Audit Report

OFFICE OF THE INSPECTOR GENERAL

DOD INFORMATION TECHNOLOGY SOLICITATIONS AND CONTRACT COMPLIANCE FOR YEAR 2000 REQUIREMENTS

Report No. 98-065 February 6, 1998

Department of Defense

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Acronyms

FAR	Federal Acquisition Regulation
GAO	General Accounting Office
GSA	General Services Administration
Y2K	Year 2000

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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ARLINGTON, VIRGINIA 22202-2884

February 6, 1998

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND TECHNOLOGY
ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT AND COMPTROLLER)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)
AUDITOR GENERAL, DEPARTMENT OF THE ARMY
DIRECTOR, DEFENSE INTELLIGENCE AGENCY

SUBJECT: Audit Report on DoD Information Technology Solicitations and Contract Compliance for Year 2000 Requirements (Report No. 98-065)

We are providing this audit report for information and use. Because management has promptly taken action to address the problems identified by the audit, this report contains no additional recommendations.

Management comments on a draft of the report were considered in preparing this report. Additional comments are not required.

We appreciate the courtesies extended to the audit staff. If you have questions on the audit, please contact Mr. Robert M. Murrell, Audit Program Director, at (703) 604-9210 (DSN 664-9210) email <rmurrell@dodig.osd.mil> or Mr. Kent E. Shaw, Audit Project Manager, at (703) 604-9228 (DSN 664-9228) email <kshaw@dodig.osd.mil>. See Appendix F for the report distribution. The audit team members are listed inside the back cover.

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Report No. 98-065 **February 6, 1998**
(Project No. 7CA-0052)

DoD Information Technology Solicitations and Contract Compliance for Year 2000 Requirements

Executive Summary

Introduction. This is one in a series of reports being issued by the Inspector General, DoD in informal partnership with the Chief Information Officer, DoD to monitor DoD efforts to address the Year 2000 computing problem. For a listing of audit projects addressing this issue, see the Year 2000 webpage on IGnet[1] <http://www.ignet.gov>.

DoD spends about $10 billion each year on computer hardware and software and has identified 3,143 mission-critical systems, as of November 15, 1997, that may be affected by the Year 2000 problem. The problem arises because most hardware operating systems and application software packages produced over the past 20 years were designed to use only two digits to specify the year, rather than four digits. The use of two digits rather than four digits became industry practice to reduce memory and disk space requirements during a time when both memory and disk space were expensive resources. However, once the year 2000 begins computers using the two digits design will be unable to correctly interpret the year. The correction of that design flaw will pose a unique challenge to both industry and Government and will require changes to existing and new computer hardware and software.

The DoD initiated actions to address the new procurement aspect of the Year 2000 issue in mid-1996 in an Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) memorandum, "Year 2000 Computing Problem with Personal Computers and Workstations," May 8, 1996. Federal Acquisition Regulation section 39.106, "Year 2000 Compliance," subsequently provided mandatory guidance to assist agencies in acquiring information technology products and systems that are Year 2000 compliant. On January 9, 1997, the Office of Management and Budget issued a memorandum to each agency Chief Information Officer and Senior Procurement Executive, informing them of the procurement guidance that was developed for inclusion in the Federal Acquisition Regulation.

Audit Objectives. The audit objective was to determine whether DoD information technology solicitations and contracts comply with Federal Acquisition Regulation

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[1] IGnet is an internet site operated by the Inspector General Community. The Inspector General Community consists of the Offices of Inspector General in more than 60 Federal agencies, as well as their peers in state and local government, education, nonprofit organizations, and the private sector.

section 39.106, "Year 2000 Compliance," and to determine whether selected information technology acquisitions are, in fact, Year 2000-compliant.

Audit Results. Twenty of the reviewed 35 indefinite-delivery/indefinite-quantity and indefinite-delivery-requirement information technology contracts (for commercial off-the-shelf products) did not have the required Federal Acquisition Regulation Year 2000 compliance language, and none of the 35 contracts required testing of purchased products. As a result, DoD has no assurance that information technology products purchased were Year 2000 compliant. Further, the purchase of noncompliant products may seriously hamper the ability of DoD to perform its administrative and warfighting mission requirements. Additionally, because 33 of the 35 contracts are available for use by other Federal agencies, nonconforming contract items could negatively affect the ability of the Federal government to survive the Year 2000 crisis. See Part I for a discussion of the finding.

Corrective Actions Taken by Management. We briefed the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence); the Director, Defense Procurement; and representatives from the Services, Defense Information Systems Agency, and the Defense Intelligence Agency on the results of our audit. Subsequently, the Acting Assistant Secretary and the Director, Defense Procurement began drafting new guidance for the Defense Components that would require Year 2000-compliant information technology and testing of items purchased from the information technology contracts. We have included final guidance resulting from these efforts (see Appendix F). Additionally, Army, Navy, and Air Force Contracting Officers completed the contract modifications to include the required Federal Acquisition Regulation Year 2000 language in 17 additional contracts and three other Air Force contracts are being reviewed (see Appendix E). Because the corrective actions taken or planned by management should correct the problems we identified, we are making no additional recommendations in this report.

Management Comments. A draft of this report was issued on January 15, 1998. The Under Secretary of Defense for Acquisition and Technology; the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence); the Services; and the Defense Intelligence Agency were invited to provide optional comments on the draft report. Comments were received from the Office of Chief Information Officer, Navy and the Deputy Assistant Secretary (Contracting) of the Office of the Assistant Secretary (Acquisition), Air Force. See Part I for a summary of management comments and Part III for the complete text of management comments.

