Audit Report

U.S. ATLANTIC COMMAND YEAR 2000 ISSUES

Report No. 98-194 August 27, 1998

Office of the Inspector General
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Acronyms

ACOM	U.S. Atlantic Command
Y2K	Year 2000

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

August 27, 1998

MEMORANDUM FOR COMMANDER IN CHIEF, U.S. ATLANTIC COMMAND
DIRECTOR, JOINT STAFF

SUBJECT: Audit Report on U.S. Atlantic Command Year 2000 Issues
(Report No. 98-194)

We are providing this report for your information and use. We considered management comments on a draft of this report in preparing the final report. Management comments were responsive; therefore, no additional comments are required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Ms. Mary Lu Ugone at (703) 604-9049 (DSN 664-9049) email <mlugone@dodig.osd.mil>, Ms. Dianna J. Pearson at (703) 604-9063 (DSN 664-9063) email <djpearson@dodig.osd.mil>, or Mr. Scott S. Brittingham at (703) 604-9068 (DSN 664-9068) email <ssbrittingha@dodig.osd.mil>. See Appendix C for the report distribution, which includes all unified commands so that self evaluations of Year 2000 readiness may be facilitated. The audit team members are listed inside the back cover.

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Assistant Inspector General
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Office of the Inspector General, DoD

Report No. 98-194 **August 27, 1998**
(Project No. 8AS-0006.03)

U.S. Atlantic Command Year 2000 Issues

Executive Summary

Introduction. 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 year 2000 computing challenge. For a listing of audit projects addressing the issue, see the year 2000 webpage on IGnet at <http://www.ignet.gov>.

Information technology systems have typically used two digits to represent the year, such as "98" representing 1998, to conserve electronic storage and reduce operating costs. With the two-digit format, however, the year 2000 is indistinguishable from 1900. As a result of the ambiguity, computers and associated systems and application programs that use dates to calculate, compare, and sort could generate incorrect results when working with years after 1999.

Audit Objectives. The overall audit objective was to evaluate the status of the U.S. Atlantic Command's progress in resolving the year 2000 computing issues. Our audit focused on the following year 2000 issues: leadership support and awareness, management and resolution strategy, system assessments, prioritization, system interfaces, testing, risk analysis and contingency planning, and support received from responsible Service executive agents.

Audit Results. The U.S. Atlantic Command has taken action to increase year 2000 awareness throughout the command. However, the U.S. Atlantic Command needs to do more. Unless the U.S. Atlantic Command, the Joint Staff, the Services, and Defense agencies collaboratively make further progress, the U.S. Atlantic Command may not be able to ensure that operational capability is not adversely affected by year 2000 problems. See Part I for details of the audit results.

Summary of Recommendations. We recommend that the Commander in Chief, U.S. Atlantic Command, establish procedures and timeframes for monitoring and tracking the status of mission-critical systems, join with other unified commands to obtain the status of mission-critical systems, and report the status of mission-critical supporting systems to the year 2000 program office; complete the reconciliation of the managed-systems inventory and define reportable systems and how they should be categorized; complete compliance certification checklists; establish offices of primary responsibility for nonstandard commercial off-the-shelf products and reconcile compliance

discrepancies; develop system and operational contingency plans; and use selected command and joint exercises to test year 2000 scenarios and contingency plans in an operational environment.

Management Comments. The U.S. Atlantic Command concurred with and has taken action on all of the recommendations except the recommendation to join with functional counterparts at other unified commands to obtain status information of mission-critical systems from the Services and Defense agencies. The U.S. Atlantic Command stated that the executive agents would be inundated with duplicate requests, and suggested a more efficient approach would be for the Joint Staff to obtain the status information and provide it simultaneously to the unified commands. The Joint Staff stated that it endorsed the recommendations of the report but agreed with the concerns expressed by the U.S. Atlantic Command. See Part I for a summary of management comments and Part III for the complete text of the comments.

Audit Response. Management comments were responsive. We commend ACOM for expediting the necessary actions to address the recommendations of the report. We did not intend that the unified commands duplicate efforts to obtain the status of mission-critical systems from the Services and Defense agencies. Rather, the intent of the recommendation was to encourage a unified command-wide involvement from a functional perspective in DoD year 2000 remediation and continuity of operations efforts. For example, an outcome of the year 2000 conference of the unified commands was the scheduling of the Operations directorate year 2000 conference to be held in September 1998 to collectively discuss continuity of operations issues. Other functional directorates of the unified commands may have to also proactively and collectively work together to obtain and share system information to support year 2000 remediation and continuity of operations efforts. We agree, however, that the Joint Staff plays a central coordinating role. We will continue working with the Joint Staff, unified commands, DoD Year 2000 Program Office, and other DoD components to improve the information flow on system year 2000 status to the warfighting community.

Table of Contents

Executive Summary

Part I - Audit Results

Audit Background 2
Audit Objectives 4
Status of the U.S. Atlantic Command Year 2000 Program 5

Part II - Additional Information

Appendix A. Audit Process
Scope 16
Methodology 17
Appendix B. Summary of Prior Coverage 18
Appendix C. Report Distribution 21

Part III - Management Comments

U.S. Atlantic Command Comments 24
Joint Staff Comments 28

Part I - Audit Results

Audit Background

The year 2000 (Y2K) problem is the term most often used to describe the potential failure of information technology systems to process or perform date-related functions before, on, or after the turn of the century. The Y2K problem is rooted in the way that automated information systems record and compute dates. For the past several decades, systems have typically used two digits to represent the year, such as "98" representing 1998, to conserve on electronic data storage and to reduce operating costs. With the two-digit format, however, 2000 is indistinguishable from 1900. As a result of the ambiguity, computers and associated system and application programs that use dates to calculate, compare, or sort could generate incorrect results when working with years following 1999. Calculation of Y2K dates is further complicated because the Y2K is a leap year, the first century leap year since 1600. The computer systems and applications must recognize February 29, 2000, as a valid date.

