plans in the source selection criteria. In addition, contracts should specify that NDI research plans be updated throughout the development cycle. Finally, program officials should monitor contractor activities to ensure that the NDI plan is implemented and may request cognizant Defense Contract Management Command activities to monitor implementation of contractual NDI plans. While the SD-2 provides guidance concerning contractor participation in maximizing NDI use, mandatory guidance to acquisition and contracting officials is required to motivate, evaluate, and monitor contractor NDI efforts. Acquisition plans for MDAP should include the specific program acquisition strategy for achieving maximum contractor participation in the search for NDI solutions.

RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Under Secretary of Defense for Acquisition:

a. Revise DoD Instruction 5000.2, part 6, section L, "Nondevelopmental Items," February 1991, to require program managers to follow the Standard Document-2, "Buying NDI," part 2.5.4, October 1990, concerning contractor participation in finding nondevelopmental items solutions, including motivating and evaluating contractual nondevelopmental items efforts.

b. Revise Standard Document-2, part 2.5.4, to require that program managers, as part of the source-selection process, solicit and evaluate prospective contractors' nondevelopmental items research and investigative plans, adequately weight the plans in the source-selection evaluation criteria, and ensure that the nondevelopmental items plans are adequately implemented during the preliminary and critical design review. The Standard Document-2 should reference the appropriate Defense Federal Acquisition Regulation Supplement for solicitation guidance.

c. Include the revised Standard Document-2 nondevelopmental items requirements concerning contractor participation in the nondevelopmental items manual authorized by DoD Instruction 5000.2, part 6, section L.

2. We recommend that the Director of Defense Procurement:

a. Revise the Defense Federal Acquisition Regulation Supplement, part 210, to require that contracting officers solicit, evaluate, and negotiate contractor nondevelopmental items plans; make the negotiated plans part of the contract, subject to Government oversight; and direct administrative contracting officers, as necessary, to monitor nondevelopmental items plans for execution.

b. Revise the Defense Federal Acquisition Regulation Supplement, part 207, to require that program offices include in acquisition plans specific efforts to encourage contractor participation in the nondevelopmental items research effort, specific requirements concerning contractor nondevelopmental item plans, and a plan of action for monitoring implementation of negotiated nondevelopmental items plans.

MANAGEMENT COMMENTS

We did not receive comments to the draft report from USD(A); however, we did receive comments from the Director of Defense Procurement (the Director). The complete text of the Director's comments are in Part IV. The Director nonconcurred with draft Recommendation B.2.a. because it could result in increased costs to the Government. She stated that the recommendation to require an NDI plan as a contract deliverable was impracticable because

data delivery occurs too late in the acquisition process, and the development effort would be well under way before the plan was received. The Director also said that DoD Instruction 5000.2 correctly emphasizes the need to examine NDI potential before development begins and that the recommended requirement for administrative contracting officers to monitor NDI plans was redundant because DoD already has configuration management controls imposed on itself and its contractors.

The Director also nonconcurred with Recommendation B.2.b. and stated that FAR, part 7, already specifies contractor participation in finding NDI solutions and therefore the guidance should not be repeated in the DFARS. More specifically, the Director said that FAR 7.105(a)(8) specifies acquisition streamlining requirements, including recommending the most appropriate application and tailoring of contract requirements, and that DFARS, part 210, subjects acquisition programs to the acquisition streamlining requirements of FAR. The Director also stated that monitoring NDI plans would be redundant because monitoring NDI was already accomplished through the configuration management process.

The Director commented that the report body should be revised because, although technically accurate, it created the erroneous impression that DFARS, section 211, should have provided additional NDI guidance.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

We partially agree with the Director's comments on draft Recommendation B.2.a. Specifically, we agree that the recommendation could have been misinterpreted to prohibit NDI research until an NDI plan was delivered under the contract. The intent of the recommendation, as stated in the report, was to have the contracting parties agree on an NDI research plan before award of the Demonstration and Validation and EMD contracts; and have the agreed-upon plan made part of the contract and subjected to routine Government oversight. Recommendation B.2.a. is consistent with the SD-2, which states that offerors for major programs should be required to submit, in response to the solicitation, their plans to conduct NDI research for subsystems and components. The SD-2 further states that evaluation criteria should be considered to reward offerors with superior NDI plans. We revised the recommendation to eliminate any misinterpretation concerning NDI plans and delay in performance of the contract.

We disagree with the Director's comments on Recommendation B.2.a. that DoD Instruction 5000.2 correctly emphasizes the need to examine NDI potential only before development begins. We found that this policy limited NDI research to the system level, excluding NDI research at the subsystem and component levels. Therefore, we recommended in Recommendation A.2. that DoD Instruction 5000.2 be revised to require continuous NDI research

efforts at all levels of the work breakdown structure. Recommendation A.2. is consistent with draft guidance prepared by the OSD NDI focal point but never issued.

We also disagree with the Director's comments on Recommendation B.2.a. equating configuration management controls to monitoring the execution of NDI plans. Configuration management represents actions taken to identify and document the functional and physical characteristics of an item, to control changes to an item, and to record and report change processing and implementation status. Monitoring NDI plans, on the other hand, would entail performing those tasks necessary to provide reasonable assurance that Defense contractors execute NDI plans agreed to at negotiations. While use of NDI would be subject to the configuration control process, monitoring contractor NDI research efforts would be outside the configuration management process. In essence, NDI decisions should form the basis for the production configuration that is then documented and controlled through configuration management.

We disagree with the Director's comments on Recommendation B.2.b. The FAR, part 7, does not, in our opinion, provide specific guidance on contractor participation in finding NDI solutions. Acquisition streamlining is a broad concept representing any effort that results in more efficient and effective use of resources to develop or produce quality systems. The concept includes ensuring that only necessary and cost-effective requirements are included in solicitations and contracts. However, the concept does not require contractors to seek NDI solutions to achieve cost-effective systems. In fact, neither the DoD definition of "acquisition streamlining" nor FAR, part 7, even mention or reference the term "NDI." The audit results confirmed the lack of contractor participation in finding NDI solutions.