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Part I - Audit Results

Audit Background

Procurement Guidance for Year 2000 Compliance

Federal Acquisition Regulation (FAR) section 39.002 defines "year 2000 compliant" information technology as equipment capable of accurately processing date and time data (calculating, comparing, sequencing, etc.) in both the twentieth and twenty first centuries as well as leap years.

DoD Guidance. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) issued a memorandum, "Year 2000 Computing Problem with Personal Computers and Workstations," May 8, 1996, that required immediate attention to the Year 2000 (Y2K) computing problem. The memorandum required agencies to:

- determine whether contractor products are Y2K compliant;
- issue stop work orders for purchase of new products on existing contracts if the new products fail to comply with Y2K requirements;
- request contracting offices to develop a plan to upgrade their products to be Y2K compliant;
- identify software and computer operations that will be disrupted by noncompliant hardware; and
- plan and budget for corrective actions.

FAR Requirement for Y2K Compliance. On January 2, 1997, interim FAR guidance, Federal Acquisition Circular 90-45, promulgated the requirement for agencies to ensure that all solicitations and contracts require information technology procurements to be or become Y2K compliant by December 31, 1999. The General Services Administration finalized this interim guidance in FAR section 39.106, "Year 2000 Compliance," on August 22, 1997.

Office of Management and Budget. On January 9, 1997, the Office of Management and Budget distributed a memorandum, "Year 2000 Federal Acquisition Guidance," requiring agency managers and computer professionals to follow the new FAR guidance in all agency information technology contracts.

DoD Year 2000 Management Plan, April 1997. The DoD Year 2000 Management Plan requires DoD to use Y2K compliance language in all new contracts and modifications as appropriate. It reiterates the need to issue stop work orders for new products purchased on existing contracts if the products fail to meet Y2K requirements. Additionally, the plan contains guidance for software, to include commercial-off-the-shelf products and appropriate checklists to use for determining Y2K compliance.

The Year 2000 Problem. DoD spends approximately $10 billion each year on computer hardware and software and has identified 3,143 mission critical systems, as of November 15, 1997, that may be affected by the Y2K problem. The problem arises because most hardware operating systems and application software packages produced over the past 20 years were designed to use only two digits rather than four digits to specify the year. However, once the year 2000 begins, computers using the two-digit design will be unable to correctly interpret the year. The correction of that design flaw will pose a unique challenge to both industry and Government, and will require changes to computer hardware and software.

The Impact of the Y2K Problem. DoD is using and purchasing an extensive inventory of hardware and software that may be affected by the Y2K problem. Desktop personal computers and client/server applications such as electronic mail, software, spreadsheets and database software that have a date function are all susceptible to failure in the year 2000. The full impact of failure to make those required changes before January 1, 2000, may not be known until the problems have already occurred. If the inability to accurately process date and time data is not remedied, everything from missile systems to payroll systems could be impacted. Further, ignoring the Y2K requirements in computer systems could result in great costs associated with damage control and legal liability.

Management Controls. The Secretary of Defense FY 1997 Management Control Assurance letter recognizes failure to proactively meet Y2K compliance requirements as a material control weakness. Therefore, we did not evaluate the management control program.

Audit Objectives

The primary audit objective was to determine whether DoD information technology solicitations and contracts comply with FAR section 39.106, "Year 2000 Compliance," and to determine whether selected information technology acquisitions are, in fact, Y2K compliant. See Appendix A for a discussion of the audit process. Appendix B summarizes prior coverage related to the audit objectives.

Implementing Year 2000 Compliance

Of the reviewed 35 indefinite-delivery/indefinite-quantity and indefinite-delivery-requirement information technology contracts (for commercial off-the-shelf products), 20 did not contain the required FAR Y2K compliance language and none of the 35 contracts required testing of purchased computer hardware and software. This lack of compliance occurred because DoD information technology program managers and contracting officers had not effectively implemented FAR requirements and DoD policy for Y2K contract compliance; and the Chief Information Officer guidance for testing of commercial off-the-shelf information technology products was not being followed. As a result, DoD has no assurance that information technology products offered or purchased were Y2K compliant. Further, the purchase of noncompliant products may seriously hamper the ability of DoD to perform its administrative and warfighting mission requirements. Additionally, because 33 of the 35 contracts are available for use by other Federal agencies, non-conforming contract items could negatively affect the ability of the Federal government to survive the Y2K crisis.

Contracts to Purchase Information Technology Products

The audit identified a significant number of contracts that did not contain Y2K compliance language. Also, DoD purchased commercial off-the-shelf information technology products without Y2K compliance testing.

Compliance Language. Of the 35 reviewed contracts, 20 did not have the required FAR Y2K compliance language (see Appendix D). DoD ordered approximately $195 million of information technology products (during the period between April and October 1997) against those 20 contracts that did not have the required FAR language.

We were told some of the contracts that did not have the required language were close to completion. Contracting officers cited several reasons for the delays in implementing the required language.

- Vendors wanted DoD to pay additional compensation to cover the costs of determining Y2K compliance in their products and to offset the increased assumption of liability if their products failed.

- Vendors that had informally agreed to the Y2K language in DoD contracts claimed they had not yet received assurance from all suppliers as to Y2K compliance in those suppliers' hardware and software products.

- DoD purchasers did not always specify that information technology hardware and software items had to be Y2K compliant or insist that future hardware and software products be Y2K compliant.

