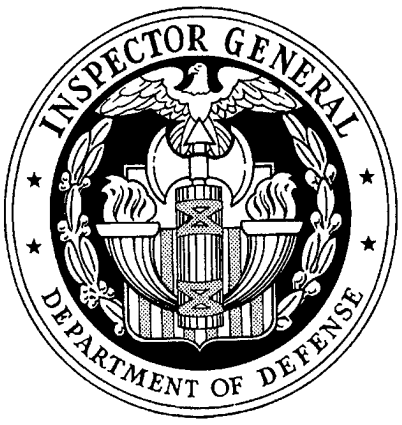
Audit Report



YEAR 2000 WINDOWING TECHNIQUES

Report No. D-2000-190 September 22, 2000

Office of the Inspector General
Department of Defense

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Acronym

Y2K	Year 2000

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

September 22, 2000

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER
DIRECTOR, DEFENSE FINANCE AND ACCOUNTING SERVICE

SUBJECT: Audit Report on Year 2000 Windowing Techniques
(Report No. D-2000-190)

We are providing this report for information and use. We considered management comments on a draft of this report when preparing the final report.

The Air Force and the Defense Finance and Accounting Service comments conformed to the requirements of DoD Directive 7650.3; therefore, additional comments are not required.

We appreciate the courtesies extended to the audit staff. For additional information on this report, please contact Mr. Raymond A. Spencer at (703) 604-9071 (DSN 664-9071) (rspencer @dodig.osd.mil) or Mr. Thomas S. Bartoszek at (703) 604-9014 (DSN 664-9014) (tbartoszek @dodig.osd.mil). See Appendix C for the report distribution. 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. D-2000-190 **September 22, 2000**
(Project No. D2000AB-0058)

Year 2000 Windowing Techniques

Executive Summary

Introduction. The DoD Year 2000 Management Plan provided options including windowing for agencies to fix systems affected by year 2000 anomalies. The DoD conversion period for making systems year 2000 compliant ended in March 2000 with few year 2000 failures experienced. The technique of windowing retains a two digit year to fix year 2000 problems by using a range measure in 100-year increments (100-year window) to convert data to the correct century. For example, a two digit date ending in 50 through 99 would be interpreted by the system as 19XX and a date ending in 00 through 49 would be interpreted as 20XX. When managers of information systems use windowing, they must document and communicate their windowing techniques to all interfacing systems. Otherwise, the use of different windowing techniques by interface partners increases the risk of future system failure due to misinterpretation of the correct century when transmitting and receiving data.

Objectives. Our overall objective was to determine the extent to which windowing techniques were used to remedy year 2000 processing issues. Specifically, we reviewed interfacing agreements and other documentation to determine whether managers using windowing disclosed the technique used to interface partners.

Results. Managers who used windowing techniques generally disclosed them to interface partners. Of the 92 information systems analyzed, 3 had an increased risk of data corruption because the systems' windowing techniques had not been disclosed to all interface partners and the potential impact had not been analyzed. After we identified the problems, the Air Force and the Defense Finance and Accounting Service agreed to take action to identify the windowing techniques used to all interface partners. However, additional steps are required for the three systems because they are at increased risk of future system failure due to transmission and misinterpretation of date-sensitive information between interfacing systems. For details of the audit results, see the Finding section of the report.

Summary of Recommendations. We recommend that the Chief Information Officer, Department of the Air Force, disclose the windowing techniques used by the Air Force Core Automated Maintenance System for Mobility and the Air Force Automated Project Order Form System to interface partners, request the windowing technique of each interfacing system if the windowing strategy was used to address the year 2000 problem, and assess the risk of system failure if different windows were used to interpret the centuries. In addition, we recommend that the Chief Information Officer,

Defense Finance and Accounting Service, disclose the windowing techniques used by the Standard Accounting and Reporting System to interface partners, request the windowing technique of each interface system if the windowing strategy was used to address the year 2000 problem, and assess the risk of system failure if different windows were used to interpret the centuries.