We also disagree with the Director's comments on Recommendation B.2.b. equating configuration management controls to monitoring the execution of NDI plans as noted in our audit response to the Director's comments to Recommendation B.2.a. on this issue. Despite statutes imposed upon DoD, the DFARS neither requires nor encourages MDAP contractors to perform research necessary to find NDI solutions at the subsystem and component levels. Public Laws 99-661 and 101-510 require DOD to maximize use of NDI and to conduct market research to achieve that end. In addition, the SD-2 states that NDI opportunities exist at the subsystem and component levels and that solicitations should be structured to encourage industry to propose NDI as alternatives to conventional research and development or production programs. The SD-2 further states that acquisition plans will reflect the NDI program objectives, strategy, conditions, and constraints. The audit found that contractors were not required to conduct NDI research or encouraged to propose NDI solutions and, as a result, performed little NDI research.

Subsequent to the issue of our draft report, the Deputy Secretary of Defense issued a memorandum encouraging additional NDI acquisitions (Appendix H). The memorandum directs the Service Secretaries, the USD(A), and the heads of other DOD components with procurement responsibilities to maximize the procurement of NDI, to conduct market research before developing new item specifications, and to define DoD requirements to encourage NDI solutions. The memorandum also directed that Competition Advocates be authorized to promote NDI acquisitions, review procurement activities for NDI acquisition policies, and report and make recommendations on use of NDI and policies needed to increase NDI use. We believe that the Deputy Secretary of Defense's direction supports implementation of our recommendations. However, the conditions found by the audit indicate that adequate regulatory revisions are needed to implement statutory requirements on NDI.

We agree with the Director's comments that the draft report, although accurate, created an erroneous impression that DFARS, part 211, should provide additional NDI guidance. Therefore, we revised the final report accordingly.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
B.1.	USD(A)	X	X	X	IC
B.2.	Director of Defense Procurement	X	X	X	IC

* IC = material internal control weakness

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C. NDI DATA BASE

The NDI data bases existed in a number of buying commands, but DoD had not identified, centralized, and published NDI data bases of major subsystems and components. This condition occurred because DoD had not placed a priority on developing an adequate system for consolidating and disseminating NDI information, as indicated by failure to implement previous recommendations made by the JLC to correct the condition. As a result, program offices were not aware of NDI data bases that, if used, may have led to increased NDI use, lowered cost, and reduced risks in developing new systems (see Appendix G).

DISCUSSION OF DETAILS

Background

Criteria. No specific statutory or regulatory provisions address access to and use of NDI data bases. However, two standard documents directly or indirectly discuss the use of NDI data bases in identifying potential acquisition solutions.

o The SD-5, "Pamphlet: Locating Off-The-Shelf Items," February 1989, states that use of commercially available data bases should help save time and resources in the search for products. The SD-5 references several potential NDI automated data bases, but the data bases are generally limited to the parts level.

o The SD-1, "Standardization Directory [FSC Class and Area Assignments]," May 1, 1991, designates the lead standardization activity for each Federal Supply Class and identifies lead activities responsible for standardization areas. An example of a lead activity for standardization is the Manufacturing Modernization Directorate, Office of the Assistant Secretary of Defense (Production and Logistics), which is responsible for all matters concerning product and nonproduct standardization, including weapon systems, subsystems, components, and equipment; the DoD Parts Control Program; and standardization plans for Federal Supply Classification Classes and for technology areas.

DoD Instruction 5000.2, part 6, section L, does not reference the use of SD-5 and SD-1.

NDI Data Base Use and Availability

Program offices lacked information on availability of NDI at the subsystem and component levels within DoD. None of the program offices visited used NDI data bases to identify potential NDI candidates and only one program office was aware of the SD-5, the only current DoD document identifying a limited number of NDI data bases. While the Military Departments have published some data bases on available NDI, the data bases were not consolidated

and disseminated throughout DoD. Without widespread availability and dissemination of NDI data bases, program offices cannot ensure that all potential NDI solutions are identified and evaluated.

Military Departments data bases. Although the audit scope did not include a search for NDI data bases, examples of specific Military Department NDI-related publications that were obtained during the audit follow.

o NAVDESL-500, "NAVAIR Design Selection List of Non-Developmental Items," October 1989, lists NDI components and equipment in the Naval Air Systems Command's inventory to be used by weapon systems contractors to prevent unnecessary development. The list includes commercial manufacturers, Government entities, and North Atlantic Treaty Organization sources.

o "Air Force Standard/Preferred Avionics Subsystems and Avionics Architectural List," April 1991, contains avionics from the Air Force standard and preferred items list and Air Force-adopted architectural standards.

o An undated Army Communications and Electronics Command briefing chart describes an NDI data base that includes domestic vendors and products covering 12 communications-electronics categories, current technology and industry trends, and foreign products and technologies. Lack of funding caused the data base to be disestablished in 1991.

Program offices should use Military Department data bases, such as those described above, to identify potential NDI solutions. Our limited review indicated that the three data bases described above were not on file in the program offices. In our opinion, publications containing potential NDI considerations should be cataloged in one OSD publication to provide program offices with knowledge and availability of NDI data bases with potential NDI candidates. Additionally, acquisition commands should be responsible for establishing and maintaining NDI data bases for items developed by their command. These data bases can then be referred to in the standard OSD publication and used for conducting NDI research. The SD-1 designates major acquisition commands as the lead activities for specific Federal supply classes. Therefore, an organization is in place to assume this added responsibility and provide program offices with knowledge and availability of NDI data bases.

Joint Logistics Commanders study. In 1988, the JLC conducted a study on NDI use. The JLC determined that program offices had insufficient information to conduct NDI research and identified numerous DoD data bases that could assist program offices in NDI research. Specifically, the JLC task force:

o found "literally hundreds of DoD data bases" that contained useful NDI-related information; however, the data bases were not distributed, so their use for NDI decisions was minimal; and

o provided specific examples of existing DoD data bases and their use. For example, the JLC study cited a data base compiled by Army Materiel Command (AMC) Communication and Electronics Command as an excellent communications-electronics data base and a data base compiled by the Navy on fiber optics as very informative.

