# Audit Report

U.S. PACIFIC COMMAND YEAR 2000 ISSUES

Report No. 99-031 November 3, 1998

Office of the Inspector General
Department of Defense

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**Acronyms**

| | |
|---|---|
| ALCOM | Alaskan Command |
| CINCPACFLT | U.S. Pacific Fleet Command |
| MARFORPAC | Marine Forces Pacific Command |
| PACAF | U.S. Pacific Air Forces Command |
| PACOM | U.S. Pacific Command |
| USARPAC | U.S. Army Pacific Command |
| USFJ | U.S. Forces Japan |
| USFK | U.S. Forces Korea |
| Y2K | Year 2000 |

INSPECTOR GENERAL
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ARLINGTON, VIRGINIA 22202

November 3, 1998

MEMORANDUM FOR COMMANDER IN CHIEF, U.S. PACIFIC COMMAND

SUBJECT: Audit Report on U.S. Pacific Command Year 2000 Issues
(Report No. 99-031)

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 on the draft of this report conformed to the requirements of DoD Directive 7650.3, and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Richard B. Vasquez at (703) 604-9094 (DSN 664-9094) email <rbvasquez@dodig.osd.mil>, Ms. Dianna J. Pearson at (703) 604-9063 (DSN 664-9063) email <djpearson@dodig.osd.mil>, or Ms. Mary Lu Ugone at (703) 604-9049 (DSN 664-9049) email <mlugone@dodig.osd.mil>. See Appendix E 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.

Robert J. Lieberman
Assistant Inspector General
for Auditing

## Office of the Inspector General, DoD

**Report No. 99-031** **November 3, 1998**
(Project No. 8AS-0006.04)

# U.S. Pacific 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 the 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 that 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 progress of the U.S. Pacific Command in resolving its 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. Pacific Command has established a year 2000 program and has taken positive actions to address and resolve its year 2000 problem. However, U.S. Pacific Command needs to improve its year 2000 program to minimize the adverse impact of year 2000 date processing on its mission and on its mission-critical systems. Unless the U.S. Pacific Command, along with the Joint Staff, the Services, and the Defense agencies, makes further progress on mitigating its year 2000 risks, the U.S. Pacific Command may be unable to fully execute its mission. See Part I for details of the audit results.

**Summary of Recommendations.** We recommend that the Commander in Chief, U.S. Pacific Command, include its reconciling and updating responsibility for the U.S. Pacific Command systems inventory in the U.S. Pacific Command Year 2000 Management Plan, establish offices of primary responsibility to monitor and track the status of supporting systems, modify the systems inventory to clearly identify critical year 2000 data elements, develop system and operational contingency plans, develop a complete inventory of all facility infrastructure systems and equipment and determine

the overall responsibility for those items, and use selected command and joint exercises to test year 2000 scenarios and contingency plans in an operational environment when possible.

**Management Comments.** The U.S. Pacific Command concurred with all of the recommendations except the one recommending use of selected command and joint exercises to test year 2000 scenarios and contingency plans in an operational environment. The U.S. Pacific Command stated that it will use separately developed operational evaluations and Joint Chiefs of Staff-directed Positive Response exercises to test year 2000 compliance and contingency planning. See Part I for a summary of management comments and Part III for the complete text of the comments.

**Audit Response.** The U.S. Pacific Command actions met the intent of the recommendation on the use of selected command and joint exercises to test year 2000 scenarios and contingency plans in an operational environment; therefore, management comments are considered responsive and no further comments are required. We also commend U.S. Pacific Command for expediting the necessary actions to address the recommendations of the report.

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# 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, the Y2K 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. Calculating 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 also 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 and 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 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 implementing 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 implementing mission-critical systems is December 31, 1998.

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

On August 7, 1998, the Secretary of Defense asked the Chairman of the Joint Chiefs of Staff to develop a joint Y2K operational evaluation program by October 1, 1998. On October 2, 1998, the Chairman of the Joint Chiefs of Staff provided the Joint Staff Y2K Operational Evaluation Program Plan to the

Secretary of Defense. On August 24, 1998, the Deputy Secretary of Defense directed that each Principal Staff Assistant of the Office of the Secretary of Defense provide plans for Y2K-related end-to-end testing of their respective functional process by November 1, 1998.

Public Law 105-271, "Year 2000 Information and Readiness Disclosure Act," October 19, 1998, is intended to encourage the disclosure and exchange of information about computer processing problems, solutions, test practices and test results, and related matters in connection with the transition to the Y2K.

**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 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. The Joint Staff Director, Command, Control, Communications, and Computer Systems (J-6), is 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.