Management Comments. The Chief Information Officer, Department of the Air Force, and the Chief Information Officer, Defense Finance and Accounting Service, concurred with the finding and recommendations. Air Force officials stated that system managers exchanged appropriate information on windowing, revised existing interface agreements when necessary, and performed risk assessments on the affected systems. The Director of Accounting, Defense Finance and Accounting Service, issued a memorandum on August 24, 2000, to all interface partners that fully disclosed the windowing techniques used by the Standard Accounting and Reporting System. The Director requested that all interface partners review the windowing techniques disclosed in the memorandum, disclose the window used by their system if it sends data, evaluate any adverse impact, and contact the Standard Accounting and Reporting System manager to resolve any conflicts. The complete text of management comments is in the Management Comments section.

Table of Contents

Background

The DoD Year 2000 Management Plan provided options including windowing for agencies to fix systems affected by year 2000 (Y2K) anomalies. The DoD conversion period for making systems Y2K compliant ended in March 2000. The technique of windowing retains a two digit year to fix Y2K problems by using a range measure in 100-year increments (100-year window) to convert data to the correct century. For example, a two digit date ending in 50 through 99 would be interpreted by the system as 19XX and a date ending in 00 through 49 would be interpreted as 20XX. When managers of information systems use windowing, they must document and communicate the windowing techniques used to all interfacing systems. Otherwise, the use of different windowing techniques by interface partners increases the risk of future system failure due to misinterpretation of the correct century when transmitting and receiving data.

Objectives

Our overall objective was to determine the extent to which windowing techniques were used to remedy the Y2K processing issues. Specifically, we reviewed interfacing agreements and other documentation to determine whether managers using windowing disclosed the technique to interface partners. See Appendix A for a discussion of the audit scope and methodology and prior coverage.

Windowing Technique Disclosure

Managers who used windowing techniques generally disclosed them to interface partners. Of the 92 information systems analyzed, 3 had an increased risk of data corruption because the systems' windowing techniques had not been disclosed to all interface partners and the potential impact had not been analyzed. After we identified the problem, the Air Force and the Defense Finance and Accounting Service agreed to take action to identify the windowing techniques used to all interface partners. However, additional steps are required for the three systems because they are at increased risk of system failure due to transmission and misinterpretation of date-sensitive information between interfacing systems.

DoD Year 2000 Management Plan

The DoD Year 2000 Management Plan stated that windowing is a strategy that can be used to fix the Y2K problem. The strategy was to document and communicate to all interfacing systems to prevent data corruption and to ensure that systems would interpret the correct century when transmitting and receiving data. To facilitate this strategy, DoD officials used interfacing agreements to allow trading partners to mitigate the potential for error by agreeing on formats and disclosing interface strategies, thus allowing interfacing systems to continue to function and operate.

Sample of Systems Using Windowing Techniques

Using the February 2000 Y2K system inventory databases of the Services and DoD agencies, we selected 92 systems from a universe of 281 systems that were categorized as date dependent, used windowing to correct the Y2K problem, and interfaced with other systems. The sample of 92 systems contained 871 interfaces. Table 1 shows the universe of systems, the sample by Service or DoD agency, and the number of interfaces involved. Appendix B lists each system sampled.

Table 1. Universe, Sample, and Number of Interfacing Systems Where Windowing Techniques Were Used by Service and DoD Agency

Services and DoD Agencies	Universe of Systems	Sample of Systems	Number of Interfaces in Sample
Army	91	26	243
Navy	66	23	199
Air Force	87	30	158
Marine Corps	28	9	75
Defense Finance and Accounting Service	9	4	196
Total	**281**	**92**	**871**

In Table 2, the sample is shown by functional area and Service or agency.