JLC recommendations. In a December 1988 letter to the USD(A), the JLC observed that limited information was available to assist program managers in performing NDI market surveys even though a framework existed within DoD to exchange NDI information. For the first observation, the JLC made the following recommendations.

o The NDI pamphlet SD-5 should be expanded to include DoD data bases to assist program managers in NDI market surveys. The JLC recommended that the OSD should lead the effort to expand the pamphlet.

o The lead standardization activity for each Federal supply class and special technology area also should be designated as NDI focal points. The activities would function as repositories and authorities concerning NDI potential within their respective supply class and technology area.

For the second observation, the JLC recommended the continuation of the existing standardization and data management organization as the most efficient and cost-effective medium of exchange for market research information.

Initial response to recommendations. In January 1989, the NDI focal point recommended that the USD(A) accept both JLC recommendations. The NDI focal point stated that the second recommendation, if implemented, would be the first step in the Military Departments recognizing the efficiency of consolidating DoD engineering talent and resources for a commodity area at a single command rather than having it spread throughout the Military Departments and Defense agencies.

Actions on recommendations. The USD(A) did not implement the JLC recommendation to compile and distribute NDI data bases of military subsystems and components. In addition, the USD(A) did not designate the existing standardization structure as a repository and source of NDI information.

Other OSD initiatives. The Office of the Assistant Secretary of Defense (Production and Logistics) developed a draft guide, "Market Analysis for Nondevelopmental Items." The guide lists samples of available product information data bases, data

files, and Government contracts. While the guide lists sample military and commercial data bases, it is not specific on type of information maintained or on how to access the data bases, files, or contracts. As a result, the final guide will, in our opinion, provide minimal benefit to program offices in their NDI considerations.

Effects of Not Compiling NDI Data Bases

Program offices exposed themselves to potentially greater program cost, technical risk, and extended development cycles by not reviewing NDI data bases and consulting knowledgeable NDI sources. Both our audit and the JLC study identified NDI data bases which, if used, could both maximize NDI use and result in reduced cost and program risk.

Conclusion

Program offices are required by public law to do NDI research and are further required by DoD regulations to present the results of their research on subsystems and components to the DAB in the Integrated Program Summary. A widely distributed data base of NDI subsystems and components is needed by program offices to properly implement this requirement. The current list of data bases, the SD-5, lists only a limited number of data bases and is not widely distributed; therefore, its usefulness is questionable.

The JLC study found that program offices were not using data bases to identify NDI during the acquisition process. They recommended actions to establish data bases that would allow program offices to know whether suitable subsystems and components have already been developed or where performance tradeoffs would permit NDI solutions. Our audit confirmed the JLC study conclusions. Specifically, program offices should be aware of available NDI data bases, and it is essential to both "advertise" available NDI and allow program offices to discuss availability and applicability of potential NDI candidates with standardization activities shown in the SD-1. We believe that the JLC recommendations are still relevant and should be implemented.

RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Under Secretary of Defense for Acquisition:

1. Expand Standard Document-5, "Pamphlet: Locating Off-The-Shelf Items," February 1989, to include DoD-owned data bases at subsystem and component levels.

2. Revise Standard Document-1, "Standardization Directory [FSC Class and Area Assignments]," May 1, 1991, by designating the lead standardization activity for each Federal supply class

as repositories and authorities concerning nondevelopmental items potential within their respective supply class and technology area.

3. Reference Standard Document-1 and Standard Document-5 in DoD Instruction 5000.2, part 6, section L, "Nondevelopmental Items," February 1991, and require their use as part of market surveys and investigations.

MANAGEMENT COMMENTS

We did not receive USD(A) comments to a draft of this report issued on April 16, 1992 (see the "Management Comments" section of Finding A.).

AUDIT RESPONSE TO MANAGEMENT COMMENTS

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, we request that USD(A) provide comments on the final report. See the "Status of Recommendations" section below for the recommendations you must comment on and the specific requirements for your comments.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
C.1.	USD(A)	X	X	X	IC
C.2.	USD(A)	X	X	X	IC
C.3.	USD(A)	X	X	X	IC

* IC = material internal control weakness

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PART III - ADDITIONAL INFORMATION

Appendix A - Program Descriptions, Milestone Dates, and Cost

Appendix B - Prior Audits and Other Reviews

Appendix C - Program Office NDI Research

Appendix D - SD-2 Sample NDI Solicitation Clause

Appendix E - Program Office NDI Planning and Contracting

Appendix F - Defense Contractors' NDI Policies, Procedures, and Practices

Appendix G - Program Office Awareness and Use of NDI Data Bases and NDI Standard Documents

Appendix H - Deputy Secretary of Defense Memorandum Encouraging Use of Nondevelopmental Items

Appendix I - Summary of Potential Benefits Resulting from Audit

Appendix J - Activities Visited or Contacted

Appendix K - Report Distribution

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APPENDIX A: PROGRAM DESCRIPTIONS, MILESTONE DATES, AND COST

Army

Reconnaissance Attack Helicopter (RAH)-66	A lightweight, twin engine advanced helicopter for primary missions of armed reconnaissance and light attack.
ASM-LOSAT	An antitank Kinetic Energy Missile for defeating armored threats.
LONGBOW	A helicopter mounted air-to-air and air-to-ground missile system with day, night, and adverse weather capabilities.

Navy

FDS	The mission and function of the FDS is classified.
AIWS	An air-to-ground missile for attacking large numbers of less than high value tactical targets.
F/A-18 E/F	An upgraded F/A-18 with increased range and enhanced survivability.

Air Force

ATARS	Provides near real-time reconnaissance capability to the tactical commander for timely response to the threat.
ATF	Next generation air superiority fighter. Follow-on to the F-15C.
Short Range Attack Missile (SRAM) II	An improved nuclear air-to-surface missile capable of penetrating advance defensive threats. The program was terminated by DoD in September 1991.