Our review of the contract files showed that some contracting officers had started to implement the required language shortly after the directive was issued by the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) in May 1996. Nevertheless, for the most part, FAR requirements and DoD policy for Y2K contract compliance had not been implemented effectively or in a timely manner by Defense Components.

Compliance Testing. Of the 35 reviewed contracts, none required testing of purchased products to ensure that the products offered were Y2K compliant. Testing would be a certain way to verify Y2K compliance, however, DoD requirements for testing were not being followed, and there is no central DoD organization that offers such testing.

A consulting firm that specializes in testing computers for Y2K compliance, Greenwich Mean Time, told us their tests showed as many as 47 percent of the computers tested in mid-1997 were not fully compliant. Those tests were based on the ability of the computer's basic input/output system to recognize and rollover the date to the correct year and correctly interpret the year 2000 as a leap year. Greenwich Mean Time representatives told us that before 1997, the failure rate was as high as 93 percent.

To fix noncompliant computers, agencies can update the basic input/output system of each computer with vendor-supplied software. Alternatively, the Air Force has developed computer software that may be used during startup of the computer after the start of the year 2000, to force the computer to accept the correct date[2].

Both the Army's Technology Integration Center and Greenwich Mean Time consultants told us that there was a higher risk of computer failure from non-compliant software than from noncompliant hardware. Greenwich Mean Time representatives tested 629 commercial off-the-shelf software packages that manipulate dates. The tests revealed that 295 of the 629 programs store dates differently than the way the dates were entered by the user, 113 of the programs did not recognize the year 2000 as a leap year, and 90 of the programs tested would not work after December 31, 1999. The date-related problems included abnormal program termination (known as general protection faults), refusal of the software to run, corruption of data, and inability of software to recognize vendor license information.

During the audit, we found that the Technology Integration Center had initiated testing of some products delivered under contracts DAHC94-94-D-0005, F19630-93-D-0001, and N68939-95-D-0018; but that no testing had been performed on products delivered from the other 32 contracts reviewed. Further, while each of the DoD testing and information organizations publicizes the results of their testing, those organizations were not reporting those test results to the General Services Administration. See Appendix C for details.

[2] The Air Force Y2K software is available for download from internet address <http://www.ssg.gunter.af.mil/Y2000>.

We believe that the lack of consistent testing of commercial off-the-shelf computer software and hardware was due to the lack of compliance with DoD guidance to accomplish that testing. DoD needs to emphasize its requirements for testing newly-acquired off-the-shelf information technology products for compliance with Y2K requirements.

Corrective Action Taken by Management. Following our audit results briefings to the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) and the Director, Defense Procurement, new guidance was drafted by those offices. The guidance, later signed by the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), requires DoD to purchase only Y2K-compliant equipment, as well as requiring testing of items purchased from the information technology contracts (see Appendix F). Additionally, the Military Departments with contracts lacking compliance language began action to get that language into the contracts. Since our review, the Army has modified its last contract to include that language, the Navy has modified the remainder of its contracts, and Air Force has modified six additional contracts. Three Air Force contracts still need to be modified. See Appendix E for further details. Because the corrective actions taken by management should correct the problems identified during the audit, we are making no additional recommendations in this report.

Effects of Noncompliance

Without the required Y2K contract language and without agency testing of the items being procured, DoD has no assurance that information technology products purchased were Y2K-compliant and there is no contractor obligation to fix the noncompliant items. Additionally, because 33 of the 35 contracts are available for use by other Federal agencies, nonconforming contract items can negatively affect the ability of the Federal government to survive the Y2K crisis. We were not able to fully assess the risk of receiving noncompliant information technology products.

Because hardware and software from the contracts reviewed may be integrated into mission-critical applications, the full risk of having non-Y2K-compliant information technology is unknown. However, we believe that the purchase of noncompliant products may seriously hamper the ability of DoD to perform its administrative and warfighting mission requirements. It is imperative that DoD take aggressive action to correct this problem while there is still time.

Management Comments and Audit Response

A draft of this report was issued on January 15, 1998. The Under Secretary of Defense for Acquisition and Technology; the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence); the Services; and the Defense Intelligence Agency were invited to provide optional comments on the draft report. Comments were received from the Office of Chief Information

Officer, Navy and the Deputy Assistant Secretary (Contracting) of the Office of the Assistant Secretary (Acquisition), Air Force. See Part III for the complete text of management comments.

Navy Comments. The Office of the Chief Information Officer, Navy provided documentation showing that all eleven of the contracts that we reviewed are now compliant with FAR section 39.106 and requested that we modify the report to reflect the subsequent contract modifications.

Audit Comments. The report's Executive Summary, Part I, and Part II (Appendix E, Corrective Actions Taken by Management) have been modified to reflect the status of contract compliance with Y2K requirements as of February 6, 1998.

Air Force Comments. The Deputy Assistant Secretary (Contracting), of the Office of the Assistant Secretary (Acquisition), commented that the frequent use of "required Federal Acquisition Regulation (FAR) Year 2000 compliance clauses" was incorrect since there are no Y2K compliance "clauses" in the FAR. FAR section 39.106, "Year 2000 compliance," only addresses the "requirement" to acquire Year 2000-compliant information technology. Y2K compliance is a "requirements" issue that is being addressed in several ways. Specifically, Year 2000 compliance requirements are being captured in statements of work and contract specifications. There is no requirement to include a compliance "clause" in solicitations and contracts for the acquisition of information technology. The Deputy Assistant Secretary (Contracting) recommended that the report be revised to discuss the need to address the "requirement" for Year 2000 compliance and not "required clauses."