Because of the potential failure of computers to run or function throughout the Government, the President issued an Executive Order, "Year 2000 Conversion," February 4, 1998, making it policy that Federal agencies ensure that no critical Federal program experiences disruption because of the Y2K problem. The Executive Order also requires that the head of each agency ensure that efforts to address the Y2K problem receive the highest priority attention in the agency.

DoD Y2K Management Strategy. In his role as the DoD Chief Information Officer, the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) issued the "DoD Year 2000 Management Plan" (DoD Management Plan) in April 1997. The DoD Management Plan provides the overall DoD strategy and guidance for inventorying, prioritizing, fixing, or retiring systems, and for monitoring progress. The DoD Management Plan states that the DoD Chief Information Officer has overall responsibility for overseeing the DoD solution to the Y2K problem. Also, the DoD Management Plan makes the DoD Components responsible for the five-phase Y2K management process. The DoD Management Plan includes a description of the five-phase Y2K management process. The DoD Management Plan, "For Signature Draft Version 2.0," June 1998, accelerates the target completion dates for the renovation, validation, and implementation phases. The new target completion date for implementation of mission-critical systems is December 31, 1998.

In a memorandum dated January 20, 1998, for the heads of executive departments and agencies, the Office of Management and Budget established a new target date of March 1999 for implementing corrective actions to all systems. The new target completion dates are September 1998 for the Renovation phase and January 1999 for the Validation phase.

The Joint Chiefs of Staff. The Chairman of the Joint Chiefs of Staff is the principal military advisor to the President, the Secretary of Defense, and the National Security Council. The Joint Chiefs of Staff have no executive authority to command the combatant forces. The Secretaries of the Military Departments assign all forces under their jurisdiction to the unified commands to perform missions assigned to those commands.

The Joint Staff. The Joint Staff Director, Command, Control, Communications, and Computer Systems (J6), has been designated by the Chairman of the Joint Chiefs of Staff to oversee the unified commands' and Joint Staff's implementation of the DoD Management Plan.

The Joint Staff assists the Chairman of the Joint Chiefs of Staff with unified strategic direction of the combatant forces; unified operation of the combatant commands; and integration into an efficient team of land, naval, and air forces.

Year 2000 Action Plan. The Joint Chiefs of Staff Year 2000 Action Plan, March 1998, provides the unified commands and Joint Staff directorates the corporate strategy and management approach for addressing the Y2K problem. The action plan uses the accelerated target completion dates for the renovation, validation, and implementation phases in the draft DoD Management Plan. The action plan provides that the unified commands should target December 31, 1998, for completion of all Y2K efforts.

U.S. Atlantic Command. The U.S. Atlantic Command (ACOM) is one of nine unified commands in the Department of Defense. The ACOM was established on October 1, 1993. The ACOM is responsible for conducting joint operations, humanitarian assistance, counterdrug operations, and military support for civilian authorities within its area of responsibility. The ACOM area of responsibility encompasses 45 million square miles of Atlantic Ocean from the North Pole to the South Pole and from the east coast of the United States to Gibraltar, including the Norwegian, Greenland, and Barents seas. It also includes the Pacific Ocean west of Central and South America and the continental United States. The ACOM reports to the Secretary of Defense. The overall mission of ACOM is to support and advance U.S. interests and policies throughout its assigned area of responsibility and to accomplish the following:

- provide combat-ready land, maritime, and air forces to U.S. warfighting commanders in chief;
- conduct operations unilaterally or in concert with coalition partners; and
- train forces as joint units.

The ACOM is supported by component commands from each Service that provide forces as required to conduct operations. The component commands are the U.S. Army Forces Command; the U.S. Navy Atlantic Fleet; the U.S. Air Force Air Combat Command; and the U.S. Marine Forces, Atlantic.

Audit Objectives

The overall audit objective was to evaluate the status of the progress of ACOM in resolving its Y2K computing issues. Our audit focused on the following Y2K issues: leadership support and awareness, management and resolution strategy, system assessments, prioritization, system interfaces, testing, risk analysis and contingency planning, and support received from responsible Service executive agents. We did not review the management control program related to the overall audit objective because DoD recognizes the Y2K issue as a material management control weakness area in the FY 1997 Annual Statement of Assurance. See Appendix A for a discussion of the audit scope and methodology and Appendix B for a summary of prior audit coverage.

Status of the U.S. Atlantic Command Year 2000 Program

The ACOM has taken action to increase Y2K awareness throughout the command. The ACOM needs to do more in the following areas:

- gaining visibility over its mission-critical systems owned by the Services and Defense agencies;
- reconciling its managed-systems inventory to reflect the actual number and status of ACOM systems;
- preparing compliance checklists and certifying ACOM-managed systems as compliant;
- establishing directorate responsibility for all of its commercial off-the-shelf products;
- developing system and operational contingency plans to establish alternate procedures to accomplish the mission; and
- using selected command and joint exercises to test Y2K scenarios and contingency plans in an operational environment when possible.