APPENDIX A: PROGRAM DESCRIPTIONS, MILESTONE DATES, AND COST
(continued)

PROGRAM	MILITARY DEPARTMENTS	MILESTONE	DATE	RDT&E COST[1] (millions)	PROCUREMENT COST (millions)
RAH-66	ARMY	I	JUNE 1988	$4,194	$30,859
ASM-LOSAT	ARMY	I	AUG. 1986	812	8,646
LONGBOW[2]	ARMY	II	DEC. 1990	1,449	3,912
FDS	NAVY	II	SEP. 1989	1,528	3,825
AIWS[3]	NAVY	I	JUNE 1989	344	1,632
F/A-18 E/F[2]	NAVY	II	MAR. 1992	6,571	49,024
ATARS	AIR FORCE	II	MAR. 1987	287	521
ATF	AIR FORCE	II	JULY 1991	19,542	76,556
SRAM II[2]	AIR FORCE	II	AUG. 1987	1,267	968

[1] The President's FY 1992/1993 Budget, as amended by a January 29, 1992, memorandum of the Comptroller of DoD included significant Research, Development, Test, and Evaluation (RDT&E) and procurement cost reductions for the RAH-66, ASM-LOSAT, and FDS programs, (RAH-66 = Reconnaissance Attack Helicopter - 66). The proposed reductions are not included in the above chart because they were not approved.

[2] We obtained and evaluated limited NDI information on these three programs (SRAM II = Short Range Attack Missile II).

[3] We did not audit the contractor's NDI research for the system because the EMD contractor had not been selected.

APPENDIX B: PRIOR AUDITS AND OTHER REVIEWS

The GAO issued Report No. GAO/NSIAD-89-51 (OSD Case No. 7923), "DoD Efforts Relating to Nondevelopmental Items," in February 1989. The GAO evaluated DoD's actions to carry out the NDI statutory requirements, as required by Public Law 99-661. The GAO also reviewed industry-claimed impediments to DoD's procurement of NDI.

The GAO concluded that, while DoD had taken some actions to emphasize procurement of NDI, more is needed to ensure NDI procurements to the maximum extent practicable. The OSD personnel had not, in GAO's view, focused sufficient effort in providing guidance on NDI. The GAO also concluded that DoD did not have data to show how much or what kind of NDI it procures or whether such procurements have increased. Finally, GAO found a need for more NDI-related training and a need to examine acquisition regulations to ensure that cost or pricing data exemptions are not compromised by NDI sales to the Government. The GAO was unable to substantiate industry-claimed impediments to DoD's procurement of NDI.

The GAO recommended that DoD expedite issuance of internal guidance on NDI procurement, such as DoD's draft NDI Manual, collect data to measure and report on the nature and trends of NDI, ensure that sufficient training is provided to acquisition personnel, and determine if a regulatory change is needed for exemptions from cost or pricing data requirements based on established catalog or market prices. The DoD concurred with GAO's recommendations.

o Concerning the need for internal guidance, DoD issued DoD Instruction 5000.2, part 6, section L. Section L does not, in our opinion, provide adequate guidance to MDAP managers. Section L also authorizes publication of an NDI manual. Although prepared, the NDI manual has not been published and is currently being revised by the OSD. The lack of adequate NDI guidance is discussed further in Part II.

o Concerning data collecting, OSD contracted for a system to measure and report on NDI acquisitions; however, the effort was not completed at the conclusion of our field work.

o The OSD also initiated corrective actions on the GAO recommendations on training and the need for a regulatory change. Specifically, OSD developed a course on NDI acquisition that started in February 1991. For the regulatory change, DoD proposed FAR changes to preserve the exemptions from submission of certified cost or pricing data for items based on a catalog or market price that might otherwise be lost by commercial NDI sales to the Government.

The Army Audit Agency issued Report NE 91-204, "Acquisition of Nondevelopmental Items," June 17, 1991. Report NE 91-204 recommended that the Army perform complete market investigations in support of NDI acquisition strategies and reemphasize the role of the nondevelopmental or streamlining advocate in monitoring NDI market investigations, participating in NDI decision reviews, and coordinating with program managers and continuously monitoring the progress of NDI projects. The Assistant Secretary of the Army agreed with the first recommendation and stated that the Army was revising its acquisition regulations to increase emphasis on performing complete market investigations. AMC agreed with the intent of the second recommendation but stated that DoD canceled its directive requiring a streamlining advocate. Report NE 91-204 included three additional recommendations on acquisition of NDI, four on logistics support, and two on the NDI advocate program. The recommendations are not discussed in our report because the work supporting the recommendations was outside the scope of our audit.

The Office of the Inspector General, DoD, issued Report No. 92-049, "Foreign Weapons Evaluation in the DoD," February 19, 1992, and two Quick-Reaction Reports: Report No. 91-092, "Sight Improvement Program for the Tube-Launched, Optically Tracked, Wire-Guided Missile," June 10, 1991, and Report No. 91-046, "Full-Scale Development of Enhanced Modular Signal Processor," February 13, 1991.

o In Report No. 92-049, the Inspector General reported that the Military Departments were not considering foreign NDI to the maximum extent practical. The Inspector General recommended that Service Acquisition Executives designate an office to review acquisition plans for consideration of foreign NDI and purchase items that meet Military Department requirements. The DoD concurred with the recommendations.

o In Report No. 91-092, the Inspector General recommended that the Army suspend action on proposals received for the Sight Improvement Program until it evaluates and tests specific foreign items identified by the program office. The Army nonconcurred but subsequently canceled plans for the Sight Improvement Program.

o In Report No. 91-046, the Inspector General recommended that the Navy not award pending contracts on the Enhanced Modular Signal Processor until alternative signal processors were evaluated. The Navy agreed with the recommended action.

The Defense Systems Management College and AMC report, "Nondevelopmental Item Acquisition and Its Use Within the United States Army," December 1990, evaluated current Army NDI acquisition programs for key lessons learned and additional guidance needed. The report concluded that although Army NDI guidance was adequate, senior-leader advocacy for NDI was needed. The report recommended that the Secretary of the Army publish a policy memorandum expressing to the requirements and acquisition communities his commitment to appropriate NDI use. The Army Materiel Command subsequently told us that the Army does not intend to issue a NDI policy memorandum.