Table 2. Sample of Systems by Functional Area and Service or Agency

Functional Area	Army	Navy	Air Force	Marine Corps	DFAS*	Total
Command and Control	5	5	6	0	0	16
Communications	1	4	2	0	0	7
Finance	0	0	8	0	4	12
Health	0	0	2	0	0	2
Information Management	0	1	0	0	0	1
Intelligence	6	3	0	0	0	9
Logistics	8	4	3	9	0	24
Personnel and Readiness	0	3	0	0	0	3
Space and Weather	0	1	9	0	0	10
Weapons	6	2	0	0	0	8
Total	**26**	**23**	**30**	**9**	**4**	**92**

* Defense Finance and Accounting Service

For each system selected, we reviewed supporting documentation on windowing, such as interfacing agreements, interface control documents that address design implementation of interfaces, system descriptions, Y2K certification checklists, and interface flow charts. For 89 systems, the documents showed the windowing technique used, but the systems did not transmit date information, did not use windowing techniques to correct the Y2K problem, or had been replaced with a new system that used a four digit year. However, we identified two Air Force systems and one Defense Finance and Accounting Service system that used a windowing technique that did not exchange windowing information with interface partners.

Air Force Systems. The Air Force program managers for the Air Force Core Automated Maintenance System for Mobility (G081) and the Automated Project Order Form System did not exchange windowing information with trading partners.

The G081 system provides airlift and tanker aircraft maintenance management information to aircraft engine managers in operational support of the C-5 airlift force. The G081 has nine interfaces and nine interfacing agreements. Of the nine interfaces, the Reliability and Maintainability Maintenance system and the Pratt and Whitney system used windows other than G081. The windows used by G081 and the other two interfaces are shown in Table 3.

Table 3. The Windows Used for the Core Automated Maintenance System for Mobility, the Reliability and Maintainability Maintenance System, and the Pratt and Whitney System

System Description	Window Used	Interfacing Systems	Window Used
Core Automated Maintenance System for Mobility G081	51-99=19XX 00-50=20XX	1. Reliability and Maintainability System	47-99=19XX 00-46=20XX
		2. Pratt and Whitney System	70-00=19XX 01-69=20XX

The Automated Project Order Form System provides the workload and financial status for all end items repaired and identifies the need to make fund adjustments. The system has nine interfaces. Date information was transmitted only to the Project Order Control System interface, which uses windowing techniques and has a different technique than the Automated Project Order System (see Table 4).

Table 4. Windows for the Automated Project Order Form System and the Project Order Control System

System Description	Window Used	Interface System	Window Used
Automated Project Order Form	94-99=19XX 00-93=20XX	Project Order Control System	96-99=19XX 00-95=20XX

The different windows used would create problems for both systems because one system would interpret data sent or received as one century while the other systems could interpret it as a different century. This interpretation would result in data corruption or system failure if the systems failed to recognize the window used by the interfacing party.

On March 24, 2000, we met with Air Force officials who indicated that they were unaware of the different windows for the G081 system and its interfaces. To ensure continual operations without corruption of data due to different interpretation of the date information, officials agreed to identify the century logic technique used to correctly infer the century in all G081 interfaces that send or receive a two digit year. Air Force officials plan to incorporate the century logic technique into the existing memorandums of agreements. In addition, in a May 2, 2000, memorandum, Air Force officials agreed to contact the program manager for the Project Order Control System to identify the window used by the Automated Project Order Form System and reduce the risk of data corruption due to different window techniques.

Defense Finance and Accounting Service System. The Standard Accounting and Reporting System is an accounting system that provides processing and reporting of General Fund accounting functions for the Navy and other DoD organizations. The system has 75 interfaces operating under 39 memorandums of agreement. Only 1 of the 39 agreements mentioned windowing techniques and did not disclose the specific technique used. For all 75 interfaces, officials

could not identify whether the systems received or transmitted date information, identify the windows used when windowing techniques were applied, or determine whether the interface processed date information after it was transmitted or received.

The absence of interfacing agreements, ignorance of solutions for the Y2K problem by trading partners, and uncertainties of transmitted date information all increase the risk of potential system failure.