**Year 2000 Action Plan.** The Joint Staff Year 2000 Action Plan, March 1998, provides the unified commands and Joint Staff directorates with 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. The Action Plan states that the unified commands should target December 31, 1998, to complete all Y2K efforts.

**U.S. Pacific Command.** The U.S. Pacific Command (PACOM) is one of the nine unified commands of the Department of Defense. It was established as a unified command on January 1, 1947, as an outgrowth of the command structure used during World War II and is the oldest and largest of the United States' nine unified commands. The PACOM area of responsibility includes 50 percent of the earth's surface and two-thirds of the world's population. It encompasses more than 100 million square miles, stretching from the west coast of North and South America to the east coast of Africa and from the Arctic in the north to the Antarctic in the south. It also includes Alaska and Hawaii and eight U.S. Territories. The overall mission of PACOM is to promote peace, deter aggression, respond to crises, and, if necessary, fight and win to advance security and stability throughout the Asia-Pacific region.

The PACOM is supported by Component commands from each Service: the U.S. Army Pacific Command, U.S. Pacific Fleet Command, Marine Forces Pacific Command, and U.S. Pacific Air Forces Command. In addition, PACOM exercises combatant command over four sub-unified commands within

the Pacific region. The sub-unified commands are the U.S. Forces Japan, U.S. Forces Korea, Alaskan Command, and Special Operations Command Pacific.

## Audit Objectives

The overall audit objective was to evaluate the status of the progress of PACOM 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, methodology, and summary of prior coverage.

# Status of the U.S. Pacific Command Year 2000 Program

The PACOM has established a Y2K program and has taken positive actions to address and resolve its Y2K problem. However, PACOM needs to improve its Y2K program to minimize the adverse impact of Y2K date processing on its mission and on its mission-critical systems. Specifically, the PACOM needs to:

- include its reconciling and updating responsibility for the PACOM systems inventory in the PACOM Y2K Management Plan,

- establish offices of primary responsibility to monitor and track the status of supporting systems,

- modify the systems inventory to clearly identify critical Y2K data elements,

- develop system and operational contingency plans to establish alternate procedures to accomplish the mission,

- develop a complete inventory of all facility infrastructure systems and equipment and determine the overall responsibility for those items, and

- use selected command and joint exercises to test Y2K scenarios and contingency plans in an operational environment when possible.

Unless PACOM, along with the Joint Staff, the Services, and the Defense agencies, makes further progress on mitigating its Y2K risks, the PACOM may be unable to fully execute its mission.

## Y2K Program Management

The PACOM has taken numerous positive actions to address the Y2K problem, and PACOM senior management has reinforced the importance of the PACOM Y2K program throughout the command.

The PACOM has taken the following actions as part of its effort to address the Y2K problem:

- prepared a draft Y2K Management Plan;

- designated the Command, Control, Communications, and Computer Systems Directorate (J-6) as the PACOM Y2K program office;

- assigned a Y2K project officer to serve as the Y2K focal point for PACOM, as well as its Service Component commands and sub-unified commands;
- established the Y2K Working Group to heighten visibility of the Y2K problem; and
- established the Y2K Executive Steering Committee to obtain more participation from PACOM senior leaders.

**Y2K Management Plan.** The PACOM developed a draft Y2K Management Plan, May 28, 1998, to promote management awareness and involvement in developing and executing the PACOM Y2K strategy. The execution of PACOM Y2K strategy is focused on the duties and responsibilities of the PACOM Y2K Working Group. As of June 1998, the PACOM Y2K Management Plan was in draft form, but has been distributed and coordinated through the PACOM Working Group. The PACOM Y2K Management Plan is currently being updated to include the roles and responsibilities of the newly established Y2K Executive Steering Committee.

The PACOM Y2K Management Plan identifies the roles and responsibilities for the members of the PACOM Y2K Working Group; however, it does not identify the need to update and reconcile the PACOM systems inventory. The Y2K project officer and Y2K Working Group should be responsible for updating and reconciling the PACOM systems inventory.

**Y2K Working Group.** The PACOM Deputy Commander in Chief established the PACOM Y2K Working Group in November 1997. The Y2K Working Group is comprised of working level representatives from the PACOM headquarters functional directorates, Component commands, and sub-unified commands. The Y2K Working Group is tasked to develop a list of critical warfighting systems and a cohesive PACOM plan of action. It also serves as the focal point to address potential Y2K failures within the command as well as being responsible for monitoring Y2K efforts.