The JLC ad hoc group on NDI, established in March 1988 to develop recommendations for effective implementation of the NDI acquisition initiative and to recommend mechanisms to share NDI market information across service lines, found few documented reports of NDI market surveys and investigations and no institutionalized method to exchange NDI data. The group concluded that most program, project, and item managers were unaware of existing NDI systems in the private sector and within DoD. The group noted that DoD was preparing an NDI directive and an NDI manual. The group recommended to the USD(A) in December 1988 that they document and disseminate DoD data bases to program managers for use in NDI surveys and investigations. The group also recommended use of an existing DoD structure to collect and exchange NDI acquisition information. The recommendations were not implemented and are further discussed in Finding C.

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APPENDIX C: PROGRAM OFFICE NDI RESEARCH

PROGRAM OFFICE	MILITARY DEPARTMENTS	NDI RESEARCH		
		SYSTEM	SUBSYSTEM/COMPONENT	PART
RAH-66	ARMY	Y	N[1]	Y
LONGBOW	ARMY	Y	N	Y
ASM-LOSAT	ARMY	Y	Y[2]	Y
FDS	NAVY	Y	Y[3]	Y
AIWS	NAVY	Y	N[4]	Y
F/A-18 E/F	NAVY	N[5]	N	N/A
ATARS	AIR FORCE	N[6]	N[7]	Y
ATF	AIR FORCE	Y	Y[8]	Y
SRAM II[9]	AIR FORCE	Y	N	Y

[1] The program office instructed the development contractor to study foreign technologies. The contractor has an agreement with Messerschmitt Boelkow Blohm GmbH (MBB) to assist in the design of a major subsystem. While not an NDI effort, the agreement should result in less development cost because of MBB's experience in designing a similar subsystem.

[2] The program office solicited prospective development contractors to study missile technology under development by the United States and foreign firms. In addition, the system concept paper discussed three alternatives for the missile subsystem and four alternatives for the chassis. No final decisions have been made on use of NDI subsystems.

[3] The Navy will use standard computer hardware and software to operate the system (see Appendix E, footnote 5).

[4] The program office evaluated technologies at the subsystem level. However, the technologies evaluated were not ready for production.

[5] The F/A-18 E/F, which is an upgrade to an existing system, will bypass Milestones 0 and I. The program is scheduled for a Milestone IV/II on March 1992. The program office told us that a cost and operational effectiveness analysis was not required. The matter is addressed in Office of the Inspector General, DoD, Audit Report No. 92-097, "F/A-18 E/F Program as a Part of the Audit of the Effectiveness of the Defense Acquisition Board Review Process--FY 1992," June 5, 1992.

[6] There was no cost and operational effectiveness analysis performed; however, program officials told us comparisons were made to existing and alternative systems.

[7] Although an initial NDI research was not performed, the program office identified one potential subsystem NDI solution because of contractor development difficulties. The program office tasked the development contractor to perform further research of the subsystem (see Appendix F, footnote 4).

[8] The program office tasked the contractor to perform trade studies on specific subsystems. The studies evaluated existing hardware; however, no final decisions were made (see Appendix F, footnote 8). In addition, the program office performed NDI research on engines, engine nozzles, and avionic connectors.

[9] The President terminated the SRAM II program on September 28, 1991, as part of his nuclear weapon reduction program.

APPENDIX D: SD-2 SAMPLE NDI SOLICITATION CLAUSE

The SD-2 provides a sample solicitation clause for obtaining NDI alternatives as follows.

> Use of NDI is the preferred method of satisfying operational requirements of the Department of Defense where such use does not significantly degrade the operational or performance requirements.
>
> Offerors are encouraged to propose NDI alternatives to research and development or military specification production hardware or software requirements of this solicitation at all levels of the work breakdown structure (e.g., end item, subsystem, component, piece part). All proposed NDI alternatives shall be clearly identified in the proposal. The intent of the NDI alternative is to provide the Department of Defense with effective and economical solutions to its essential operational requirements. Less than full compliance with all performance, technical, or operational objectives does not preclude the use of NDI, and offerors should propose such NDI in order for the Department of Defense to consider technical and performance tradeoffs. However, NDI alternatives that significantly degrade the performance characteristics of the contract product(s) will not be considered. Offerors are requested to present in the proposal the cost-benefit analysis that supports the intelligent employment of NDI alternatives.

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APPENDIX E: PROGRAM OFFICE NDI PLANNING AND CONTRACTING

		NDI			
PROGRAM OFFICE	MILITARY DEPARTMENTS	ACQUISITION PLANNING	SOLICITATION	SOURCE SELECTION CONSIDERATION	CONTRACT CLAUSE
RAH-66	ARMY	N	N[1]	N	N
LONGBOW	ARMY	N/A	N[2]	N	N
ASM-LOSAT	ARMY	Y[3]	Y[4]	N/A	Y
FDS	NAVY	Y[5]	Y[5]	N/A	Y[5]
AIWS	NAVY	Y[6]	Y[6]	N	Y[7]
F/A-18 E/F[8]	NAVY	N/A	--	-	--
ATARS	AIR FORCE	N[9]	N[10]	N	N[10]
ATF	AIR FORCE	N	Y[11]	N	Y[11]
SRAM II	AIR FORCE	N/A	N	N	N

[1] The program office instructed the contractors to study foreign technologies. The contractor had an agreement with MBB to assist in the design of a major subsystem. While not a NDI effort, the agreement should result in less development.

[2] The solicitation did not require NDI at the subsystem and component levels but required that the contractor use off-the-shelf qualified parts.

[3] The acquisition plan indicated possible NDI alternatives were researched; however, NDI alternatives were not encouraged as the preferred or primary method of satisfying operational requirements.

[4] The EMD solicitation required that the contractor evaluate existing missile systems, foreign and U.S., as possible alternatives to new development. The solicitation also required that the contractor evaluate specific NDI alternatives at the component level. The solicitation also required use of standard computer hardware and software. The EMD contract had not been awarded at the time of our audit field work.

[5] The acquisition plan, solicitation, and contract clause addressed NDI for the land portion of the program. The audit focused on the underwater segment, because of development costs, for which NDI was not addressed.

[6] The acquisition plan encouraged competitors to identify potential NDI solutions, including those not meeting all performance requirements or technical specifications. In those cases where NDI may not meet requirements, offerors were to provide data to permit the Navy to make cost/schedule tradeoffs.