Officials from the Defense Finance and Accounting Service stated that they would provide a memorandum to all interface partners disclosing the windowing technique used to remedy Y2K processing issues and would solicit the trading partners to disclose their windowing techniques. The officials also agreed, if funding allows, to perform a through risk assessment of different window techniques.

Conclusion

The DoD Year 2000 Management Plan authorized the use of the two digit fix for Y2K anomalies using windowing techniques with a range measure in 100-year increments to convert data to the correct century. It is imperative that each interfacing system can recognize the windowing technique used by other systems to prevent data corruption. A system's interfaces, data exchange formats, protocols, and windowing techniques are usually included in an interface agreement. We found 3 exceptions in our sample of 92 systems. While officials agreed to take some steps, further action is needed. Air Force and Defense Finance and Accounting Service officials must request and obtain from interface partners the windowing techniques employed if a windowing strategy was used to address the Y2K problem. Officials must also assess the risk of system failure if different windows were used to interpret the centuries.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Chief Information Officer, Department of the Air Force, disclose the windowing techniques used by the Air Force Core Automated Maintenance System for Mobility and the Automated Project Order Form System to interface partners, request the windowing technique of each interface system if a windowing strategy was used to address the year 2000 problem, and assess the risk of system failure if different windows were used to interpret the centuries.

Air Force Comments. The Air Force concurred with the recommendation. Officials stated that they exchanged and coordinated with appropriate information systems managers the windowing techniques used by the Air Force Core Automated Maintenance System for Mobility, added an addendum to affected interface agreements documenting their action, and conducted risk assessments of system failure. The risk assessments identified that possible

interface failure could occur in 2049 for all interfaces to the Air Force Core Automated Maintenance System for Mobility except for the interfaces to the Lockheed system and the Reliability and Maintainability System. These systems could fail in 2029 and 2046, respectively. Officials stated that they will assess the remaining life of the systems no later than the year 2025, and take appropriate action by 2045 for possible system interface failures. Officials for the Automated Project Order Form System disclosed the windowing technique used to its interface partners on May 4, 2000, and verified that the system does not process the date information it receives from its interface partners.

2. We recommend that the Chief Information Officer, Defense Finance and Accounting Service, disclose the windowing techniques used by the Standard Accounting and Reporting System to interface partners, request the windowing technique used by each interfacing system if a windowing strategy was used to address the year 2000 problem, and assess the risk of system failure if different windows were used to interpret the centuries.

Defense Finance and Accounting Service Comments. The Chief Information Officer, Defense Finance and Accounting Service, concurred with the finding and recommendation. The Director of Accounting, Defense Finance and Accounting Service, issued a memorandum on August 24, 2000, to all interface partners that fully disclosed all of the windowing techniques used by the Standard Accounting and Reporting System for data sent to or received from interface partners. The Director requested that the interface partners review the windowing techniques used by the Standard Accounting and Reporting System, disclose the window used by their system if it sends data to the Standard Accounting and Reporting System, evaluate any adverse impact, and contact the Standard Accounting and Reporting System manager to resolve any conflicts.

Appendix A. Audit Process

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

Scope

We reviewed and evaluated interface agreements for windowing techniques of interfacing systems external and internal to the DoD and the Services. We evaluated efforts of the Army, Navy, Air Force, Marine Corps, and other DoD agencies when compared to the DoD Year 2000 Management Plan. We conducted discussions with DoD and the Services to evaluate whether all applicable interfacing systems were aware of the windowing technique used.