**Y2K Executive Steering Committee.** The PACOM Chief of Staff established the PACOM Y2K Executive Steering Committee in June 1998 to obtain more active participation from senior leaders. The Y2K Executive Steering Committee consists of senior leaders (O-6 and above) from PACOM headquarters functional directorates and components. It will develop a consolidated and validated PACOM mission-critical systems list, determine which mission-critical systems will require a contingency plan, and develop the strategy for contingency plans. The PACOM Y2K Executive Steering committee held its first meeting in July 1998.

**Service Component Commands and Sub-Unified Commands.** The PACOM is increasing its awareness of and involvement in Y2K issues over its Service Component commands and sub-unified commands to assess the impact on its mission for mission-critical systems and to develop a complete theater picture. In May 1998, PACOM requested Y2K status information from the Service Component commands and sub-unified commands. In August 1998, the Secretary of Defense issued a memorandum that required each Unified

Commander-in-Chief to review the status of Y2K implementation within his command and the commands of subordinate Components. The Unified Commanders-in-Chief are required to report the status of Y2K implementation to the Secretary of Defense on a quarterly basis. We visited or contacted all Service Component commands and sub-unified commands. Although we did not make recommendations directly to the Service Component commands and sub-unified commands, we suggested that they increase their efforts to provide the Y2K information required by the U.S. Pacific Command and Joint Staff. See Appendix B for a discussion on the Service Component commands and Appendix C for a discussion on the sub-unified commands.

## Systems Inventory

**Managed Systems.** The PACOM is responsible for three managed systems, one of which is mission critical. The PACOM is actively addressing Y2K issues for these managed systems and has taken positive actions to work towards their Y2K compliance. We obtained information on two of the three managed systems, including the Command Center local area network, which is the only mission-critical system that PACOM manages. The PACOM is developing management, testing, and contingency plans for the Command Center local area network, and testing and contingency plans for the Command and Control Support System.

**Supporting Systems.** The PACOM does not have a process in place to obtain the visibility and status of Services and Defense agencies mission-critical supporting systems. The PACOM has identified the lack of information as an area of concern. See Appendix D for the PACOM area of concern. The PACOM needs to establish offices of primary responsibility who will:

- monitor and track the status of Services and Defense agencies mission-critical supporting systems,
- join with functional counterparts at the Joint Staff and other unified commands to obtain the status of Services and Defense agencies mission-critical supporting systems, and
- report the status of Services and Defense agencies mission-critical supporting systems to the PACOM Y2K project office.

**Inventory List.** The PACOM has developed an initial inventory list of managed and supporting systems, but it needs to improve the list for it to be an effective Y2K management tool. Although the PACOM inventory list includes some information about the systems, data elements could be added or modified to provide a clear overall picture of PACOM systems. At a minimum, the PACOM inventory list should clearly identify the following:

- managed and supporting systems,
- mission-critical and non-mission-critical systems,

- a system executive agent,
- a PACOM office of primary responsibility who will monitor and track the status of Services and Defense agencies mission-critical supporting systems,
- system compliance status,
- target dates for system fixes,
- whether contingency plans will be developed and a projected plan completion date, and
- other information needed to match the complete DoD Y2K database that the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) has developed.

The Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) developed a DoD Y2K database. In an undated memo, the DoD Y2K Oversight and Contingency Planning Office decided to post the DoD Y2K database to the Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) web page. In September 1998, the DoD Y2K office removed the DoD Y2K database from the Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) web page due to lack of updated information. 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 Secret Internet Protocol Routing Network (SIPRNET). The DoD Y2K database will facilitate the ability of PACOM and other unified commands to monitor the progress of their supporting systems and to prepare contingency plans for their mission areas.

## Contingency Plans

The PACOM Y2K Management Plan states that the functional directorates, the Service Component commands, and the sub-unified commands must have contingency plans for the unique systems or applications that may not be corrected in time, as outlined in the DoD Y2K Management Plan. Also, the PACOM Y2K Executive Steering Committee identified the requirement to determine which mission-critical systems will require a contingency plan, and to develop the strategy for contingency plans. The PACOM has recognized that it needs to develop contingency plans for its managed systems. The PACOM offices of primary responsibility should request contingency plans for mission-critical supporting systems from the executive agents, and assess them for their impact on operations.

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 apply to day-to-day peacetime operations as well as to warfighting and peacekeeping operations. The PACOM must monitor both the status of its mission-critical systems and their completion schedules when developing contingency plans. The PACOM directorates need to coordinate with the Joint Staff, the Services, and the other 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.