[7] While the demonstration and validation solicitation included a NDI provision, it did not fully execute the NDI acquisition plan. The solicitation encouraged use of off-the-shelf items and technology but did not encourage NDI solutions which did not meet performance requirements. However, the EMD solicitation executed the acquisition plan with regards to the NDI provision; the EMD contract had not been awarded at the time of the audit.

[8] The program office was formalizing the solicitation.

[9] Even though the acquisition plan did not generally cover NDI, it stated that an existing AN/AAD-5 Infrared Line Scanner would be modified for an ATARS system to be used on one platform.

[10] The solicitation encouraged but did not require use of existing or off-the-shelf technology but did not cover actual hardware or other aspects of NDI.

[11] The solicitation and contract included a limited NDI clause. The contract clause asked the prime contractor to encourage subcontractors to submit alternate proposals using off-the-shelf hardware to meet contractual requirements instead of new development. However, the prime contractor did not insert the clause in one subcontract issued to date. We notified the program office concerning the prime contractor's implementation of the NDI clause.

APPENDIX F: DEFENSE CONTRACTORS' NDI POLICIES, PROCEDURES, AND PRACTICES

	NDI			
PROGRAM	POLICIES	RESEARCH	SOLUTIONS FROM RESEARCH	SUBCONTRACT CLAUSE
RAH-66	N	N[1]	N[2]	N
ASM-LOSAT	N	N[3]	N[3]	N
FDS	N	N	N	N
ATARS	N	Y[4]	N[4]	N[5]
ATF	Y[6]	N[7]	N[8]	N[9]

[1] Contractors' design process included an evaluation of engineering alternatives. Corporate officials advised us that, although not a formal NDI research process, the alternatives considered may result in selection of NDI. Although we did not perform an in-depth audit of the process, our review of one such alternative provided by the contractor indicated selection of an NDI component instead of new development.

[2] The proposal included potential technological sharing arrangements which, although mostly developmental, could result in some NDI solutions. However, the proposed efforts were done in response to the solicitation (see footnote 1).

[3] Company officials told us that various trade studies were in process and that these studies will evaluate engineering and hardware alternatives, but complete analyses in decisions had not been made.

[4] The current prime contractor bought the contract from the original contractor during EMD. We did not audit the original contractor. The current prime contractor performed two NDI surveys and investigations due to development and production problems. One of the two contractor NDI efforts was directed by the program office.

[5] Officials of the prime contractor stated that they use the same NDI clause with their subcontractors as the prime has with the Government. We reviewed one subcontractor clause and found this to be the case. However, the clause is not a NDI clause because it covers only off-the-shelf technology and not hardware or other aspects of NDI (see Appendix E, footnote 10).

[6] Contractor policy required use of off-the-shelf items to the fullest extent practical, but no procedures for implementing the policy were established.

[7] Even though formal NDI research was not done, the contractor contended that, in designing a major system, it performs many functions that may identify NDI solutions, such as requesting product information from its suppliers, actively participating with technical organizations, and receiving unsolicited product information from prospective vendors. However, the contractor stated that it was too early in the ATF design process to provide concrete NDI examples.

[8] The contractor performed selected trade studies that may have NDI applicability; however, no selections have been made. For example, the contractor performed a trade study on ejection seats as directed by the program office (Appendix C, footnote 8). A modified existing ejection seat was tested but was not acceptable. Further development will take place on the existing ejection seat.

[9] The contract clause asked the prime contractor to encourage subcontractors to submit alternate proposals using off-the-shelf hardware to meet contractual requirements instead of new development. However, the prime contractor did not insert the clause in the one subcontract issued to date.

APPENDIX G: PROGRAM OFFICE AWARENESS AND USE OF NDI DATA BASES AND NDI STANDARD DOCUMENTS

PROGRAM OFFICE	MILITARY DEPARTMENTS	DATA BASE	SD-2, SD-5
RAH-66	ARMY	N	N[1]
LONGBOW	ARMY	N	N
ASM-LOSAT	ARMY	N	N[2]
FDS	NAVY	N	N
AIWS	NAVY	N	N
F/A-18 E/F	NAVY	N	N
ATARS	AIR FORCE	N	N
ATF	AIR FORCE	N	N[2]
SRAM II	AIR FORCE	N	N

[1] The program office was aware of the SD-2 and the SD-5; however, they were not used during the acquisition process.

[2] Two contractors were requested by an independent trade association to comment on the SD-2. The contractors had not formally commented at the time of our audit but advised us that the SD-2 was informative and contained useful information on NDI.

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THE DEPUTY SECRETARY OF DEFENSE
WASHINGTON, D C 20301-1000

April 24, 1992

MEMORANDUM FOR: SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
COMPTROLLER
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR OF OPERATIONAL TEST AND EVALUATION
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR OF ADMINISTRATION AND MANAGEMENT
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Encouraging Use of Commercial and Other Nondevelopmental Items

It is the policy of the Department of Defense (DOD) to use commercial and other nondevelopmental items to the maximum extent practicable in procurement of supplies for the Department of Defense. The policy is designed to promote efficiency in the use of taxpayer resources to procure supplies and provide timely and effective support for the armed forces. To assist in implementing this policy, this is to direct as follows:

1. The Secretaries of the Military Departments, the Under Secretary of Defense for Acquisition, and the heads of other DOD components with procurement responsibilities shall ensure that, to the maximum extent practicable:

   (a) DOD requirements with respect to a procurement of supplies are stated in terms of functions to be performed, performance required, or essential physical characteristics;

   (b) such requirements are defined so that nondevelopmental items may be procured to fill such requirements;

   (c) such requirements are fulfilled through the procurement of nondevelopmental items; and

   (d) prior to developing new specifications, the DOD conducts market research to determine whether nondevelopmental items are available or could be modified to meet agency needs.