DoD-Wide Corporate Level Government Performance and Results Act (GPRA) Coverage. In response to the GPRA, the Secretary of Defense annually establishes DoD-wide corporate level goals, subordinate performance goals, and performance measures. Currently DoD had not established a corporate level goal for Information Assurance, the General Accounting Office lists it as a high risk area. This report pertains to Information Assurance as well as achievement of the following goal, subordinate performance goal, and performance measure:

- **FY 2000 DoD Corporate Level Goal 2:** Prepare now for an uncertain future by pursuing a focused modernization effort that maintains U.S. qualitative superiority in key warfighting capabilities. Transform the force by exploiting the Revolution in Military Affairs, and reengineer the Department to achieve a 21st century infrastructure. **(00-DoD-2)**
- **FY 2001 Subordinate Performance Goal 2.5:** Improve DoD financial and information management. **(01-D0D-2.5)**
- **FY 2001 Performance Measure 2.5.3:** Qualitative Assessment of Reforming Information Technology Management. **(01-D0D-2.5.3)**.

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 objective and goal.

Information Technology Management Functional Area.

Objective: Provide services that satisfy customer information needs.
Goal: Upgrade technology base. **(ITM-2-3)**

Methodology

Audit Type, Dates, and Standards. We performed this economy and efficiency audit from February through June 2000, in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. We relied on computer-processed data without performing tests of system general and application controls to confirm the reliability of the database. However, not establishing the reliability of the database will not affect the results of our audit. We relied on judgmental sampling procedures to develop conclusions on this audit. We judgmentally selected DoD mission-critical, date-dependent, interfacing systems, using windowing or other temporary techniques. The Technical Assessment Division, Audit Followup and Technical Support Directorate, Office of the Inspector General, provided expertise in the use of different techniques, including windowing, to address the Y2K issue.

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

Management Control Program

We did not review the management control program related to the overall audit objectives because DoD recognized the Y2K issue as a material management control weakness area in the FY 1999 Annual Statement of Assurance. In addition, the Department's systems successfully made the January through March 2000 transition.

Prior Coverage

General Accounting Office and the Inspector General, DoD. The General Accounting Office and the Inspector General, DoD, conducted about 200 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.

Appendix B. Sample of Systems for Windowing

	Description of Mission-Critical System	Identification Number
Army		
1	Army Total Assest Visibility	DA00935
2	ASAS - Comm Control Sys (BLOCK I) (SEC)	DA00642
3	ASAS-SS/EAC (BLOCK I) (SEC)	DA00639
4	C-12, Fixed Wing, King Air	DA01669
5	C-23, Fixed Wing Sherpard	DA01672
6	C-26, Fixed Wing Comp Fairchild Metro Liner	DA01673
7	Combat Service Support Control System	DA01163
8	Cont Central Comp AN/FSC-115, GSC-63 (SEC)	DA00580
9	DoD Address Directory	DA00914
10	Global Command and Control System - Army	DA02185
11	Guardrail/Common Sensor System 1, AN/USD-9D	DA00627
12	Guardrail/Common Sensor System 4, AN/USD-9C	DA00628
13	Initial Fire Support Automated System (SEC)	DA00605
14	Integrated Meteorological System (IMETS) Block II	DA01161
15	Lightweight Tac. Fire Direction Sys (SEC)	DA00062
16	Logistics Intelligence File	DA00886
17	MLRS - Fire Direction Sys, AN/GYK-37 (SEC)	DA01343
18	RC-12, Guardrail, Fixed Wing Aircraft	DA01676
19	Standard Army Retail Supply System Level 1 Objective	DA00486
20	Transportation Coordinator's Automated C2 Information System	DA00066
21	Trailblazer, AN/TSQ-138 (SEC)	DA00624
22	UC-35A, Fixed Wing, Citation	DA01675
23	U-21, Fixed Wing King Air	DA01674
24	Unit Level Logistics System – Aviation	DA00484
25	Unit Level Logistics System – Ground	DA00483
26	Unit Movement Visability	DA00902
Navy		
1	AN/SMQ-11, Receiver Recorder Set	5642
2	AN/SSN-2 (V) Precise Integrated Navigation System	8459
3	AN/WLQ-4(V) Sea Nymph	8549
4	Aviation Maintenance Material Management	5567
5	CCS REV 6.3	8522
6	Cooperative Engagement Capability 2	8528
7	Global Command And Control System Maritime - Tactical	5512
8	Inactive Manpower And Personnel Management Information	7310
9	Manpower Personnel and Training Management & Administration	10176
10	Naval Aviation Command Management Information System Intermediate Maintenance Activity	5558
11	Naval Aviation Command Management Information System	5559

