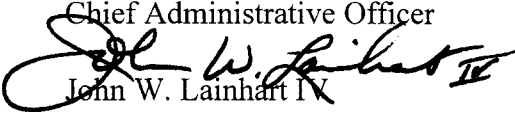


John W. Lainhart IV
Inspector General

Office of Inspector General
U.S. House of Representatives
Washington, DC 20515-9990
MEMORANDUM

TO: James M. Eagen III
Chief Administrative Officer

FROM: 
John W. Lainhart IV
Inspector General

DATE: September 29, 1997

SUBJECT: Audit Report - House Needs To Refocus It's Efforts To Meet The Year 2000
Deadline (Report No. 97-CAO-13)

This is our final report of our audit of HIR's progress in identifying and resolving Year 2000 issues. The objectives of this audit were to (1) evaluate the adequacy of the House's Year 2000 plan, (2) assess the status, allocation of priorities and resources, and timetable for completion of the Year 2000 initiative, (3) determine whether generally accepted project management techniques have been established, and (4) identify whether vendor supported hardware/software products will be Year 2000 compliant. In this report, we identified Year 2000 management controls involving planning, budgeting, internal and external coordination issues, procurement, and conversion practices that can be improved. We also found that the House is only at the initial stages for OSM and FMS Payroll replacement efforts which leaves no time for unanticipated problems or delays.

In response to our September 11, 1997 draft report, your office concurred with our findings and recommendations. Your September 9, 1997 management response is incorporated in this final report and included in its entirety as an appendix. The corrective actions taken and planned by your office are appropriate and, when fully implemented, should adequately respond to the recommendations contained in this report and other long-standing recommendations contained in prior OIG reports. Further, the milestone dates provided for implementing the corrective actions appear reasonable.

We appreciate the courtesy and cooperation extended to us by your staff. If you have any questions or require additional information regarding this report, please call me or Robert B. Frey III at (202) 226-1250.

cc: Speaker of the House
Majority Leader of the House
Minority Leader of the House
Chairman, Committee on House Oversight
Ranking Minority Member, Committee on House Oversight
Members, Committee on House Oversight

HOUSE NEEDS TO REFOCUS ITS EFFORTS TO MEET THE YEAR 2000 DEADLINE

I. INTRODUCTION

The Year 2000 date change is one of the most significant changes ever faced by the Information Technology industry. It will have an enormous impact on business applications, package solutions, and system software, potentially even putting some companies out of business. The date change has the potential to cripple an organization's ability to execute its critical business functions. It impacts everything from payroll and pension calculations to budgeting to electronic data transfer. Failures can include programs ending abnormally, or worse, returning incorrect results. Even applications that do not use dates are at risk, as they may depend on others that do. It is estimated that companies in the United States will spend billions of dollars addressing the software changes required by the coming millennium. What makes this problem so daunting is its magnitude, not its technical complexity. The biggest challenges to be faced by the House of Representatives (House) are keeping tight project control of the effort and securing active House-wide participation. The Year 2000 initiative has a deadline that cannot be extended.

House Information Resources' (HIR) April 1997 Year 2000 plan represents the House's first, formal attempt to present an organized response to a problem facing the rest of the Federal government and private sector entities that depend on computers to sustain their operations. The information presented in this report will show that, while the House is addressing this issue head-on, it is ill-prepared to handle the problems that have been identified. The House is not prepared to implement its Year 2000 initiative from the project management, planning, budgeting, resources, and priorities perspective that would ensure success in this time-critical endeavor.

Background

The cause of the Year 2000 problem is relatively simple. Until very recently, computer storage was at a premium, so programmers were encouraged to save space and eliminate redundant data wherever possible. Date information was a prime candidate for space reduction because a date such as January 31, 1997 could be represented by six numbers: 970131. However, the continued use of the current two-digit year representation will cause many basic functions of computer systems to fail in the Year 2000. For example, an automated pension program may calculate a person's retirement by subtracting the birth year from the retirement year (i.e., 1997 minus 1942 equals 55 years). However, the computer actually subtracts 42 from 97 to get 55. But in the year 2000, the same 2-digit computer calculated retirement age will be 00 minus 42 which equals a negative 42--the computer does not 'know' that "00" represents "2000." Vast amounts of stored data and program instructions are still in this old format. No one commissioning or writing code in the 1970's and 1980's thought their systems would survive into the 21st century, yet they are still in use in many organizations today, including the House.