2. The Secretaries of the Military Departments, the Director of the Defense Logistics Agency, and the heads of other appropriate DOD components shall ensure that the advocates for competition in the Department of Defense designated under Section 20 of the Office of Federal Procurement Policy Act (41 U.S.C 418), Section 2318 of Title 10 of the United States Code, or DOD Instruction 5000.2 (Part 5, Sec. A, para. 3.c.(3)) shall, in addition to the authorities and duties otherwise assigned to them:

   (a) be responsible for challenging barriers to and promoting use of commercial and other nondevelopmental items to meet procurement needs;

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(b) review procurement activities for matters relating to policies on use of commercial and other nondevelopmental items to meet procurement needs;

(c) identify and report to the appropriate senior procurement executive opportunities and actions taken to achieve use of commercial and other nondevelopmental items to meet procurement needs;

(d) recommend on a fiscal year basis to the appropriate senior procurement executive goals and plans for increasing competition; and

(e) recommend to the appropriate senior procurement executive such other policies and actions as may be appropriate to achieve use of commercial and other nondevelopmental items to meet procurement needs.

3. If the Secretary of a Military Department, the Director of the Defense Logistics Agency, or head of another DOD component determines that the authorities and duties required to be assigned to the advocate for competition of the component by paragraph 2(a) through (e) can be performed more effectively by another employee within that component, the Secretary, Director, or other component head may, after coordination with the Under Secretary of Defense for Acquisition, submit for my approval a request to assign those authorities and duties to that employee in lieu of the advocate for competition.

4. As used in this memorandum:

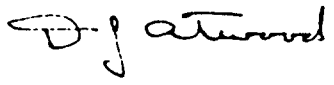
   (a) "nondevelopmental item" has the meaning given that term by Section 2325(d) of Title 10; and

   (b) "appropriate senior procurement executive" means:

      (1) for a Military Department, the Service Acquisition Executive; and

      (2) for all DOD components other than the Military Departments, the Under Secretary of Defense for Acquisition.

5. The Under Secretary of Defense for Acquisition may issue instructions as necessary to implement this memorandum. The Under Secretary shall submit a report to the Deputy Secretary of Defense annually for each of the next five years on progress made in increasing the use of commercial and other nondevelopmental items to meet DOD procurement needs.



APPENDIX I: SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT

Recommendation Reference	Description of Benefit	Type of Benefit
A.1.	Internal Control. Will provide oversight of program office NDI research efforts.	Nonmonetary.
A.2.a.	Internal Control. Will ensure continual NDI research during development and identification of potential NDI candidates.	Not Quantifiable.
A.2.b.	Internal Control. Will ensure NDI solutions at all levels of the work breakdown structure.	Not Quantifiable.
A.2.c.	Internal Control. Will result in thorough NDI surveys and well-planned investigations.	Nonmonetary.
A.2.d.	Internal Control. Will ensure that NDI candidates identified by program offices are considered by the contractor.	Not Quantifiable.
A.2.e.	Internal Control. Will provide a record of NDI research performed.	Nonmonetary.
A.3. A.4.	Internal Control. Will establish NDI research criteria.	Nonmonetary.

APPENDIX I: SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT (continued)

Recommendation Reference	Description of Benefit	Type of Benefit
B.1.a.	Internal Control. Will provide needed guidance to acquisition officials on motivating and evaluating contractor participation in the NDI research effort.	Not Quantifiable.
B.1.b.	Internal Control. Will ensure agreement as to contractors' role in NDI and implementation of that role.	Not Quantifiable.
B.1.c.	Internal Control. Will ensure that pending guidance adequately addresses NDI research.	Nonmonetary.
B.2.a. B.2.b.	Internal Control. Will ensure that NDI guidance encourages contractor participation in NDI research.	Nonmonetary.
C.1. C.2.	Internal Control. Will increase inventory of NDI candidates.	Nonmonetary.
C.3.	Internal Control. Will increase availability of NDI items.	Nonmonetary

APPENDIX J: ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Office of the Under Secretary of Defense for Acquisition, Washington, DC

Department of the Army

Assistant Secretary of the Army (Research, Development and Acquisition), Washington, DC
ASM-LOSAT Program Office, Redstone Arsenal, Huntsville, AL
Longbow Program Office, AVSCOM, St. Louis, MO
RAH-66 Program Office, AVSCOM, St. Louis, MO
Army Audit Agency, Washington, DC

Department of the Navy

Assistant Secretary of the Navy (Research, Development and Acquisition), Washington, DC
AIWS Program Office, Arlington, VA
F/A-18 Program Office, Arlington, VA
FDS Program Office, Arlington, VA
Naval Air Systems Command, Arlington, VA
Space and Warfare System Command, Arlington, VA

Department of the Air Force

Office of the Assistant Secretary of the Air Force (Acquisition), Washington, DC
Air Force Systems Command, Andrews AFB, MD
Aeronautical Systems Division, Wright-Patterson AFB, Dayton, OH
ATARS Program Office, Wright-Patterson AFB, Dayton, OH
F-22 Program Office, Wright-Patterson AFB, Dayton, OH
SRAM II/T Program Office, Wright-Patterson AFB, Dayton, OH

Other Defense Activities

Defense Contract Audit Agency, Resident Branch Office, Greensboro, NC
Defense Plant Representative Office, Orlando, FL
Defense Plant Representative Office, Marietta, GA
Defense Plant Representative Office, Burlington, NC
Defense Plant Representative Office, Philadelphia, PA
Defense Plant Representative Office, Dallas, TX

APPENDIX J: ACTIVITIES VISITED OR CONTACTED (continued)

Non-Government Activities

American Telephone and Telegraph, Greensboro, NC
Boeing Aircraft, Philadelphia, PA
Lockheed Aircraft Company, Marietta, GA
Litton Temco Voight, Dallas, TX
Martin Marietta, Orlando, FL

APPENDIX K: REPORT DISTRIBUTION

Office of the Secretary of Defense

Deputy Secretary of Defense
Under Secretary of Defense for Acquisition
Director, Defense Research and Engineering
Assistant Secretary of Defense (Production and Logistics)
Assistant Secretary of Defense (Program Analysis and Evaluation)
Assistant Secretary of Defense (Public Affairs)
Director of Defense Procurement
Comptroller of the Department of Defense
Director, Defense Acquisition Regulations Council

Department of the Army

Secretary of the Army
Assistant Secretary of the Army (Financial Management)
Assistant Secretary of the Army (Research, Development and Acquisition)
Inspector General
Auditor General, U.S. Army Audit Agency