Audit Comments. The Deputy Assistant Secretary (Contracting) is correct that neither DoD guidance nor the FAR provision contains a prescribed "clause" to be included in solicitations or contracts. Although the General Services Administration has proposed a recommended warranty clause for use by contracting officers, contracting officers are given broad discretion to tailor clauses that meet the requirements of the FAR rule. Additionally, delivery orders issued against indefinite delivery/indefinite quantity contracts could contain such provisions should the underlying contracts fail to have the Y2K requirement. To make our report clearer in this regard, we have changed the word "clause" to the word "language" throughout the report.

Part II - Additional Information

Appendix A. Audit Process

This is one in a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the Y2K computing challenge. For a listing of audit projects addressing this issue, see the Y2K webpage on IGnet <http://www.ignet.gov>

Scope

Audit Work Performed. We judgmentally selected to review 35 DoD information technology contracts for commercial off-the-shelf products (see Appendix D). The 35 reviewed contracts were comprised of 25 indefinite-delivery/indefinite-quantity contracts and 10 indefinite-delivery-requirement contracts with a total estimated value of $13.9 billion. The review included 7 contracts administered by the Army, 11 Navy contracts, 10 Air Force contracts, and 7 Defense Intelligence Agency contracts. The Air Force contracts included the Defense Messaging System contract that was administered by the Air Force on behalf of the Defense Information Systems Agency.

Contacts During the Audit. We visited or contacted individuals and organizations within the DoD, General Service Administration's Government Information Technology Executive Council and MITRE Corporation. Further details are available on request.

Methodology. We reviewed contract files, evaluated vendor representations, and talked to Y2K compliance offices established by the Services. We also reviewed information technology acquisitions for commercial off-the-shelf products made from the 35 contracts since April 1997.

Audit Type, Dates, and Standards. We performed this program audit from July 1997 to November 1997. The audit was made in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. We did not use statistical sampling procedures.

Appendix B. Summary of Prior Audits and Other Reviews

General Accounting Office

The General Accounting Office (GAO) has conducted several audits related to Y2K issues. The audits relevant to this report are summarized below.

GAO Report No. AIMD-98-35 (OSD Case No. 1456), "Defense Computers: Air Force Needs to Strengthen Year 2000 Oversight," January 16, 1998. This was a Congressionally requested review of the Air Force's Y2K program. The review focused on Air Force oversight of it's Y2K program and the appropriateness of the Air Force strategy and actions for ensuring that the problem will be successfully addressed. The Air Force has taken a number of positive actions toward fulfilling its Y2K oversight responsibilities. At the same time, the Air Force has not yet adequately addressed several critical issues that would ensure that it is well-positioned to deal with the later, and more difficult, phases of Y2K correction. GAO's review revealed that some Components are not adequately planning for the testing phase of their Y2K effort and developing of contingency plans. GAO also found that some Components are taking conflicting approaches toward determining the actual impact or the program status to their system interfaces. If Components and the Air Force do not promptly address and take consistent action on these issues, they may well negate any success they may have in making systems within their control Y2K compliant. While the Air Force has enlisted the help of the Air Force Audit Agency to help address some of these concerns, this work needs to be backed by comprehensive and continued Air Force oversight in order to ensure that it can address unforeseen problems and delays in the next, more difficult phase.

GAO Report No. AIMD-98-7R (OSD Case No. 1471), "Defense Computers: Technical Support Is Key to Naval Supply Year 2000 Success," October 21, 1997, states that Naval Supply Systems Command had not allocated sufficient resources to the Fleet Material Support Office Year 2000 Project Office to ensure that all system interfaces were identified and adequately monitored for progress. Also, Naval Supply Systems Command had not directed that risk assessments be performed or that contingency plans be prepared at the system and functional levels. As a result of the concerns raised, Naval Supply Systems Command and Fleet Material Support Office officials began addressing system interface issues by assigning full-time staff to identify date-related data elements in interface files and ensure that date formats are compatible. Those actions, together with Naval Supply Systems Command's plans for requiring system managers to perform risk assessments and develop contingency plans for critical systems, should help mitigate against the loss of operational capability at the start of the year 2000. As Naval Supply Systems Command progresses to the renovation, validation (testing), and implementation phases of the Year 2000

program; continued attention to these issues will be necessary to better ensure that the Year 2000 challenge is met. The Department of Defense concurred with a draft of this report.

General Accounting Office Report No. AIMD-97-149 (OSD Case No. 1446), "Defense Computers: Logistics Systems Support Center Needs to Confront Significant Year 2000 Issues," September 26, 1997. The report states that while Y2K improvement efforts have been initiated by Logistics Systems Support Center on its Commodity Command Standard System program, several key project management actions associated with the assessment phase have not been completed. As a result, Logistics Systems Support Center is not presently well positioned to move forward to the more difficult phases of renovation, validation, and implementation in the Y2K process phases that industry experts estimate could consume as much as three-fourths of Y2K project time and resources. The report recommended that Logistics Systems Support Center still needs to take a number of actions to increase its chances of success, including (1) managing competing workload priorities, (2) planning for testing, (3) clarifying and coordinating written system interface agreements, and (4) developing a contingency plan. To increase its chances of successfully managing its Y2K program, Logistics Systems Support Center will also need to institutionalize a repeatable software change process that can be used from project to project. Given the prominence of date processing in the Commodity Command Standard System and its central mission of sustaining the solider in the field, Logistics Systems Support Center cannot afford to delay any longer, and needs to demonstrate that it will perform, all the key actions associated with sound Y2K planning and management. The Director, Test, Systems Engineering and Evaluation, concurred with a draft of this report.