Unless ACOM, the Joint Staff, the Services, and Defense agencies collaboratively make further progress, ACOM and the other unified commands will be unable to ensure that operational capability is not adversely affected by Y2K problems.

Y2K Program Management

The ACOM has taken action to increase Y2K awareness throughout the command.

Y2K Program Office. The ACOM Director of Command, Control, Communications, and Computer Systems (J-6) is the Y2K program office and has responsibility for the ACOM Y2K Program. The ACOM Director of Command, Control, Communications, and Computer Systems reports the status of ACOM directly to the Commander in Chief and Deputy Commander in Chief. On April 7, 1998, the ACOM Director of Command, Control, Communications, and Computer Systems briefed the Deputy Commander in Chief and all of the ACOM directors on the Y2K responsibilities of each ACOM directorate.

The Command, Control, Communications, and Computer Systems directorate Y2K program office:

- created and maintains an ACOM Y2K web page;
- reconciles the ACOM systems inventory;

- prepares the quarterly reports submitted to the Joint Staff;
- developed the ACOM Y2K Management Plan; and
- chairs regular meetings with directorate Y2K representatives.

Additionally, the Command, Control, Communications, and Computer Systems directorate Y2K program office has taken the responsibility for identifying the status of systems that the Services and Defense agencies owned and that all of ACOM used.

ACOM Directorates. The Command, Control, Communications, and Computer Systems directorate Y2K program office is responsible for all ACOM Local Information System network-centered hardware and software. However, the ACOM directorates are responsible for all non-Local Information System network hardware and software and also nonstandard software that resides on the ACOM local network. Additionally, the directorates are responsible for the following:

- coordinating with the Joint Staff functional counterparts to obtain mission-critical systems status from the Services and Defense agencies;
- reviewing the ACOM Y2K web page for completeness and reporting updates to the Command, Control, Communications, and Computer Systems directorate; and
- funding and replacing nonstandard commercial off-the-shelf products.

The directorates are responsible for preparing contingency plans for mission-critical systems. The ACOM uses 148 systems that the Services and Defense agencies own. Each system has an office of primary responsibility, the responsible directorate that has the mission that the system supports. The office of primary responsibility prepares contingency plans for mission-critical systems and, as stated, coordinates to determine the status of those systems.

ACOM Supporting Systems

The ACOM did not have visibility over mission-critical supporting systems, which are owned by the Services and Defense agencies, because at the time of the audit ACOM had not established or been provided a method for monitoring and tracking its supporting systems. The ACOM is, necessarily, relying on the Services and Defense agencies to make the Y2K corrections in a timely manner. The ACOM directorates are required to develop contingency plans for those systems that are not compliant by December 31, 1998.

The ACOM considered 53 of its 148 systems to be critical to its mission. Of the 53 systems, ACOM did not know the status of Y2K compliance for 30 systems, 15 systems were not Y2K compliant, and 8 systems were Y2K compliant.

Until January 1998, the ACOM Y2K program office monitored the status of supporting systems using the Defense Information Support Tools database. The ACOM Y2K program office posted the information on the ACOM Y2K web page,

making the information available to the offices of primary responsibility. The Defense Information Support Tools database is no longer available for obtaining information concerning the status of systems, and ACOM has not established or been provided alternate procedures for determining the status of those systems. As a result, ACOM is unable to determine the potential impact that supporting systems may have on its mission and any Y2K system schedule delays.

As stated, ACOM made each directorate responsible for coordinating with its Joint Staff functional counterpart to monitor the status of its systems. Also, the directorates should join with other unified command functional counterparts to obtain system Y2K status information from the Services and Defense agencies. The directorates should report the progress of the executive agents to the ACOM Y2K office, noting especially whether the systems will be compliant and fully implemented by December 31, 1998. The ACOM is in the process of implementing status-tracking requirements.

The Office of the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) has developed a DoD Y2K database. In a recent undated memo, the DoD Y2K Oversight and Contingency Planning Office decided to post the database to the Office of the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) web page.

To provide further assistance to the warfighting community on determining the Y2K status of supporting systems, the Joint Staff has taken initiatives to compensate for the continuing problems in making that information available through other channels. To date, the Joint Staff has posted an extract of the DoD Y2K database on the SIPRNET.

ACOM-Managed Systems

The ACOM overall system inventory list did not accurately reflect the status of ACOM systems. However, as a result of this audit, the ACOM directorates are in the process of reconciling the directorate inventory lists to the ACOM overall inventory list. Additionally, ACOM is establishing ACOM directorate reporting requirements to the ACOM Y2K program office. As a result of the established requirements, ACOM consolidated reporting should provide an accurate assessment of the status of ACOM-managed systems.

Quarterly Report. In the April 1998 quarterly report, ACOM reported to the Joint Staff that it manages 32 systems, none critical to the mission of ACOM. Of the 32 systems, ACOM reported 19 systems compliant, 8 systems being replaced, 3 systems in renovation, and 2 systems to be eliminated.

ACOM Reportable Systems. Based on our review of the ACOM documentation, ACOM should have reported 57 managed systems; 8 of the 57 systems were considered critical to the mission of ACOM. Further, ACOM should have reported only nine systems as compliant.

Number of Managed Systems. Of the 32 managed systems, ACOM should have reported only 23 systems. One directorate was shown as having 10 managed systems. However, eight of those systems were subsystems, were not systems, or did not belong to the directorate. Another system was not listed by the attributed directorate. In addition to the 23 reportable systems, another 34 systems were not included in the ACOM systems inventory list, bringing the total reportable systems to 57. The following table provides a categorization of the number of systems that ACOM reported compared with the actual reportable systems.