## Facility Infrastructure

The PACOM headquarters is located at a Marine Corps host installation. The Marine Corps Facility Infrastructure Y2K Action Plan, May 1998, states that the base/station commander has the overall responsibility to identify and correct facility infrastructure Y2K problems. The Marine Corps Base Hawaii is responsible for facility infrastructure at Camp Smith and has identified a point of contact for facility infrastructure Y2K issues and data sharing. The PACOM did an initial Y2K assessment of facility infrastructure in October 1997 and identified general categories of facility infrastructure systems, which have been cleared of Y2K issues by the maintenance contractor or local subject-matter experts who provide PACOM with the services. The PACOM identified the commercial power system and the card swipe system that will be affected by Y2K issues.

However, PACOM has not developed a complete inventory of all facility infrastructure systems and equipment and has not determined the overall responsibility for those items. The Marine Corps Base Hawaii is responsible for the facility infrastructure systems; and PACOM is responsible for any unique equipment that has been added to the buildings (generators and card swipe systems). For example, the Marine Corps Base Hawaii is responsible for the standard door locks installed in the buildings, but PACOM is responsible for any special lock added for heightened security. The PACOM needs to develop a complete inventory of all facility infrastructure systems and equipment and needs to determine the overall responsibility for those items.

## Using Selected Command and Joint Exercises for Y2K Operational Evaluation

Because of time constraints posed by Y2K issues, using selected command and joint exercises to test Y2K scenarios may assist PACOM to make further progress to identify and resolve Y2K problems. Further, using selected command and joint exercises would provide PACOM and the unified commands with the opportunity to correct Y2K interoperability issues because of system interdependencies and interfaces or would provide alternative measures if resolution of Y2K issues is not timely. The other Inspector General, DoD,

unified command Y2K reports that have been issued recommended that the Joint Staff and unified commands integrate Y2K scenarios into operational requirements for joint exercises to determine the extent of potential Y2K impact on warfighter operations. The Joint Staff and the unified commands concurred with the recommendation.

Public Law 105-261, "National Defense Authorization Act for FY 1999," October 17, 1998, Section 334 requires that the Secretary of Defense submit to Congress, not later than December 15, 1998, a plan for the execution of a simulated Y2K as part of military exercises to evaluate, in an operational environment, the extent to which information technology and national security systems involved in those exercises will successfully operate during the actual year 2000. Section 334 states that military exercises are those conducted by the DoD during the period beginning on January 1, 1999, and ending on September 30, 1999, including those conducted under the Chairman of the Joint Chiefs of Staff Exercise Program. In addition, Section 334 requires functional end-to-end tests or tests through a Defense Major Range and Test Facility Base as an alternative testing method for those information technology or national security systems for which a simulated Y2K test as part of a military exercise is not feasible or presents undue risk. The Secretary of Defense may exclude a particular information technology or national security system from the Y2K simulation phase of the exercise if the Secretary determines that the system would be incapable of performing reliably during the Y2K simulation phase of the exercise. In this case, the system excluded shall be replaced in accordance with the Y2K contingency plan for the system.

On August 7, 1998, the Secretary of Defense asked the Chairman of the Joint Chiefs of Staff to develop a joint Y2K operational evaluation program by October 1, 1998. On October 2, 1998, the Chairman of the Joint Chiefs of Staff provided the Joint Staff Y2K Operational Evaluation Program Plan to the Secretary of Defense. Also, on August 24, 1998, the Deputy Secretary of Defense directed that each Principal Staff Assistant of the Office of the Secretary of Defense verify that all functions under his or her purview will continue unaffected by Y2K issues. The designated Office of the Secretary of Defense Principal Staff Assistant must provide plans for Y2K-related end-to-end testing of each process by November 1, 1998.

In June 1998, the Vice Chairman of the Joint Chiefs of Staff asked the unified commands, the Services, and the Defense agencies to provide a synopsis of the operational evaluation plan, the unified command involvement in the Y2K process, and requested feedback on Y2K operational evaluation opportunities. The Y2K operational evaluation plan will encourage joint exercises, demonstrations, mission-readiness assessments, tests, or other opportunities to evaluate Y2K readiness. The goal of Y2K operational evaluations is to assure warfighters that their key mission-critical systems will not fail because of Y2K effects on isolated systems or on part of the interconnected systems environment in which warfighting and peacekeeping missions are conducted. In September 1998, the Joint Staff hosted its second Y2K operational evaluation conference. The intent of the conference is for O-6 level operators and exercise

planners to discuss their respective unified command Y2K operational evaluations in context of critical missions and functions that must be accomplished.

Performing command and joint exercises to test Y2K interoperability of system interdependencies and interfaces may not be possible if the Services and agencies have not implemented the necessary Y2K corrections to the required systems. In such cases, contingency plans should be tested in an operational environment to help PACOM assess its capability to continue operations if the systems fail because of Y2K problems.