General Accounting Office Correspondence Report No. AIMD-97-120R (OSD Case No. 1399), "Defense Computers: Standard Systems Group Needs to Sustain Year 2000 Progress," August 19, 1997. The report states that Standard Systems Group must further emphasize management and oversight of system interfaces to ensure successful implementation of year 2000-compliant system throughout its user community. Also, a number of Standard Systems Group systems must use standard interface message formats to exchange data that are defined by external entities not under Standard Systems Group's control. Some of the message formats had not been finalized by the organizations responsible for their definition. Recently, Standard Systems Group's Year 2000 Project Office officials began addressing the interface issue. If effectively implemented by the project office, this effort should be a positive step toward preventing loss of operational capabilities between Standard Systems Group's internal and external system interface message formats at the year 2000. The Air Force Director, Communications and Information, concurred with a draft of this report.

GAO Report No. AIMD-97-112 (OSD Case No. 1395), "Defense Computers: Improvements to DoD Systems Inventory Needed for Year 2000 Effort," August 13, 1997, states that, while improvement efforts have been initiated, the Defense Integration Support Tools database will not be usable and reliable in time to have a beneficial impact on Y2K correction efforts. The Defense Integration Support Tool contains the DoD enterprise-

wide inventory of automated information systems. The report recommended investigation of all duplicate, inactive, and incomplete entries; expedited development and implementation of the purging methodology; and expansion of information contained in the database for individual systems, to include key program activity schedules that managers of interfacing systems need to ensure that system interfaces are maintained during the renovation phase. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) concurred with the recommendations and stated that DoD plans to take corrective action by performing statistical sampling of the Defense Integration Support Tools Database to validate accuracy.

GAO Report No. AIMD-97-106 (OSD Case No. 1389), "Defense Computers: Issues Confronting Defense Logistics Agency in Addressing Y2K Problems," August 12, 1997, states that the Defense Logistics Agency has already assessed the Y2K impact on its operations; inventoried its systems; conducted pilot projects to determine Y2K effects on some of its major systems; and developed and issued policies, guidelines, standards, and recommendations on Y2K correction for the agency. The Defense Logistics Agency has not prioritized the 86 automated information systems it plans to have operational in the year 2000 to ensure that mission critical systems are corrected first. In addition, the Defense Logistics Agency has not developed contingency plans in the event that any of the systems cannot be corrected on time. The report recommended that the Defense Logistics Agency complete signed, written interface agreements detailing data exchange methods; develop a Y2K system prioritization plan; and prepare contingency plans for all critical systems. The Under Secretary of Defense for Acquisition and Technology concurred with the recommendation on interface agreements and contingency plans but did not concur with the recommendation on system prioritization, stating that the Defense Logistics Agency's planning efforts and strategy for renovating its systems are adequate. The Defense Logistics Agency is in the process of ensuring that documented agreements are prepared for all interfaces requiring changes between their interface partners. Completion was expected in September 1997. The Defense Logistics Agency is also in the process of preparing contingency plans within each business area focusing on those systems that Y2K will affect. Initial plans were to be prepared by October 1997.

GAO Report No. AIMD-97-117 (OSD Case No. 1392), "Defense Computers: Defense Finance and Accounting Service Faces Challenges in Solving the Y2K Problems," August 11, 1997, states that the Defense Finance and Accounting Service has developed a Y2K strategy consistent with the DoD Y2K Management Plan and has defined conditions that automated information systems must meet to obtain certification as Y2K compliant. However, the Defense Finance and Accounting Service has not identified all critical tasks for achieving Y2K objectives, established milestones for completing all tasks, performed formal risk assessments of all systems to be renovated, or prepared contingency plans in the event that renovations are not completed in time or fail to operate properly. The report also states that the Defense Finance and Accounting Service has not identified all system interfaces and has completed only 230 of 904 written agreements with interface partners. Further, the Defense Finance and Accounting Service has not adequately ensured that testing resources will be available to determine if all operational systems are compliant

before the year 2000. The report recommended that the Defense Accounting and Finance Service identify Y2K program actions and milestones, issue guidance on ensuring continuity of operations, identify external interfaces and obtain written agreements describing the method of data exchange, and devise a testing schedule to ensure that all systems can operate in a Y2K environment. The Under Secretary of Defense (Comptroller) concurred with the recommendations. The Defense Finance and Accounting Service agreed to update its existing Year 2000 Executive Plan and it's Corporate Contingency Plan. It also agreed to have all written interface agreements with interface partners in place by September 30, 1997, and to fully implement its Y2K certification process for ensuring that all systems are compliant. Further, the Defense Finance and Accounting Service agreed to devise a testing schedule that identified the test facilities and resources needed for performing proper testing of its systems in a Y2K environment.

Appendix C. Other Matters of Interest

We identified some Government organizations that can provide testing services or information on Y2K compliance. For example:

- The Federal Chief Information Officers Council Subcommittee on the Y2K Commercial Off-the-shelf Workgroup developed an internet-based database of Y2K compliant products. The database is known as the Federal Y2K COTS Product Database. The database contains agency experiences and notations on specific products, vendor information, and details on Y2K compliance. The system was jointly developed by representatives from Social Security Administration and the General Services Administration.