If corrective actions are not taken before the Year 2000 arrives, most, if not all, of the House's systems, including the mission-critical ones (e.g., Legislative Information Management System

(LIMS), Office Systems Management (OSM), and Financial Management System (FMS Payroll)), may fail or produce erroneous data. House systems that project future dates such as HIR's MONIES (Management Of Network, Income, Expense, and Services) and OSM have already experienced Year 2000 date recognition problems. Before the Year 2000, the House must complete a comprehensive Year 2000 initiative which includes identifying its computer systems and software and converting problematic date fields using appropriate system development life cycle techniques. While the problem is primarily mainframe-based, it also affects client/server networks, workstations, distributed systems, telecommunication systems, networks, and computer-controlled devices. Possible solutions to the problem include either system migration, modification, replacement (e.g., commercial off-the-shelf systems), or system retirement. No matter which solution or combination of solutions is employed, the House needs to ensure that it is ready for the Year 2000.

Objectives, Scope, And Methodology

Due to the increasing urgency of preparing for the Year 2000, the Office of Inspector General has initiated this first of a series of periodic "snapshot" reviews of HIR's progress in identifying and resolving Year 2000 issues. Our December 31, 1996 audit report entitled, "*Improvements Are Needed In The Management And Operations Of The Office Of The Chief Administrative Officer,*" (Report No. 96-CAO-15), included a recommendation for the Acting Chief Administrative Officer (CAO) to prepare a comprehensive Year 2000 strategy. We consider this December 1996 audit report a baseline for Year 2000 issues against which this and follow-up audits will be targeted. This audit focused on HIR's newly developed Year 2000 plan to determine if the House is positioned to resolve Year 2000 issues in a timely manner. We plan to conduct additional reviews at critical phases throughout the House's Year 2000 initiative.

The objectives of this review were to (1) evaluate the adequacy of the House's Year 2000 plan, (2) assess the status, allocation of priorities and resources, and timetable for completion of the Year 2000 initiative, (3) determine whether generally accepted project management techniques have been established, and (4) identify whether vendor supported hardware/software products will be Year 2000 compliant. In light of the managerial deficiencies identified in our recent audit of HIR's management practices (*HIR Management Practices Undermine The House's Ability To Keep Pace With Technological Changes*, report no. 97-CAO-09, dated May 8, 1997), we also looked at techniques employed and decisions made by those given the responsibility for managing the Year 2000 initiative. Successful implementation of this initiative requires a similar level of project management and techniques as in a single, large information system development effort.

Our audit covered the period April 1997 through June 13, 1997, and was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States. Since the House has recently prepared its Year 2000 plan, only limited documentary evidence was available. Thus, most of the information provided was based on numerous interviews with officials involved in the Year 2000 issue. Also, since this review was meant to be a "snapshot" in time, it may not include management actions taken after our cutoff date to remedy problems reported herein. Our next review will address any such issues in full.

Internal Controls

During this review, we evaluated internal controls over the Year 2000 initiative. The internal control weaknesses we identified are described in the *Results of Review* section of this report.