12	Navigation Command and Control System (NAV/C2)	8462
13	Navy Key Management System	5541
14	Ocean Surveillance Information System Baseline Upgrade/OSIS	5513
15	Shipboard Nontactical ADP Program	5557
16	Reserve Headquarters Support	7406
17	Ships Signal Exploitation Equipment (Tactical Cryptolgic System	5508
18	Shore Signal and Information Processing Segment/Surveillance Direction System	5521
19	Silent Knight (AN/WLQ-4(V)1)	8471
20	Submarine Message Buffer	5538
21	SURTASS- LFA Low Frequency Active	5587
22	Tactical Intel Info Exchange System II/SCI ADNS	5499
23	Trident Integrated Radio Room (CM11)	5534

Air Force

1	Air Force Satellite Control Network - Range Segment	99007977
2	Air Force Satellite Control Network Communications Segment	99007976
3	Analysis of Mobility Platform	AS006482
4	Automated Budget Analysis/Centralized User System	AS006850
5	Automated Business Services System	99003529
6	Automated Patient Evacuation System	AS007017
7	Automated Project Order Form System	99001874
8	Ballistic Missile Early Warning System I	99008001
9	Ballistic Missile Early Warning System II	99008002
10	Ballistic Missile Early Warning System III	99008003
11	Core Automated Maintenance System for Mobility	99002937
12	Central Procurement Accounting System	2000736
13	Defense Medical Regulating Information System	AS007016
14	Defense Meteorological Satellite Program-Ground Segment-MARK IV-B & STT	AS003378
15	Defense Satellite Communication System - Ground Support	99007983
16	Depot Level Maintenance Requirements And Program Management System	1000232
17	Eglin FPS-85	99004756
18	GPS Space Segment	AS003521
19	Job Order Cost Accounting System II	2001287
20	Logistics Information Brokering System	99005004
21	Maintenance Actual Material Cost System	1000205
22	Milstar - Ground Segment	AS003964
23	PAVE PAWS Phased Array Radar	31002615
24	Perimeter Acquisition Radar Charactarization System	31002608
25	Space Defense Operations Center	31002940
26	Space Environmental Support System Ionoshperic Segment	AS003427
27	Space Environmental Support System Operations Segment	99002654
28	Space Environmental Support System Solar Segment	AS003428
29	Spacelift Range - Eastern Range	AS002798
30	Weapon System Cost Retrieval System	2002417

Marine Corps

1	Allotment Accounting Subsystem	5756
2	Computer-Aided Embarkation Management System(USMC)	5683
3	Direct Support Stock Control Subsystem	5754
4	MAGTF Deployment Support System II	5742
5	Mechanization of Warehousing & Shipment Processing	5753
6	Supported Activities Supply System	5777
7	Transportation Coordinators Automated Information for Movements System	5788
8	War Reserve System	5809
9	Wholesale/Retail Stratification	5783

Defense Finance and Accounting Service

1	Data Element Managerial Accounting & Reporting System	AR7206
2	Standard Accounting And Reporting System	DN7306
3	Standard Industrial Fund System	AR6161
4	Standard Operations And Maintenance, Army R&D System	AR7208

Appendix C. Report Distribution

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Director, Defense Logistics Studies Information Exchange

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Auditor General, Department of the Navy

Department of the Air Force

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Department of the Air Force Comments

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

Chief Information Officer

08 SEP 2000

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

FROM: AF-CIO
1250 AF Pentagon
Washington DC 20330-1250

SUBJECT: Draft Audit Report – Year 2000 Windowing Techniques (D2000AB-0058)
(DoDIG 21 Jun 2000 Memo, same subj)

This is in reply to your memorandum requesting the Assistant Secretary of the Air Force (Financial Management and Comptroller) provide AF comments on subject report.