ACOM-Managed Systems

	Reported	Actual
Compliant	19	9
To be replaced	8	24
To be renovated	3	2
To be eliminated	2	11
To be validated	0	10
Requirement to be revalidated	0	1
Total ACOM-managed systems	**32**	**57**

The ACOM is taking action to clearly establish guidelines on what is considered to be a reportable system and how reportable systems should be categorized and then to reconcile the ACOM systems inventory list. The ACOM stated that an updated inventory would be provided to the Joint Staff in the July 1998 quarterly report. The ACOM needs to complete the reconciliation of its inventory lists and to define reportable systems.

Mission-Critical Systems. The ACOM should have reported that it manages eight mission-critical systems. Two of the mission-critical systems are not expected to be compliant until after December 31, 1998, the deadline for implementing all mission-critical systems.

Certification and Compliant Checklists

The ACOM did not complete compliance certification checklists for eight of the nine ACOM-managed systems stated to be Y2K compliant. As stated earlier in this report, ACOM had reported that it had 19 managed systems that are Y2K compliant. However, the following 10 systems should not have been included:

- 8 systems that were not reportable systems,
- 1 system that is not scheduled to be renovated until October 1998, and
- 1 system that was not compliant.

The DoD Management Plan states that systems developers and maintainers, along with the system's functional proponent, will certify and document each system's Y2K compliance. The DoD Y2K Management Plan and ACOM Draft Y2K Management Plan provide a sample Y2K compliance checklist.

For seven of the nine systems, ACOM had some supporting documentation to show that Y2K tests had been done and no problems identified. For two of the nine systems, Y2K compliance is based on verbal information with no documentation to support it. Inspector General, DoD, Report No. 98-147, "Year 2000 Certification of Mission-Critical DoD Information Technology Systems," June 5, 1998, estimated that DoD Components certified only 25 percent of the systems reported as compliant. As a result, systems may unexpectedly fail because they were classified as Y2K compliant without adequate verification and validation.

Although existing documentation and verbal information are some basis on which to support Y2K compliance, ACOM directorates need to complete compliance certification checklists to fully support those systems as Y2K compliant. Further, compliance certification checklists will provide uniformity and continuity for ACOM-managed systems and a record of testing performed for successive system maintainers.

Commercial Off-the-Shelf Products

The ACOM did not establish the office of primary responsibility for 104 commercial off-the-shelf products as of April 14, 1998. Commercial off-the-shelf products refer to software that a contractor has produced and that is available for general purchase. In addition, ACOM has not determined Y2K compliance for 128 of the 361 commercial off-the-shelf products supported by the directorates and sub-commands. Of the 128 applications for which compliance is unknown, 71 applications are without an office of primary responsibility.

The ACOM commercial off-the-shelf inventory list appears to have discrepancies as to compliance of Y2K applications. For several applications, directorates are reporting different results about the Y2K compliance of the same application. The discrepancies appear to be the result of lack of coordination between the directorates and sub-commands and the Y2K program office. The ACOM is taking action to determine the compliance of its commercial off-the-shelf inventory list and to reconcile the discrepancies. The ACOM needs to complete those actions.

Contingency Plans

As a result of this audit, ACOM has documented in the ACOM Y2K Management Plan its strategy for the development, implementation, and timeframes for contingency planning. The management plan requires that ACOM develop contingency plans by December 31, 1998, for mission-critical systems not compliant by that date. Although ACOM had a written strategy for contingency planning, ACOM had not developed contingency plans for mission-critical systems. On May 29, 1998, the ACOM Y2K program office notified the

directorate Y2K focal points that the offices of primary responsibility are required to contact the executive agents and request a copy of the compliance certification checklist for the mission-critical systems and obtain installation delivery dates for systems that are not compliant yet. Additionally, the offices of primary responsibility are encouraged to request contingency plans from the executive agents for those systems that they know will not be compliant by December 31, 1998.

The Joint Chiefs of Staff Year 2000 Action Plan requires that the unified commands conduct sufficient planning and establish alternate procedures to successfully complete their mission while system program managers and technical staff make necessary Y2K corrections. Alternate procedures must be applicable to day-to-day peacetime operations as well as warfighting and peacekeeping operations. The ACOM must monitor both the status of its mission-critical systems and the completion schedules when developing contingency plans. The ACOM directorates need to begin coordinating with the Joint Staff, the Services, and the unified commands to determine realistic completion schedules for the common mission-critical systems and develop both system and operational contingency plans to establish alternate procedures to accomplish their missions.

Command and Joint Exercises

Because of time constraints posed by Y2K issues, using selected command and joint exercises to test Y2K scenarios may assist ACOM in making further progress to identify and resolve Y2K problems. Inspector General, DoD, Report No. 98-173, "U.S. Central Command Year 2000 Issues," July 2, 1998, and Inspector General, DoD, Report 98-129, "U.S. Special Operations Command Year 2000 Issues," May 8, 1998, recommended that the Joint Staff integrate year 2000 scenarios into operational requirements in joint exercises in FY 1998 for the purposes of determining the extent of potential Y2K impact on the continuity of the warfighter. The U.S. Central Command and the U.S. Special Operations Command concurred with the recommendation.