## Conclusion

Although PACOM established a Y2K program and has taken positive actions to address and resolve its Y2K problem, it needs to improve its Y2K program to minimize the adverse effect of Y2K date processing on its mission and its mission-critical systems. Unless PACOM, along with the Joint Staff, the Services, and the Defense agencies, makes further progress on mitigating Y2K risks, it may be unable to fully execute its mission. We recognize the inherent problems confronting PACOM and other system users who must rely on system owners to carry out the necessary remediation measures. The DoD Y2K database will facilitate the ability of PACOM and other unified commands to monitor the progress of their supporting systems and to prepare contingency plans for their mission areas. Copies of this report are being provided to all unified commands so that self evaluations of Y2K readiness may be facilitated.

## Recommendations, Management Comments, and Audit Response

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

**1. Include the reconciling and updating responsibility for the U.S. Pacific Command systems inventory in the U.S. Pacific Command Year 2000 Management Plan.**

**2. Establish offices of primary responsibility to:**

**(a) monitor and track the status of Services' and Defense agencies' mission-critical supporting systems,**

**(b) join with functional counterparts at the Joint Staff and other unified commands to obtain the status of Services' and Defense agencies' mission-critical supporting systems, and**

**(c) report the status of Services' and Defense agencies' mission-critical supporting systems to the U.S. Pacific Command Year 2000 Project Office.**

**3. Modify the systems inventory to clearly identify critical year 2000 data elements.**

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

**5. Develop a complete inventory of all facility infrastructure systems and equipment and determine the overall responsibility for those items.**

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

**Management Comments.** The PACOM concurred with Recommendations 1. through 5., stating progress made and future actions for each recommendation. However, PACOM did not concur with Recommendation 6., stating that it will use separately developed operational evaluations and Joint Chiefs of Staff-directed Positive Response exercises to test Y2K compliance and contingency plans.

**Audit Response.** The PACOM comments are considered responsive. Although PACOM nonconcurred with Recommendation 6., PACOM has taken action that met the intent of the recommendation. We commend PACOM for expediting the necessary actions to address the recommendations of the report. No further comments are required.

# 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 web page on the IGnet at http://www.ignet.gov.

## Scope

We reviewed and evaluated the status of the progress of PACOM in resolving its Y2K computing issue. We evaluated the Y2K efforts of PACOM compared 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 PACOM Y2K Management Plan and systems inventory status information as of June 1998, and we used the information to assess efforts relating 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 at PACOM from June through August 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 for 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.

## 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.ignet.gov. The following Y2K reports have been issued on other unified commands.

Inspector General, DoD, Report No. 98-194, "U.S. Atlantic Command Year 2000 Issues," August 27, 1998.

Inspector General, DoD, Report No. 98-188, "U.S. Space Command Year 2000 Issues," August 18, 1998.

Inspector General, DoD, Report No. 98-173, "U.S. Central Command Year 2000 Issues," July 2, 1998.

Inspector General, DoD, Report No. 98-129, U.S. Special Operations Command Year 2000 Issues," May 8, 1998.

Army Audit Agency, Memorandum Report No. AA 98-292, "U.S. European Command Year 2000 Issues," July 30, 1998.

Army Audit Agency, Memorandum Report No. AA 98-291, "U.S. Southern Command Year 2000 Issues," July 31, 1998.

Air Force Audit Agency Project No. 98066033, "U.S. Strategic Command Year 2000 Issues," September 29, 1998.

Air Force Audit Agency Project No. 98066032, "U.S. Transportation Command Year 2000 Issues," September 25, 1998.

# Appendix B. Status of the Service Component Commands

The PACOM is increasing the awareness of its Service Component commands to assess the Y2K impact on the PACOM mission. In May 1998, PACOM requested the Service Components to provide Y2K status information. The following paragraphs summarize the status information sent to PACOM and also summarize discussions with the Service Components.

**U.S. Army Pacific Command.** The U.S. Army Pacific Command (USARPAC) has taken an aggressive approach in addressing its Y2K issues and has divided its Y2K effort into two categories: weapon and automation systems, and infrastructure devices. The USARPAC also prepared a Y2K Management Plan outlining its direction in dealing with the Y2K issue and established a Y2K homepage on the Internet to share information throughout USARPAC and with other DoD agencies. The USARPAC developed a detailed inventory of its mission-critical systems to provide USARPAC with oversight for systems that could affect its mission operations. The Y2K strategy of USARPAC is to maintain a list of mission-critical systems being used; to revalidate its Y2K status; to ensure that risk management and contingency plans are in place; and to ensure that Y2K fixes are applied and tested and that system interface issues have been resolved. Although USARPAC has developed a detailed systems inventory to execute its Y2K strategy, it should also identify the program offices that manage systems, projected completion dates, and local points of contact for mission-critical systems.