The report recommends the Air Force Chief Information Officer: (1) disclose windowing techniques used by the Air Force Core Automated Maintenance System for Mobility and the Air Force Automated Project Order Form System to interface partners; (2) identify the windowing technique of each interfacing system if windowing strategy was used to address the year 2000 problem; and (3) assess the risk of system failure if different windows were used to interpret the centuries.

Our concurrence with the recommendation and comments are attached.

My POC is Maj Callahan, AFCIC/ITCC, DSN 425-6083, Comm 703-588-6083, michael.callahan@pentagon.af.mil.

Lawrence J. Delaney

LAWRENCE J. DELANEY
Chief Information Officer

Attachment:
Air Force Comments

cc:
HQ AMC/SC
HQ AMC/LG
HQ AFMC/SC
HQ ESC/IG
MSG/CD

Draft Air Force Comments
On
DOD IG Draft Audit Report on
Year 2000 Windowing Techniques
21 Jun 2000
(Prj No D2000AB-0058)

Recommendation #1. We recommend that the Chief Information Officer, Department of the Air Force, disclose the windowing techniques used by the Air Force Core Automated Maintenance System for Mobility and the Automated Project Order Form System to interface partners, request the windowing technique of each interface system if a windowing strategy was used to address the year 2000 problem, and assess the risk of system failure if different windows were used to interpret the centuries.

Air Force Response. Concur.

a. Air Force Core Automated Maintenance System for Mobility (G081) windowing techniques used by G081 and interface partners have been exchanged and coordinated with the appropriate Information System Managers. Addenda to existing interface agreements documenting this action is filed with applicable G081 interface agreements. Risk assessment of system failure due to use of different windows was conducted. The base year of 50 used by G081 was the limiting factor for possible interface failure in 2049 for all G081 interfaces except the following:

(1) G081 to Lockheed - possible failure in 2029 due to Lockheed base year of 30.

(2) G081 to REMIS - possible failure in 2046 due to REMIS base year of 47.

Action will be taken not later than 2025 to access the remaining life-cycle of the G081/Lockheed interface and determine if modification of the G081/Lockheed interface is necessary to mitigate possible interface problems. Any necessary action will be taken not later than 2045 for the remaining interfaces.

b. The Automated Project Order Form System (J025) has one interface that passes one or more date fields. This interface is to the Project Order Control System. The Automated Project Order Form System completed efforts on 3 May 00 to disclose the windowing technique, as described on page 4 of Table 4 of Draft DoDIG Report, to the Project Order Control System. No problem exists because the Project Order Control System does not perform calculations based upon date values received from the Automated Project Order Form System. Based on this information, the risk of system failure is zero.

Attachment

Defense Finance and Accounting Service Comments

DEFENSE FINANCE AND ACCOUNTING SERVICE

1931 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22240-5291
WWW.DFAS.MIL

SEP 1 2000

DFAS-HQ/S

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Audit Report on Year 2000 Windowing Techniques
(Project No. D200AB-0058)

Defense Finance and Accounting Service (DFAS) concurs with your finding and recommendation for Year 2000 Windowing Techniques. The attached outlines the disclosure of windowing techniques used for the Standard Accounting and Reporting System to all its interface partners. Follow on actions will be taken for any identified adverse impacts.

My point of contact for this matter is Richard Farrow, DFAS-HQ/SB, 703-607-3967, richard.farrow@dfas.mil.