- The Army Information Systems Engineering Command (Technology Integration Center) maintains a database that shows commercially available information technology products that have been tested for Y2K compliance. The U. S. Army Materiel Command also maintains a list of computers that are Y2K compliant or non-compliant.

- The MITRE corporation and Air Force Electronic Systems Center have a database that is updated by the contractors to show their products' Y2K compliance.

While each of the DoD testing and information organizations publicizes the results of their testing through internet web sites[3], those organizations were not reporting the test results to the Federal Y2K COTS Product Database. We believe that DoD testing centers need to establish procedures for reporting their test results to the Federal Y2K COTS Product Database. This database, when used as a central repository for Government-wide testing results, could preclude duplication of testing efforts.

[3] Respective internet addresses are <http://y2k.policyworks.gov>, <http://www.hqisec.army.mil/y2kweb>, and <http://www.mitre.org/research/y2k>.

Appendix D. Results of Information Technology Contracts for Commercial Off-The-Shelf Products Reviewed

Agency	Type of Information Technology	Contract Number	Contract Award Date	Contract Type*	Contract Value	Contract Contained Year 2000 Language	Requirement To Test Product
Army	Small Multi-user Computer II	DAHC94-95-D-0010	August 31, 1995	IDIQ	$ 908,000,000	YES	NO
	Personal Computer 2	DAAB07-97-D-V001	October 17, 1996	IDIQ	$ 277,000,000	YES	NO
	Personal Computer 2	DAAB07-97-D-V002	October 17, 1996	IDIQ	$ 277,000,000	YES	NO
	Portable Computer 2	DAAB07-97-D-V003	December 16, 1996	IDIQ	$ 118,500,000	YES	NO
	Portable Computer 2	DAAB07-97-D-V004	December 16, 1996	IDIQ	$ 118,500,000	YES	NO
	Soldiers' Portable On-line Repair Tool	DAAH01-96-D-0021	October 11, 1995	IDIQ	$ 107,000,000	NO	NO
	Standard Army Management Information System	DAHC94-94-D-0005	June 25, 1996	IDIQ	$ 95,000,000	YES	NO
Navy	Superminicomputer Program	F19630-93-D-0001	October 20, 1992	IDIQ	$ 2,493,000,000	NO	NO
	Tactical Advanced Computer-4	N68939-95-D-0004	July 10, 1996	IDIQ	$ 672,000,000	NO	NO
	Personal Computer Local Area Network	N68939-95-D-0018	June 13, 1995	IDIQ	$ 575,000,000	NO	NO
	Computer Aided Design II	N66032-93-D-0021	August 30, 1993	IDR	$ 411,000,000	NO	NO
	Computer Aided Design II	N66032-94-D-0012	July 13, 1994	IDR	$ 398,000,000	NO	NO
	Computer Aided Design II	N66032-91-D-0003	April 8, 1991	IDR	$ 362,000,000	NO	NO
	Data Base Machines	F19628-93-D-0018	July 10, 1993	IDIQ	$ 23,000,000	NO	NO
	Data Base Machines	F19628-93-D-0019	July 10, 1993	IDIQ	$ 149,000,000	NO	NO
	Data Base Machines	F19628-93-D-0028	July 10, 1993	IDIQ	$ 158,000,000	NO	NO
	New Technology for Office and Portable Systems	N68939-96-D-0007	April 18, 1996	IDIQ	$ 176,000,000	YES	NO
	Naval Aviation Logistics Command Management Information System	N66032-93-D-0001	December 3, 1992	IDIQ	$ 72,000,000	NO	NO

* Contract Types are IDIQ (Indefinite-Delivery/Indefinite-Quantity) and IDR (Indefinite Delivery Requirement)

Appendix D. Results of Information Technology Contracts for Commercial Off-The-Shelf Products Reviewed

Agency	Agency and Type of Information Technology	Contract Number	Contract Award Date	Contract Type*	Contract Value	Contract Contained Year 2000 Language	Requirement To Test Product
Air Force	Desktop V Computer	F01620-96-D-0002	May 3, 1996	IDIQ	$ 920,000,000	NO	NO
	Air Force Work Stations	F19628-96-D-0021	March 19, 1996	IDIQ	$ 478,000,000	NO	NO
	Air Force Work Stations	F19628-96-D-0020	March 19, 1996	IDIQ	$ 478,000,000	NO	NO
	Integration for Command, Control, Communications, Computers	F19628-96-D-0001	December 1, 1995	IDIQ	$ 310,000,000	NO	NO
	Integration for Command, Control, Communications, Computers	F19628-96-D-0003	December 1, 1995	IDIQ	$ 310,000,000	NO	NO
	Integration for Command, Control, Communications, Computers	F19628-96-D-0004	June 12, 1996	IDIQ	$ 310,000,000	NO	NO
	Integrated Computer Aided Software Engineering	F01620-94-D-0002	April 12, 1994	IDIQ	$ 692,000,000	YES	NO
	Unified Local Area Network Architecture II	F34608-94-D-0011	December 16, 1994	IDIQ	$ 579,000,000	NO	NO
	Unified Local Area Network Architecture II	F34608-94-D-0008	July 18, 1997	IDIQ	$ 633,000,000	NO	NO
	Defense Message System	F01620-95-D-0001	May 1, 1995	IDIQ	$ 1,600,000,000	NO	NO
Defense Intelligence Agency	Systems Acquisition and Support Services II	MDA908-97-D-0004	May 1, 1997	IDR	$ 55,000,000	YES	NO
	Systems Acquisition and Support Services II	MDA908-97-D-0016	May 1, 1997	IDR	$ 24,000,000	YES	NO
	Systems Acquisition and Support Services II	MDA908-97-D-0017	May 1, 1997	IDR	$ 24,000,000	YES	NO
	Systems Acquisition and Support Services II	MDA908-97-D-0018	May 1, 1997	IDR	$ 24,000,000	YES	NO
	Systems Acquisition and Support Services II	MDA908-97-D-0019	May 1, 1997	IDR	$ 24,000,000	YES	NO
	Systems Acquisition and Support Services II	MDA908-97-D-0020	May 1, 1997	IDR	$ 24,000,000	YES	NO
	Systems Acquisition and Support Services II	MDA908-97-D-0021	May 1, 1997	IDR	$ 24,000,000	YES	NO
				Total	**$13,899,000,000**	**15 Yes 20 No**	**0 Yes 35 No**