**U.S. Pacific Fleet Command.** The U.S. Pacific Fleet Command (CINCPACFLT) has not completed its systems inventory. The Navy Systems Commands are responsible for identifying the standard Navy systems that they manage, which are called programs of record. The CINCPACFLT is responsible for identifying all other systems, called non-programs of record. The CINCPACFLT divided its Y2K effort between the regional commands and the type commands, which consist of ships, submarines, and aircraft carriers, and obtained contractor assistance for its Y2K effort. The first facility infrastructure data call occurred in September 1997 with no problems; however, CINCPACFLT performed a prototype facility infrastructure assessment in May 1998 and found numerous Y2K issues. Therefore, CINCPACFLT initiated another facility infrastructure and systems inventory to be completed by September 1998. Because CINCPACFLT has not identified its inventory, it is unable to assess the magnitude of its Y2K problem. Specifically, CINCPACFLT has not identified which systems are critical to its mission. Without a complete inventory, CINCPACFLT is unable to establish the timeframes required to assess the inventory of systems, fix and replace noncompliant systems, test compliant systems, and implement the certified

compliant systems. Because CINCPACFLT cannot assess its Y2K status, we could not determine its Y2K impact on the PACOM mission. We encourage CINCPACFLT to raise its Y2K status to senior management within the PACOM, the Navy, and the DoD Chief Information Officer and Y2K Project Office.

**U.S. Pacific Air Forces Command.** The U.S. Pacific Air Forces Command (PACAF) has taken action to determine whether the computer systems supporting its mission will operate correctly after December 31, 1999. As of June 1998, the PACAF and its air bases use 113 systems managed by the Services and other agencies, of which only 20 are Y2K compliant. Two systems are not expected to be compliant until after December 1998. Additionally, PACAF has 10 unique systems, none of which is considered critical to the PACAF mission. The PACAF is the host of Hickam Air Force Base and therefore is responsible for the facility infrastructure. The PACAF drafted a contingency plan template to incorporate facility infrastructure and information technology issues into one plan. Additionally, PACAF created a Y2K project team, which has completed eight of the nine staff assistance visits. The PACAF is concerned about not getting timely and accurate information from program managers on its support systems.

**Marine Forces Pacific Command.** The Marine Forces Pacific Command (MARFORPAC) works under the guidance and direction provided by the Marine Corps Headquarters, Office of the Chief Information Officer Y2K Action Team. The MARFORPAC established a Y2K coordinator to represent the command in the PACOM Y2K working group. The coordinator is responsible for maintaining a database inventory of information technology hardware, software, and systems, and for tracking the status of systems that MARFORPAC uses. However, the status of the systems is not being disseminated to the users of the systems. Also, MARFORPAC has not established Y2K focal points within the functional units and directorates. The MARFORPAC has identified 75 systems that it uses but does not manage. Of the 75 systems, 22 were identified as mission critical. The MARFORPAC needs to provide an inventory, including mission-critical systems, to the Marine Corps Y2K Project Office. We encourage MARFORPAC to establish Y2K focal points within all functional units and directorates to participate in the Y2K program. We also encourage MARFORPAC to provide its Y2K inventory and its mission-critical systems status to PACOM and the Marine Corps.

In response to our discussion draft report, MARFORPAC stated that it has taken action to enhance information sharing across commands and functional divisions. In addition, MARFORPAC stated that it has taken the following actions:

- established Y2K focal points within the functional divisions,
- established a Y2K working group with participation from all functional divisions, and
- initiated appropriate Y2K reporting.

# Appendix C. Status of the Sub-Unified Commands

The PACOM is increasing the awareness and involvement of its sub-unified commands for Y2K issues to develop a complete theater picture. In May 1998, PACOM sent a message to all sub-unified commands except the Special Operations Command Pacific requesting Y2K information on the status of the headquarters and supporting service Y2K efforts, mission-critical systems, any unique areas, and contingency plans. The following paragraphs summarize the status information sent to PACOM and also summarize the discussions with the sub-unified commands.

**U.S. Forces Japan.** The U.S. Forces Japan (USFJ) headquarters identified local area networks that connect the headquarters staff to command-unique systems. The local area networks consist entirely of commercial of-the-shelf products, and USFJ does not anticipate any major problems with these systems. All local area network components are Y2K compliant or will be Y2K compliant before July 1999. The USFJ has also initiated a test program for the local area networks to verify vendors' Y2K compliance claims. Other systems that USFJ uses are common DoD systems that Services or other agencies manage. The USFJ Y2K project officer is tracking the status of these common DoD systems; however, he stated that his office could not ensure the Y2K compliance of these common DoD systems. The USFJ has three categories of mission-critical systems and is not preparing contingency plans for the local area networks (command-unique systems). The USFJ will develop command-specific contingency plans if and when it determines that applicable Services and agencies are unable to ensure Y2K compliance of the systems that they manage.