Prior Audit Coverage

Improvements Are Needed In The Management And Operations Of The Office Of The Chief Administrative Officer (Report No. 96-CAO-15, dated December 31, 1996). This audit addressed Year 2000 activities and determined that HIR had not yet developed a plan for minimizing the potential impact that the Year 2000 will have on the House. This report concluded that the House had not assigned a team leader, assessed the office level systems within the House environment, or conducted an analysis to determine the impact of phasing out the legacy application systems. The report recommended that the Acting CAO prepare a comprehensive strategy addressing the potential impact of the Year 2000 issue for review and approval by the Committee on House Oversight (CHO). The Acting CAO concurred with the audit recommendation. In response, he instructed HIR to develop project management policies and procedures to ensure appropriate planning and conversion for the Year 2000 issue addressing the establishment of priorities and target dates for the phases of conversion including adequate testing for all the systems. The Acting CAO also agreed to appoint a project manager to oversee the conversion team, which will have representatives from all areas of HIR.

HIR Management Practices Undermine The House's Ability To Keep Pace With Technological Changes (Report No. 97-CAO-09, dated May 8, 1997). This audit concluded that HIR has failed to timely address and develop a viable solution/plan to minimize the impact of the Year 2000 problem, and that HIR has not established certain minimal control practices such as project management, quality assurance, and change control. In response to the report, the Acting CAO agreed to improve the HIR management processes which, in turn, should positively impact the Year 2000 effort.

II. RESULTS OF REVIEW

HIR¹ has recognized and is working towards meeting the Year 2000 challenge. To date, HIR has (1) prepared a high-level Year 2000 plan for approval by the CHO, (2) appointed a project leader and assigned personnel to work on the initiative, (3) estimated some costs, prioritized tasks for mission-critical projects, and prepared broad target dates, (4) sent survey letters to commercial vendors asking if their products will be Year 2000 compliant, and (5) initiated action to reprogram date fields for LIMS. In addition, the House is continuing its efforts to replace the FMS Payroll system through the preparation of a contractor statement of work that will result in a needs analysis and the development of a request for proposal (RFP). However, House

¹ In some instances we refer to HIR as the organization responsible for Year 2000 tasks and in others we refer to the House. When we initiated this audit, we anticipated dealing with a Year 2000 project manager having responsibility for all House Year 2000 issues. We quickly discovered that many Year 2000 tasks were being addressed by various organizations throughout the House with limited coordination and the Project Leader had no authority outside his immediate organization within HIR.

management has to refocus its objectives, dedicate additional resources, and reassess its priorities in order to meet the Year 2000 challenge.

Additional Actions Needed Which Are Critical To The Year 2000 Initiative

In attempting to recognize the positive aspects of the work HIR has done in preparation for the Year 2000, we should also point out that its efforts to date have merely scratched the surface of an issue that should have been addressed years before. Because the urgency of this issue was not adequately recognized, HIR may have to redouble its efforts in order to become Year 2000 compliant. Specifically, we found that the HIR has not (1) established effective project management controls, (2) met general government Year 2000 milestones, (3) prepared a comprehensive Year 2000 plan covering critical stages of the initiative or disposition of all systems, (4) adequately estimated the Year 2000 initiative costs or budgeted sufficient funds, (5) sufficiently coordinated Year 2000 efforts with external groups, (6) incorporated Year 2000 warranty language in its procurement contracts to guarantee compliance on future information technology purchases, and (7) secured software tools or contractor support to assist in the conversion effort. We also found that the House is only at the initial stages for OSM and FMS Payroll replacement efforts which leaves no time for unanticipated problems or delays.

Effective Project Management Controls Are Needed

Effective project management controls have not been established. The Year 2000 solution is not strictly, or primarily, a technical challenge. It requires sound planning and good management to be successful. While a project leader has been assigned, this official has not been given the formal authority to lead the overall effort and is only acting as a "coordinator" for internal HIR issues. Moreover, the project leader spends only 15 percent of his time on Year 2000 issues, and, according to him, 90 percent of that time is focused on mainframe application systems. In our view, the Year 2000 project leader position is more than a part-time job; it requires a full-time effort at critical stages. We also found there are at least 16 employees (including those working on the physical conversion of the LIMS date fields) involved in the Year 2000 effort in some capacity, yet no formal charter outlining their specific roles and responsibilities exists. In addition, HIR has not instituted regular meetings (internal or external to HIR) to track progress and share information on Year 2000 readiness, nor have status or progress reports been utilized to keep senior management informed on an ongoing basis. Thus, no organized attempt has been established to track and measure the progress in addressing the Year 2000 effort. Omitting such key project management elements could hinder the success of the Year 2000 initiative.