* Contract Types are IDIQ (Indefinite-Delivery/Indefinite-Quantity) and IDR (Indefinite Delivery Requirement)

Appendix E. Corrective Actions Taken by Management

At the conclusion of our audit, we briefed the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence); the Director, Defense Procurement; and representatives from the Services, Defense Information Systems Agency, and the Defense Intelligence Agency on the results of our audit. The Acting Assistant Secretary was greatly concerned that the level of compliance was not higher since a previous Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) memorandum, "Year 2000 Computing Problem with Personal Computers and Workstations," May 8, 1996, had directed DoD Components to issue stop work orders on all contracts for new products that fail to meet the Y2K requirement. Following our briefing, the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) and the Director, Defense Procurement began drafting new guidance to DoD Components requiring Y2K-compliant information technology and emphasizing testing requirements for items purchased from the information technology contracts. We have included final guidance resulting from these efforts as Appendix F. Additionally, as shown in the table below; Army, Navy, and Air Force Contracting Offices have completed the required contract modifications on 17 additional contracts.

Status of Contracts Compliant with Federal Acquisition Regulation 39.106 as of February 6, 1998

Component	At End of Audit Field Work	Subsequent Contract Modifications	Remaining Noncompliant Contracts	Total Contracts
Army	6	1	0	7
Navy	1	10	0	11
Air Force	1	6	3	10
Defense Intelligence Agency	7	0	0	7
Total	**15**	**17**	**3**	**35**

Appendix F. Assistant Secretary Of Defense (Command, Control, Communications, and Intelligence) Memorandum

ASSISTANT SECRETARY OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON, DC 20301-6000

December 18, 1997

COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Acquisition of Year 2000 (Y2K) Compliant Information Technology (IT) and Bringing Existing IT into Compliance

Effective immediately, all IT that is acquired by the Military Departments and Defense Agencies shall be Y2K compliant. This includes IT acquired for use in national security systems as defined in Federal Acquisition Regulation (FAR) Part 39.002, and applies to all Department of Defense (DoD) purchases by any acquisition method, including orders placed under contracts or schedules issued by other Agencies. Information technology contracts and other acquisition instruments must be reviewed on a case by case basis to determine whether any modification to the contract or other acquisition instrument is necessary.

Orders for IT shall not be placed against a contract or other acquisition instrument unless that contract/instrument requires Y2K compliance or the order itself requires Y2K compliance.

Either the supplier or the acquiring activity will test at least a representative sampling of the IT that is delivered and document the results in writing.

The term "Year 2000 compliant" is defined at FAR Part 39.002 as follows:

> "Year 2000 compliant means, information technology that accurately processes date/time data (including, but not limited to, calculating, comparing and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations. Furthermore, Year 2000 compliant information technology, when used in combination with other information technology, shall accurately process date/time data if the other information technology properly exchanges date/time data with it."

Requests for exceptions to this policy must be submitted to the Department of Defense Chief Information Officer (DoD CIO) for approval.

For IT in the existing inventory that is not Y2K compliant, DoD Components should, in appropriate cases, be assertive in requesting that the supplier and the manufacturer take action to bring the IT into compliance.

Requests for waivers to this policy and questions concerning this policy should be submitted to Mr. Samuel Worthington, Director of Information Technology or his Deputy, Ms Ruby Harney, Office of the Assistant Secretary of Defense (C3I), Room 3D239, 6000 Defense Pentagon, Washington D.C., 20301-6000. Mr. Worthington can be reached on (703) 614-6132, (email: WorthinS@osd.pentagon.mil). Ms. Harney can be reach be reached on (703) 614-6202, (email: ruby.harney@osd.pentagon.mil).