The House bill to authorize appropriations for FY 1999 for the Department of Defense, H. R. 3616, proposes that the Secretary of Defense submit to Congress a report containing a plan to include simulated Y2K scenarios in military exercises conducted from January 1 through September 30, 1999. The plan is to include military exercises conducted under the Chairman of the Joint Chiefs of Staff Exercise Program. Additionally, the plan is to cover systems excluded from the exercise and an explanation of how the military exercise will use an excluded system's Y2K contingency plan. The Senate version of H.R. 3616 proposes that the Secretary of Defense and the Director of Central Intelligence jointly submit to Congress a report on the plans of the DoD and intelligence community for ensuring the continuity of performance of essential operations that are at risk of failure because of computer systems and other information and support systems that are not Y2K compliant. The report shall be submitted not later than March 31, 1999. The House and Senate versions of H.R. 3616 are under consideration by the conferees to the DoD authorization conference, who are considering the FY 1999 DoD bill.

The Secretary of Defense has tasked the Chairman of the Joint Chiefs of Staff to develop a Joint Y2K operational evaluation program and to provide the plans by October 1, 1998. In June 1998, the Vice Chairman, Joint Chiefs of Staff, sent a message to the unified commands, Services, and Defense agencies. The message provided a synopsis of the operational evaluation plan, solicited unified command involvement in the Y2K process, and requested feedback on Y2K operational evaluation opportunities. The Y2K operational evaluation plan will encourage use of joint exercises, demonstrations, mission readiness assessments, tests, or other opportunities for evaluation of readiness. The goal of Y2K operational evaluations is to assure the warfighters that their key mission-critical systems will not fail because of Y2K perturbations, as isolated systems, or as part of the interconnected systems environment in which warfighting as peacekeeping missions are conducted.

Performing command and joint exercises to test Y2K interoperability of system interdependencies and interfaces may not be possible in some instances if the Services and Defense agencies have not made and implemented the necessary Y2K corrections to the required systems. However, in an effort to mitigate the risk associated with the Y2K issue and the effect that Y2K could have on the core mission of ACOM, testing contingency plans in an operational environment will be required. Testing contingency plans is vital to help ACOM assess its capability to continue operations if systems fail because of Y2K problems.

Conclusion

The ACOM, like the other unified commands, must take an aggressive approach to dealing with Y2K for supporting systems to ensure that it is well-positioned to deal with unexpected problems and delays. The ACOM must continually monitor and assess the progress of supporting systems so that it may forecast potential Y2K disruptions to the ACOM mission and prepare operational contingency plans accordingly. We recognize the inherent problems confronting ACOM and other system users, who must rely on system owners to carry out the necessary remediation measures. The Military Departments and Defense agencies must make accurate information on Y2K risk and remediation status available to the Joint Staff and unified commands. Access to the information located on the DoD Y2K database would greatly facilitate the ability of ACOM and other unified commands to monitor the progress of their supporting systems, prepare contingency plans for their mission areas, and plan operational evaluations.

Recommendations for Corrective Action

We recommend that the Commander in Chief, U.S. Atlantic Command:

1. Establish procedures and timeframes for the offices of primary responsibility to:

(a) Monitor and track the status of mission-critical systems that the Services and Defense agencies own.

(b) Join with functional counterparts at other unified commands to obtain the status of mission-critical systems from the Services and Defense agencies.

(c) Report the status of those systems to the year 2000 program office.

2. Complete reconciliation of the managed-systems inventory to reflect the actual number and status of the U.S. Atlantic Command systems and clearly define reportable systems and how reportable systems should be categorized.

3. Complete compliance certification checklists to fully support systems as year 2000 compliant.

4. Establish offices of primary responsibility for nonstandard commercial off-the-shelf products and complete reconciliation of compliance discrepancies.

5. Develop system and operational contingency plans that will establish alternate procedures to successfully accomplish the mission if year 2000 disruptions occur.

6. Use selected command and joint exercises to test year 2000 scenarios and contingency plans in an operational environment when possible.

Management Comments. The ACOM concurred with all of the recommendations except to join functional counterparts at the other unified commands to obtain the status of mission-critical systems from the Services and Defense agencies.

The ACOM stated that it has developed a database to monitor and track the status of mission-critical systems that the Services and Defense agencies own. The

offices of primary responsibility are to report all information on supporting systems and commercial off-the-shelf software to the ACOM Y2K office on a monthly basis. Additionally, ACOM stated that it:

- completed the managed-system inventory reconciliation May 29, 1998;

- established September 1, 1998, as the completion date for all certification checklists;

- established offices of primary responsibility for all commercial off-the-shelf products as of June 30, 1998; and

- established a deadline of December 31, 1998, for the completion of contingency plans for supporting systems.

The ACOM is providing input to the Joint Staff for the Chairman of the Joint Chiefs of Staff operation evaluation plan.

The ACOM did not agree to join the functional counterparts of the other unified commands in obtaining status information, stating that the executive agents would be inundated with duplicate requests. ACOM stated that a more efficient approach would be for the Joint Staff to obtain the status information and provide it simultaneously to the unified commands.

The Joint Staff stated that it endorses the recommendations to improve the Y2K posture of ACOM; however, the Joint Staff agrees with the concerns that ACOM expressed.

Audit Response. We consider the comments of ACOM to be responsive. We commend ACOM for expediting the necessary actions to address the recommendations of the report.

We did not intend that the unified commands duplicate efforts to obtain the status of mission-critical systems from the Services and Defense agencies. Rather, the intent of the recommendation was to encourage a unified command-wide involvement from a functional perspective in DoD Y2K remediation and continuity of operations efforts. For example, an outcome of the Y2K conference of the unified commands was the scheduling of the Operations (J-3) directorate Y2K conference to be held in September 1998 to collectively discuss continuity of operations issues. Other functional directorates of the unified commands may have to also proactively and collectively work together to obtain and share system information to support Y2K remediation and continuity of operations efforts. We agree, however, that a central Joint Staff role in collecting and disseminating Y2K status information is vital.