The USFJ Y2K status is for the headquarters staff only. The USFJ Service Components report their Y2K status through the Service Component channels. Although the USFJ Y2K status did not contain anything about facility infrastructure, a base working group is addressing facility infrastructure issues. We encourage the USFJ to complete an inventory, assess facility infrastructure systems and equipment, establish clear responsibility for those items, and develop contingency plans for the local area networks that it manages.

**U.S. Forces Korea.** The U.S. Forces Korea (USFK) established a Y2K working group and steering committee, which is chaired by the Deputy Chief of Staff, to work Y2K issues. The USFK reports its Y2K status to the Department of the Army through the 8th U.S. Army Component. The USFK addressed the Y2K issue by implementing a compliant versus noncompliant strategy, with the

focus on finding problems. The DoD Y2K Management Plan endorses a mission-critical versus non-mission-critical strategy so that mission-critical systems are given priority. We encourage USFK to:

- identify and concentrate on its mission-critical systems so that the appropriate executive agents are aware of the systems that are critical to USFK,
- complete an inventory, assess facility infrastructure systems and equipment, and establish clear responsibility for those items, and
- inform the PACOM Y2K program office regularly on the status of its Y2K issues.

In response to our discussion draft report, USFK provided a summarization of their Y2K efforts. The USFK listed the following among their current and future efforts:

- work on contingency plans (mission critical as their priority),
- refine systems inventory list as a management tool,
- work on U.S.-Korean allied systems interfaces,
- conduct operational evaluations in joint exercise opportunities, and
- establish a Korean representative on the USFK working group and steering committee.

**Special Operations Command Pacific.** The Special Operations Command is taking a more active interest in the Y2K issues of its Service Components and sub-unified commands, including Special Operations Command Pacific. In May 1998, the Special Operations Command hosted a Y2K conference to reinforce the importance of Y2K efforts throughout the command. The Special Operations Command will be issuing additional guidance for the Service components and sub-unified commands. We encourage the Special Operations Command Pacific to continue to develop a complete inventory, identify its mission-critical systems, and report its Y2K status to the Special Operations Command and the Pacific Command.

**Alaskan Command.** The Alaskan Command (ALCOM) developed the ALCOM headquarters Y2K status and is developing a composite ALCOM-based Y2K status. The ALCOM Service Components are managed through Service Component headquarters. The ALCOM identified mission-critical systems for all functional areas of the headquarters including managed and supporting systems. The ALCOM wide area network is the only managed system, and it is considered to be mission critical. The ALCOM wide area network is based on commercial off-the-shelf products that are Y2K compliant. The ALCOM stated

that it actively tests the wide area network for Y2K compliance and that it has no known Y2K issues with the wide area network that would require a contingency plan. We encourage ALCOM to:

- engage senior management to review the list of mission-critical systems,
- develop contingency plans for its mission-critical wide area network, and
- complete an inventory, assess facility infrastructure systems and equipment, and determine the overall responsibility for those items.

# Appendix D. PACOM Area of Concern

**Status of System Information.** In June 1998, the PACOM expressed concern to the Joint Staff on the lack of information on the status of systems. The PACOM suggested that the Joint Staff task the Services and system executive agents to provide a functional area list of all mission-critical systems for which they are responsible. The PACOM also stated that, at a minimum, the list should address systems' compliance status, functionality, target dates for fixes, whether a contingency plan will be developed for the system, and a projected plan completion date.

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 DoD Y2K database to the Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) web page. In September 1998, the DoD Y2K office removed the DoD Y2K database from the Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) web page due to lack of updated information. 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 Secret Internet Protocol Routing Network (SIPRNET). The DoD Y2K database will help PACOM and other unified commands to monitor the progress of their supporting systems and to prepare contingency plans for their mission areas.