Department of the Navy

Secretary of the Navy
Assistant Secretary of the Navy (Financial Management)
Assistant Secretary of the Navy (Research, Development and Acquisition)
Comptroller of the Navy
Auditor General, Naval Audit Service

Department of the Air Force

Secretary of the Air Force
Assistant Secretary of the Air Force (Acquisition)
Assistant Secretary of the Air Force (Financial Management and Comptroller)
Air Force Audit Agency

Defense Agencies

Director, Defense Contract Audit Agency
Defense Intelligence Agency
Director, Defense Logistics Studies Information Exchange
Director, National Security Agency

APPENDIX K: REPORT DISTRIBUTION (continued)

Non-DoD Federal Organizations

Office of Management and Budget
U.S. General Accounting Office, NSIAD Technical Information Center

Congressional Committees:

Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
Ranking Minority Member, Senate Committee on Armed Services
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
Ranking Minority Member, House Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security, Committee on Government Operations

PART IV - MANAGEMENT COMMENTS

Director of Defense Procurement Comments

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Director of Defense Procurement Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE
WASHINGTON, DC 20301

APR 2 8 1992

ACQUISITION

DP/AR

MEMORANDUM FOR DOD INSPECTOR GENERAL
ATTENTION: DEPUTY DIRECTOR, ACQUISITION MANAGEMENT

THROUGH: CHIEF, CONGRESSIONAL ACTIONS AND INTERNAL REPORTS 29 APR 92

SUBJECT: Audit Report on the Effectiveness of DoD Use of Non-Developmental Items in Major Defense Acquisition Programs (Project No. 1AE-0047)

Comments on the subject report are attached. Although we do not concur with the recommendations at Part II, Findings B.2.(a) and (b), your assessment that no monetary benefit is associated with those recommendations appears to be reasonable.

The attachment also contains comments on the draft report's discussion of regulatory requirements. In general, the report does not appear to have considered the fact that the Defense Federal Acquisition Regulation Supplement must be read in conjunction with the Federal Acquisition Regulation or that those regulatory documents are primarily intended for procurement personnel and do not contain all requisite guidance for other personnel involved in the acquisition process.

Eleanor Spector

Eleanor R. Spector
Director, Defense Procurement

Attachment

Final Report Reference

Attachment

Comments on Draft DoDIG Project No. 1AE-0047

AUDIT REPORT ON THE EFFECTIVENESS OF DOD USE OF NONDEVELOPMENTAL ITEMS IN MAJOR DEFENSE ACQUISITION PROGRAMS

1. Finding B, Criteria

16 and 17

(a) The discussion of regulatory requirements on pages 32 through 34 should be revised. In general, the discussion seems to treat the Federal Acquistion Regulation (FAR) and the Defense Federal Acquistion Regulation Supplement (DFARS) as independent works and does not recognize the fact that the DFARS is only intended to supplement the FAR. The regulations must be read together. As an example, page 33 of the draft faults the DFARS for not specifying contractor participation in finding NDI solutions. That guidance is found at FAR Part 7 and, consistent with our regulatory simplification efforts, should not be repeated in the DFARS. FAR 7.105(a)(8) contains specific acquistion streamlining guidance including "...industry involvement during design and development in recommending the most appropriate application and tailoring of contract requirements. FAR 7.105(b)(6) references FAR Part 10. For DoD, that reference includes DFARS Part 210. As mentioned on page 33 of the draft report, DFARS Part 210 contains DoD policy regarding the acquisition of NDI. DFARS Part 210 also subjects all DoD systems acquisition programs to acquisition streamlining requirements. Therefore, when DFARS Parts 207 and 210 are read in conjunction with FAR Part 7, a link to industry participation is established.

16

17, line 25

(b) On page 34, the sentence beginning on line 6 and ending on line 9, should be deleted or revised. The statement is factually correct but creates the erroneous impression that DFARS Part 211 should have provided additional guidance on nondevelopmental items. DFARS Part 211 implements section 824(b) of the FY90/91 National Defense Authorization Act (P.L. 101-189). Although Section 824 is titled "Acquisition of Commercial and Nondevelopmental Items", section 824(b) does not address nondevelopmental items. The subsection requires the Secretary of Defense to publish new regulations for the acquistion of commercial items.

2. Finding B, Recommendation 2.(a)

"Revise the Defense Federal Acquisition Regulation Supplement, part 210, to require that contracting officers solicit contractor nondevelopmental item plans; require submission of the plans as a contract deliverable; and direct administrative contracting officers, as necessary, to monitor nondevelopmental plans for execution."

Do not concur. This recommendation could result in increased costs to the Government.

(a) DoDI 5000.2 correctly emphasizes the need to examine NDI potential before development begins. The DoDIG recommendation to require submission of nondevelopmental item plans as a contract deliverable is impracticable because data delivery occurs too late in the acquisition process. By the time the plan is received, development effort for other systems, subsystems, or components may have progressed to the point where a configuration change would require additional design and systems integration effort and could affect logistic support costs. Similarly, cost increases and schedule delays are likely to occur if a contractor attempted to "work around" or delay design and development of portions of a weapon system until the NDI plans had been developed and delivered to the Government.

(b) The recommendation to require ACOs to monitor nondevelopmental item plans imposes a redundant requirement. DoD has stringent and exhaustive configuration management controls that it imposes upon itself and its contractors. Although a program management responsibility, program managers use contract administration offices in the configuration management process whenever it is practicable to do so.

3. Finding B, Recommendation 2.(b)

"Revise the Defense Federal Acquisition Regulation Supplement, part 207, to require that program offices include in acquisition plans specific efforts to encourage contractor participation in the nondevelopmental items research effort, specific requirements concerning contractor nondevelopmental item plans, and a plan of action for monitoring implementation of negotiated nondevelopmental item plans."

Do not concur.

(a) FAR Part 7 contains requirements for contractor participation in the acquisition streamlining process. DFARS Part 210 subjects all DoD systems acquistion programs to the streamlining requirements. Also see comment 1., above.

(b) Revising DFARS Part 207 to require a plan of action for monitoring nondevelopmental item plans would create a redundant requirement. Monitoring is accomplished through the configuration management process. Also see comment 2., above.

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