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 the issue, see the Y2K webpage on IGnet at <http://www.ignet.gov>.

Scope

We reviewed and evaluated the status of the progress of ACOM in resolving the Y2K computing issue. We evaluated the Y2K efforts of ACOM and compared them with those efforts described in the DoD Management Plan issued by the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) in April 1997. We obtained documentation including the ACOM Y2K Management Plan, the ACOM Y2K responses to the Office of the Inspector General, DoD, Y2K questionnaire, and systems inventory database information as of April 1998. We used the information to assess efforts related to the multiple phases of managing the Y2K problem.

DoD-Wide Corporate-Level Government Performance and Results Act Goals. In response to the Government Performance and Results Act, the Department of Defense has established 6 DoD-wide corporate-level performance objectives and 14 goals for meeting the objectives. This report pertains to achievement of the following objectives and goals.

- **Objective:** Prepare now for an uncertain future. **Goal:** Pursue a focused modernization effort that maintains U.S. qualitative superiority in key war fighting capabilities. **(DoD-3)**

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

- **Information Technology Management Functional Area.** **Objective:** Become a mission partner. **Goal:** Serve mission information users as customers. **(ITM-1.2)**

- **Information Technology Management Functional Area.** **Objective:** Provide services that satisfy customer information needs. **Goal:** Modernize and integrate Defense information infrastructure. **(ITM-2.2)**

- **Information Technology Management Functional Area.** **Objective:** Provide services that satisfy customer information needs. **Goal:** Upgrade technology base. **(ITM-2.3)**

General Accounting Office High-Risk Area. In its identification of risk areas, the General Accounting Office has specifically designated risk in resolution of the Y2K problem as high. This report provides coverage of that problem and of the overall Information Management and Technology high-risk area.

Methodology

Audit Type, Dates, and Standards. We performed this economy and efficiency audit from April through June 1998 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 computer-processed data to perform this audit.

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

Management Control Program. We did not review the management control program related to the overall audit objective because DoD recognized the Y2K issue as a material management control weakness area in the FY 1997 Annual Statement of Assurance.

Appendix B. Summary of Prior Coverage

The General Accounting Office and the Inspector General, DoD, have conducted multiple reviews related to Y2K issues. General Accounting Office reports can be accessed over the Internet at http://www.gao.gov. Inspector General, DoD, reports can be accessed over the Internet at http://www.dodig.osd.mil. The following summarizes the Y2K coverage of the unified commands.

Inspector General, DoD, Report No. 98-188, "U.S. Space Command Year 2000 Issues," August 18, 1998. The report states that the U.S. Space Command and component commands have taken actions to address the Y2K problem, but not completed all the actions necessary to minimize the adverse impact of Y2K date processing on its mission and its mission-critical systems.

The report recommended that the U.S. Space Command identify Y2K as a readiness issue and include functional directorates in future warfighter Y2K conferences hosted by the Joint Staff. The report also recommended that the U.S. Space Command develop the following:

- written Y2K management plan;
- complete list of mission-critical systems;
- contingency plans for mission-critical systems that U.S. Space Command manages;
- operational contingency plans for mission areas; and
- comprehensive and complete test plans.

Additionally, the report recommended that the U.S. Space Command complete the identification of interfaces and prepare written interface agreements for mission-critical systems that U.S. Space Command manages; coordinate Y2K solutions and contingency plans with its component commands; and use selected command and joint exercises to test Y2K scenarios and contingency plans in an operational environment when possible. The report recommended the Joint Staff include all functional directorates and component commands in the warfighter Y2K conference. The U.S. Space Command and the Joint Staff concurred with the recommendations of the report. The U.S. Space Command stated that it has initiated action to address the recommendations of the report. The Joint Staff stated that all functional directorates would be invited to the Joint Staff's August 1998 and subsequent Y2K conferences.

Inspector General, DoD, Report No. 98-173, "U.S. Central Command Year 2000 Issues," July 2, 1998. The report states that the U.S. Central Command has taken several positive actions to address its Y2K problem. However, the U.S. Central Command and the Joint Staff have not completed all of the actions necessary to minimize the adverse impact of Y2K date processing in mission and mission-support systems.

The report recommended that the U.S. Central Command monitor and implement DoD Year 2000 Management Plan revisions; complete the identification of mission-critical supporting systems and system interfaces; research Y2K compliance of vendor software and test mission-critical vendor software; prepare written interface agreements; develop contingency plans for U.S. Central Command mission-critical managed and supporting systems and develop operational contingency plans as needed; document tests plans and certify the level of Y2K compliance for managed systems; coordinate Y2K solutions with the Component Commands; and use selected command and joint exercises to test Y2K scenarios in an operational environment. The U.S. Central Command concurred with the recommendations of the report.

The report also recommended that the Joint Staff develop a composite DoD mission-critical database and assist the unified commands in obtaining Y2K information on mission-critical supporting systems that Services or other organizations manage; implement procedures to monitor and track the status of mission-critical supporting systems; assist the unified commands in testing systems and applications common to the unified commands; disseminate Y2K information on commercial off-the-shelf products; and use selected joint exercises to test Y2K scenarios in an operational environment. The Joint Staff concurred with the recommendations of the report.