# Appendix E. 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
Inspector General, Department of the Army

## Department of the Navy

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

## 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
Inspector General, Department of the 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
Inspector General, National Imagery and Mapping Agency
Inspector General, National Reconnaissance Office

## Non-Defense Federal Organizations and Individuals

Chief Information Officer, General Services Administration
Office of Management and Budget
  Office of Information and Regulatory Affairs
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

## Non-Defense Federal Organizations and Individuals (cont'd)

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. Pacific Command Comments

**COMMANDER IN CHIEF, U.S. PACIFIC COMMAND**
**(USCINCPAC)**
**CAMP H.M. SMITH, HAWAII 96861-4028**

J633
7500
Ser: 63U059-8
5 Oct 98

To: INSPECTOR GENERAL, Department of Defense, 400 Army Navy Drive, Arlington, Virginia 22202

Subj: DEPARTMENT OF DEFENSE INSPECTOR GENERAL (DODIG) DRAFT REPORT ON THE U S PACIFIC COMMAND YEAR 2000 ISSUES FOR THE AUDIT OF THE STATUS OF YEAR 2000 COMPUTING ISSUES WITHIN THE JOINT STAFF AND UNIFIED COMMANDS (NO 8AS-0006.04)

Ref: (a) DODIG Draft Report, "U S Pacific Command Year 2000 Issues" of 4 Sep 98

1 DODIG conducted an audit in June 1998, which evaluated the status of USCINCPAC's progress in resolving its Year 2000 computing issues.

2 Reference (a) was provided for review and comments DODIG recommended corrective actions for the Y2K program. We concur with all corrective actions except the use of selected command and joint exercises to test the Y2K scenarios and contingencies plans in an operational environment Our comments to the DODIG's recommendations are as follows

a *"Include the reconciling and updating responsibility for USCINCPAC systems inventory in the USPACOM Y2K Management Plan"*

--**CONCUR** - USCINCPAC J6 is responsible for reconciling and updating Y2K status for the USCINCPAC systems inventory. This responsibility will be reflected in the next revision of the USPACOM Y2K Management Plan The revision will also include an updated Y2K strategy and the creation of an additional Y2K working group. Estimated completion date for the revised Plan is October 1998

b. *"Establish offices of primary responsibility to, (a) monitor and track the status of Services' and Defense agencies' mission-critical supporting systems, (b) join with functional counterparts at the Joint Staff and other unified commands to obtain the status of Services' and Defense agencies' mission-critical supporting systems, and (c) report the status of Services' and Defense agencies' mission-critical supporting systems to the U S. Pacific Command year 2000 Project Office."*

--**CONCUR** - Action is completed. USCINCPAC has designated the J6 Y2K Team as the primary office of responsibility for monitoring, tracking and reporting mission-critical supporting systems. The USCINCPAC Y2K Working Group, consisting of members from each of the staff directorates and component commands, work with their functional counterparts at the Joint Staff and other unified commands to obtain the status of

Services and Defense agencies' mission-critical supporting systems The Y2K Team enters the compiled status into the USCINCPAC Y2K database monthly.

c *"Modify the systems inventory to clearly identify critical Y2K data elements."*

--**CONCUR** - USCINCPAC's database, an inventory list of managed and supporting systems, will be modified through a new automated method USCINCPAC J6 is developing this automated method to extract relevant records/fields from the OSD/C3I Y2K database. The resulting database will clearly identify critical Y2K data elements. Estimated completion date is November 1998.

d *"Develop system and operational contingency plans to establish alternate procedures to accomplish the mission if year 2000 disruptions occur"* System contingency plans for HQ USCINCPAC-unique systems are in place.

--**CONCUR** - J6 is working with J3 to develop operational contingency plans as alternate procedures to accomplish the mission USCINCPAC will participate in the JCS-directed Positive Response exercises to test the operational contingency plans Estimated completion date is June 1999.

e *"Develop a complete inventory of all facility infrastructure systems and equipment and determine the overall responsibility for these items"*

--**CONCUR** - Since USCINCPAC headquarters is located at a Marine Corps host installation, the Marine Corps Base Hawaii (MCBH) is responsible for the Y2K status of all facility infrastructure systems USCINCPAC J4 is responsible for any unique equipment that has been added to the systems The inventory list of all facility infrastructure systems and equipment is now fifty-percent complete and reflects the responsible agency Estimated completion date is October 1998

f *"Use selected command and joint exercises to test Y2K scenarios and contingency plans in an operational environment when possible."*

--**NONCONCUR** - Instead of using command and joint exercises, USCINCPAC will use separately developed operational evaluations and JCS-directed Positive Response exercises to test Y2K compliance and contingency planning We have created an Operational Evaluation Working Group to plan, conduct, and analyze two operational evaluations scheduled for Mar and May 1999. During May and June 1999, USCINCPAC will participate in two Positive Response command post exercises to test our contingency plans for strategic deployment and sustainment Estimated completion date for all scheduled tests is June 1999.

3. POC is CDR A. Allen, J6336, at (808) 477-6715 (DSN 477-6715), or email allenaa0@hq pacom smil.mil.

for JAMES D. BRYAN
Brigadier General, USA
Director for Command, Control,
Communications and Computer
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