Anthony M. Valletta
(Acting)

Appendix G. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Director, Defense Procurement
  Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)

Department of the Army

Auditor General, Department of the Army
Chief Information Officer

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy
Chief Information Officer

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Assistant Secretary of the Air Force (Acquisition), SAF/AQ
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Intelligence Agency
Director, Defense Information Systems Agency
Director, Defense Logistics Agency

Non-Defense Federal Organizations

Federal Chief Information Officers Council Subcommittee on Year 2000
Office of Management and Budget
Office of Federal Procurement Policy, Office of Management and Budget
Office of Information and Regulatory Affairs, Office of Management and Budget
Technical Information Center, National Security and International Affairs Division, General Accounting Office

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Subcommittee on Acquisition and Technology, Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on Government Management, Information, and Technology, Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security
House Subcommittee on Military Procurement, Committee on National Security
House Committee on Science
House Subcommittee on Technology, Committee on Science

Part III - Management Comments

Department of the Navy Comments

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF INFORMATION OFFICER
1225 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202-4311

26 Jan 1998

From: Department of the Navy Chief Information Officer
To: Department of Defense Inspector General, 400 Army Navy Drive, Arlington, VA 22202-2884 (Attn: Mr. Paul J. Granetto, Director, Contract Management Directorate)

Subj: DRAFT AUDIT REPORT ON DOD INFORMATION TECHNOLOGY SOLICITATIONS AND CONTRACT COMPLIANCE FOR YEAR 2000 REQUIREMENTS (PROJECT NO. 7CA-0052)

Ref: (a) Your Memo of 15 Jan 98

Encl: (1) Modification P00044 to Supermini Contract F19630-93-D-0001 dtd 31 Oct 97
(2) Modification P00016 to TAC-4 Contract N68939-95-D-0004 dtd 17 Dec 97
(3) Modification P00025 to PC-LAN+ Contract N68939-95-D-0018 dtd 25 Nov 97
(4) Modification P00088 to CAD II Contract N66032-93-D-0021 dtd 13 Nov 97
(5) Modification P00047 to CAD II Contract N66032-94-D-0012 dtd 12 Nov 97
(6) Modification P00151 to CAD II Contract N66032-91-D-0003 dtd 13 Nov 97
(7) Modification P00021 to Data Base Machines Contract F19628-93-D-0018 dtd 12 Nov 97
(8) Modification P00033 to Data Base Machines Contract F19628-93-D-0019 dtd 21 Nov 97
(9) Modification P00028 to Data Base Machines Contract F19628-93-D-0028 dtd 10 Nov 97
(10) Modification P00014 to NALCOMIS Contract N66032-93-D-0001 dtd 20 Jan 98

1. Reference (a) forwarded the subject draft report for review and comment. We recommend revisions to the report to reflect the current status of the eleven Navy contracts reviewed for compliance with Federal Acquisition Regulation (FAR) 39.106.

2. As of January 16, 1998, contract modifications to incorporate the Year 2000 requirement had been issued to an additional nine of the eleven contracts. With the modification of the NALCOMIS contract on January 20, 1998, all eleven Navy contracts are compliant with FAR 39.106. Enclosures (1) through (10) are provided for your files.

3. When necessary, the contract modifications identify specific Contract Line Item Numbers (CLINs) which are no longer available for ordering. Also, since the draft report was prepared, the hardware and software ordering period of the TAC-4 contract has expired. Modification P00016 to the TAC-4 contract, which added the Year 2000

Subj: DRAFT AUDIT REPORT ON DOD INFORMATION TECHNOLOGY SOLICITATIONS AND CONTRACT COMPLIANCE FOR YEAR 2000 REQUIREMENTS (PROJECT NO. 7CA-0052)

requirement, excluded CLINs for which there had been no orders (e.g., zero demand) during the contract life. Therefore, during the remaining ordering period of the TAC-4 contract, all delivery orders were screened by the project office and contracting officer to ensure that these excluded CLINs were not purchased.

4. Based on this current information, the sections of the report entitled "Corrective Action by Management" found on page ii of the Executive Summary, on page 6 of Part I, and in Part II Appendix E, should state that all Navy contracts identified in the report are compliant.

5. The DON CIO point of contact for this response is Mr. Floyd V. Groce. He can be reached at (202) 433-3932 or e-mail floyd.groce@nismc.navy.mil.

Valerie E. Wallick

VALERIE E. WALLICK
By direction

2

Department of the Air Force Comments

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

U.S. AIR FORCE 1947 - 1997

23 JAN 1998

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING
OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

FROM: SAF/AQC
1060 Air Force Pentagon
Washington, DC 20330-1060

SUBJECT: DoDIG Draft Report, DoD Information Technology Solicitations and Contract Compliance for Year 2000 Requirements (Project No. 7CA-0052), (Your Memo 15 Jan 98)

Your memorandum requested the Assistant Secretary of the Air Force (Financial Management and Comptroller) provide comments on the Draft Audit Report on DoD Information Technology Solicitations and Contract Compliance for Year 2000 Requirements, Project No. 7CA-0052.

Throughout the entire audit report reference is made to and recommendations address the use of "required Federal Acquisition Regulation (FAR) Year 2000 compliance clauses." There are no Year 2000 compliance "clauses" in the FAR. FAR Part 39.106, Year 2000 compliance, only addresses the "requirement" to acquire Year 2000 compliant information technology. Year 2000 compliance is a "Requirements" issue that is being addressed in several ways. Specifically, Year 2000 compliance Requirements are being captured in Statements of Work and contract Specifications. There is no requirement to include a compliance "clause" in solicitations and contracts for the acquisition of information technology. We recommend that the audit report be revised to discuss the need to address the "requirement" for Year 2000 compliance and not "required clauses."

We appreciate the opportunity to comment on this draft report. If you should have any questions, please a call my action officer, Lt Col Bill McNally, SAF/AQCP, DSN 425-7061 or Comm (703) 588-7061.

Frank J. Anderson Jr.
FRANK J. ANDERSON, JR., Brig Gen, USAF
Deputy Assistant Secretary (Contracting)
Assistant Secretary (Acquisition)

cc:
SAF/FMPF

Golden Legacy, Boundless Future... Your Nation's Air Force

Audit Team Members

The Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, produced this report.

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