In an effort to provide assistance to the unified commands, the Joint Staff extracted data from the DoD Y2K Project Office developed systems database and posted it to the Joint Staff Y2K web site. The database was not available on-line because of classification issues. The Joint Staff also stated that it has been facilitating the Joint Interoperability Test Command for Y2K testing of systems owned by the unified commands. Finally, the Joint Staff stated that it is developing a Y2K operational evaluation plan for use by the unified commands and the Services during exercises and other opportunities from now until the Year 2000. In June 1998, the Vice Chairman, Joint Chiefs of Staff, sent a message to the unified commands, Services, and Defense agencies. The message provided a synopsis of the operational evaluation plan, solicited unified command involvement in the Y2K process, and requested feedback on Y2K operational evaluation opportunities.

Inspector General, DoD, Report No. 98-129, "U.S. Special Operations Command Year 2000 Issues," May 8, 1998. The report states that the progress that the U.S. Special Operations Command made in resolving its Y2K problem is not complete. To ensure that its mission-critical systems will successfully operate at the Y2K and beyond, the U.S. Special Operations Command, including its component commands and functional directorates, must address several critical issues. Unless the U.S. Special Operations Command makes further progress, it faces a high risk that year-2000-related disruptions will impair its mission capabilities.

The report recommended that the U.S. Special Operations Command implement revisions to the DoD Year 2000 Management Plan; continue to identify U.S. Special Operations Command managed mission-critical systems and the associated interfaces and for those systems; prepare written interface agreements and contingency plans; continue to identify mission-critical supporting systems that Services or other organizations manage; refine cost estimates for each individual system to determine amounts needed for fund allocation; determine systems as

Y2K compliant only after testing the systems and completing compliance checklists; and use selected command and joint exercises to test Y2K scenarios in an operational environment. Additionally, the report recommended that the Joint Staff assist the unified commands in obtaining Y2K information on mission-critical supporting systems that Services or other organizations manage; assist the unified commands in testing systems and applications that are common to the unified commands; and use selected joint exercises to test Y2K scenarios in an operational environment. The U.S. Special Operations Command and the Joint Staff concurred with the recommendations of the report, stating progress made and future intentions for each recommendation.

Appendix C. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  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)
  Year 2000 Oversight and Contingency Planning Office
Assistant Secretary of Defense (Public Affairs)

Joint Staff

Director, Joint Staff

Department of the Army

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

Department of the Navy

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

Department of the Air Force

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

Unified Commands

Commander in Chief, U.S. European Command
Commander in Chief, U.S. Pacific Command
Commander in Chief, U.S. Atlantic Command
Commander in Chief, U.S. Southern Command
Commander in Chief, U.S. Central Command
Commander in Chief, U.S. Space Command
Commander in Chief, U.S. Special Operations Command
Commander in Chief, U.S. Transportation Command
Commander in Chief, U.S. Strategic Command

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Information Systems Agency
  Inspector General, Defense Information Systems Agency
  Chief Information Officer, Defense Information Systems Agency
  United Kingdom Liaison Officer, Defense Information Systems Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Federal Organizations and Individuals

Chief Information Officer, General Services Administration
Office of Management and Budget
  Office of Information and Regulatory Affairs
Federal Chief Information Officers Council
Technical Information Center, National Security and International Affairs Division, General Accounting Office
Director, Defense Information and Financial Management Systems, Accounting and Information Management Division, General Accounting Office

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

  Senate Special Committee on the Year 2000 Technology Problem
  Senate Committee on Appropriations
  Senate Subcommittee on Defense, Committee on Appropriations
  Senate Committee on Armed Services
  Senate Committee on Governmental Affairs
  House Committee on Appropriations
  House Subcommittee on National Security, Committee on Appropriations
  House Committee on Governmental 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

Part III - Management Comments

U.S. Atlantic Command Comments

DEPARTMENT OF DEFENSE
COMMANDER-IN-CHIEF
U. S. ATLANTIC COMMAND
1562 MITCHER AVENUE SUITE 200
NORFOLK, VA. 23551 - 2488

7000
Ser J00IG4/8U9736
16 July 1998

MEMORANDUM FOR: Inspector General, Department of Defense

Subject: Audit Report on U.S. Atlantic Command Year 2000 Issues
(Project No. 8AS-0006.03)

1. The subject draft report has been reviewed and comments are forwarded as requested as Attachment.

RONALD N. BRAUNHARDT
Colonel, U.S. Air Force
Inspector General

Final Report Reference

DEPARTMENT OF DEFENSE
COMMANDER IN CHIEF
U.S. ATLANTIC COMMAND
1562 MITSCHER AVENUE SUITE 200
NORFOLK VA 23551-2488

IN REPLY REFER TO:
J631B
Ser 8U/

MEMORANDUM FOR: Inspector General, Department of Defense

Subject: Audit Report on U. S. Atlantic Command Year 2000 Issues

1. Comments on report provided in reference (a) are submitted as requested. Our primary concern is the lack of visibility over the status of systems provided by other agencies. USACOM supports the OSD initiative to create a central database to provide status data to all the CINCs and to reduce duplication of effort. Availability of a central database is long overdue. It is imperative that one is made available now.