C. Vance Kauzlarich
Director for Information and Technology
Chief Information Officer

Attachment
As stated

DEFENSE FINANCE AND ACCOUNTING SERVICE
CLEVELAND CENTER
1240 EAST NINTH STREET
CLEVELAND, OH 44199-2055

(DFAS-CL/ACC.0068)

August 24, 2000

MEMORANDUM FOR STARS INTERFACE SYSTEM PARTNER

SUBJECT: Full Disclosure of Y2K Windowing Techniques Between Interface Partners

As part of the remediation process for the Year 2000, the Standard Accounting and Reporting System (STARS) used windowing techniques in many instances to accommodate either inbound or outbound interfaces with other financial management Automated Information Systems (AISs). The Defense Finance and Accounting Service Cleveland Center (DFAS-CL) followed all prescribed DFAS and DoD guidelines.

In a post Y2K review of windowing techniques, the DoD Inspector General (DoDIG) identified the risk of future compromised financial data because STARS and STARS interface partners did not fully disclose the windowing techniques used. As recommended, this memorandum provides full windowing technique disclosure. For those interface partners who send data to STARS, we request full disclosure of your windowing techniques so we can review for potential impact on STARS.

The following windowing techniques were employed for STARS:

System/Data Description	Window Used
If data is sent to/received from STARS Field Level (STARS-FL)	80-99 = 19XX 00-79 = 20XX
If data is related to STARS One Pay *General Funds*	80-99 = 19XX 00-79 = 20XX
If data is related to STARS One Pay *Working Capital Funds* or to the U. S. Army	60-99 = 19XX 00-59 = 20XX
If data is sent to/received from STARS Headquarters (STARS-HQ)	60-99 = 19XX 00-59 = 20XX
If data is sent to/received from STARS Financial Departmental Reporting (STARS-FDR)	None

SUBJ: Full disclosure of Y2K windowing techniques between interface partners

We request that the system manager or designated point of contact for this system:

1. Review the windowing techniques above for possible impact.
2. If an adverse impact within the expected life of your system is a concern, contact the DFAS-CL STARS Directorate POC listed below.
3. If your system also (or only) sends data *to* STARS, complete the attached form (Attachment A) and fax to STARS Directorate, Attn: Tim Adams, at 216-522-6592/DSN 580-6592.

Your assistance in this matter is appreciated. My points of contact for this matter are Tim Adams or Shirley Ross, STARS Directorate, 216-522-8448, tim.adams@dfas.mil or shirley.ross@dfas.mil.

Jeffery A. Yokel
Director of Accounting

Request for Disclosure of STARS Interfacing Partner Y2K Windowing Technique

1. Does the system for which you are responsible send data *to* the Standard Accounting and Reporting System (STARS)? ☐ Yes (continue with this form)
   ☐ No (STOP! You do not need to complete or return this form).

2. What is the name and acronym of your system?

   _____

3. What windowing techniques were used by your system as a remediation tool for the Y2K problem?

   a. ☐ A pivot year of 19____ was used to determine what two-digit years are assigned a century of 19 and what two-digit years are assigned a century of 20.

   b. ☐ No windowing technique was used or required since all date data bases contain 4-digit years.

   c. ☐ Other_____

4. Point of contact for this system (System Manager or designated POC) (please print):

   a. Name: _____

   b. E-mail mail address: _____

   c. Activity name and code:

      _____

   d. Commercial telephone number:

      _____

5. Date form completed: _____

Please fax this completed form to DFAS-CL, STARS Directorate (Attn: Tim Adams) at 216-522-6592

Attachment A

Audit Team Members

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

Thomas F. Gimble
Mary L. Ugone
Raymond A. Spencer
Thomas S. Bartoszek
Lisa E. Novis
Thomas J. Hilliard
Noble C. White
Carrie J. Gravely
Sarah L. Brownell
Chanda D. Lee
Trisha L. Staley
Douglas Reed
Herbert K. Braun
Krista S. Gordon

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Inspector General, Department of Defense
400 Army Navy Drive (Room 801)
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DTIC-OCA, Initials: __VM__ **Preparation Date 10/04/00**

The foregoing information should exactly correspond to the Title, Report Number, and the Date on the accompanying report document. If there are mismatches, or other questions, contact the above OCA Representative for resolution.