2. Specific comments:

a. Page 5, first paragraph. Delete "ACOM did not adequately accomplish the following:" Replace with "actions are still on-going in the following areas:" — Revised

Rationale: Accuracy.

b. Page 7, ACOM Supporting Systems: Append "(Other Agency Developed Systems)" to the paragraph heading. — Page 6

Rationale: Consistency. Systems provided to ACOM by other agencies have been reported and documented as Other Agency Developed vice Supporting Systems. All software in use, including ACOM-developed is considered supporting.

c. Page 7, first sentence. Recommend delete: "supporting systems," and "because ACOM has not established a method for monitoring and tracking its supporting systems." — Page 6

Rationale: Accuracy. ACOM had been tracking other agency systems via the DIST database until it was taken off-line in January 98. All information collected was posted on the ACOM Y2K homepage to provide feedback to all ACOM users. The Joint Staff promised imminent access to a new database for all CINCs at the Joint Staff conference in March, 1998. From the outset, the Joint Staff was the designated representative for the CINCs with all Service and Executive Agents to preclude the need for and reduce the redundancy of each CINC contacting every agency independently. The goal was to also eliminate the requirement for each agency to provide the same information to every CINC.

d. Page 7, third paragraph, sixth line. Recommend change "ACOM" to "Joint Staff."

Final Report Reference

Subject: Audit Report on U. S. Atlantic Command Year 2000 Issues

Rationale: Accuracy. The Joint Staff is responsible for establishing alternate procedures for providing this status information to all CINCs and indicated this at the Joint Staff conference in March 1998.

Issues

Page 8

e. Page 9, first paragraph. Recommend change "eight" mission critical systems to "two." Delete entire second sentence.

Rationale: Accuracy. J2 systems, which were designated as critical to the Atlantic Intelligence Command, had not been coordinated as ACOM mission critical. Subsequent discussions determined six of the eight were not mission critical to ACOM.

Page 8

f. Page 9, under Certification and Compliant Checklists, replace the first three sentences with "ACOM has not completed compliance certification checklists for any of the ACOM-managed systems stated to be Y2K compliant."

Rationale: Accuracy and clarity.

3. Comments on recommendations, page 12:

a. We concur that the Directorates should monitor and track the status of mission critical systems and report the status of those systems to the Y2K program office; however, we non-concur that the Directorates should join with functional counterparts at other unified commands to obtain the status of mission critical systems from the Services and Defense agencies.

Rationale: If each unified command independently contacts the Services and Defense agencies to obtain status, the executive agents will be inundated with duplicate requests. A more efficient approach is for the Joint Staff to obtain the status and promulgate the information simultaneously to all the unified commands.

Corrective actions taken: (1) ACOM Y2K office has developed a database in ACCESS to contain the information being sought. (2) Directorates report all GOTS and COTS information to J63 NLT the 5th of each month. Information is provided to the Joint Staff by the 15th of each month.

b. We concur with the reconciliation of the managed-systems inventory to reflect the actual number and status of ACOM systems.

Corrective action taken: Reconciliation was completed on 29 May 1998 although new systems continue to be added.

c. We concur with the requirement for compliance certification checklists

Subject: Audit Report on U. S. Atlantic Command Year 2000 Issues

Corrective action taken: 1 Sep 98 is the established date for completion of all certification checklists.

d. We concur with establishing offices of primary responsibility for non-standard commercial off-the-shelf products and completing reconciliation of compliance discrepancies.
Subject: Audit Report on U. S. Atlantic Command Year 2000 Issues

Corrective action taken: OPRs have been established for all COTS as of 30 June 1998.

e. We concur with developing system and operational contingency plans to establish alternate procedures to successfully accomplish the mission if year 2000 disruptions occur.

Corrective action taken: 31 Dec 1998 is the ACOM established deadline for completion of contingency plans for all GOTS; this date is more aggressive than the OSD deadline.

f. We concur with testing year 2000 scenarios and contingency plans in an operations environment.

Corrective action taken: A recommended plan is being submitted to the Joint Staff per their request. By 24 July 1998 the Joint Staff will develop an operational evalulation plan; ACOM will participate as required.

4. Point of contact is Mrs. Twyla L. Pearson, J631B, DSN 836-7710.

for Bruce W. Condrey COL, USA
JOHN P. CAVANAUGH
Brigadier General, U. S. Army
Director for Command
Control, Communications,
and Computer Systems

References:
(a) Draft DOD IG Audit Report Project No. 8AS-0006.03 of June 18, 1998

Joint Staff Comments

THE JOINT STAFF
WASHINGTON, DC

Reply ZIP Code:
20318-0300

DJSM 803-98
24 July 1998

MEMORANDUM FOR THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Subject: Audit Report on US Atlantic Command Year 2000 Issues (Project No. 8AS-0006.03)

1. The Joint Staff endorses your suggestions to improve the year 2000 posture of the US Atlantic Command (USACOM).[1] We are committed to ensuring the warfighting missions of the combatant commands are conducted without year 2000-related mission degradation.

2. The draft audit report included findings for USACOM. The Joint Staff concurs in concerns expressed in USACOM's management comments, which are shown at the Enclosure.

3. The Joint Staff point of contact for year 2000 actions is Lieutenant Colonel Lucinda Hackman, J-6, (703) 697-1207, DSN 227-1207, lucinda.hackman@js.pentagon.mil.

DC Blair
DENNIS C. BLAIR
Vice Admiral, U.S. Navy
Director, Joint Staff

Enclosure

Reference:
* 1 DOD/IG memorandum, 18 June 1998, "Audit Report on U.S. Atlantic Command Year 2000 Issues (Project No. 8AS-0006.03)"

* Enclosure omitted because it repeats comments that the U.S. Atlantic Command made.

Audit Team Members

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

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