When we asked the project leader about the status of OSM and FMS Payroll replacements, he indicated that he has not taken the lead on these and referred us to OSM and Finance, respectively. If, in fact, these systems are outside the purview of the project leader, this fact needs to be acknowledged in the charter. Also, the project leader told us he has no authority over the internal HIR Year 2000 groups such as those in Communications, Enterprise Computing, Client Services, and the Internet Services Group. He told us his role as project leader was only to coordinate with these other HIR groups and did not see these groups playing a big role in the effort. Discussion with Communications and Enterprise Computing personnel indicated that they

are keeping the project leader informed on their progress, but that there was no mandatory hierarchy that requires them to directly report to him while the initiative is ongoing. As a result, the tasks attributed to the project leader have not been adequately addressed. For instance, the responsibility has not been taken for concurrent tasks, prerequisites (e.g., addressing operating systems changes before applications are integrated), internal and external coordination, and Year 2000 language for procurements. Also, while many of the HIR groups have issued letters to vendors requesting the status of Year 2000 products they distribute or support, the Client Services group has not sent letters to vendors of products listed on the "House Supported Software List." Instead, they are looking to an Internet web site that posts software products that are, or will become, Year 2000 compliant. While this may be an acceptable, supplemental tool, it cannot match the completeness or timeliness of vendor letters. This type of oversight would normally have been identified by the project leader. While HIR had good intentions in appointing a Year 2000 project leader, the effort is somewhat diminished if the project leader's primary role is oriented towards mainframe application efforts, rather than focusing on other, more "global" aspects of the initiative.

Fixed Year 2000 Deadline Leaves Little Time For Delays

Based on general government Year 2000 milestones,² we believe the House is behind in its efforts to remedy the Year 2000 problem. The government milestone for completion of the awareness phase, where the overall Year 2000 strategy is approved and which is the first of five phases, was December 1996. HIR's Year 2000 plan, which is a high-level plan containing few detailed steps (and which has only recently been submitted to the CHO for approval on May 19, 1997), is still undergoing changes. Further, while HIR has completed portions of the assessment or second phase, it has not developed detailed system plans and schedules for which the recommended milestone is June 1997. Delays in these initial two phases places the timeliness of completion of the final three phases in question.

While most of the 200 systems in the House will be affected by the Year 2000 problem, the Year 2000 plan highlighted 3 high priority, mission-critical projects--replacement of OSM and the FMS Payroll module, and the conversion of LIMS. We were told by the Year 2000 project leader that the House is "rapidly approaching the behind stage" on implementing Year 2000 solutions for these systems. Immediate decisions and actions are needed on the OSM and FMS Payroll module replacement efforts to ensure a timely solution. While the initial conversion work for LIMS has begun, such major steps as retaining contractor assistance and obtaining appropriate software tools need to be initiated. Further, the Year 2000 project leader indicated that the time-frames in the Year 2000 plan for these mission-critical systems and other systems are only general estimates that still need to be refined. Many of the smaller systems will not be made compliant until 1999. Moreover, while we generally found a sense of urgency regarding the Year 2000 initiative, that sense of urgency was not apparent for the OSM replacement or the smaller systems. If the House expects to meet the Year 2000 deadline, the CAO needs to make it clear that the Year 2000

² Office of Management and Budget, in consultation with the Chief Information Officer Council, has set government-wide milestones for completion of each phase of Year 2000 activities. These include Awareness--December 1996, Assessment--June 1997, Renovation--December 1997, Validation--January 1999, and Implementation--November 1999. (See Exhibit, page 14, for an explanation of each of these phases).

initiative should be one of their highest priorities, and provide or request sufficient resources to carry it out.

Renovation, Validation (Testing), And Implementation Phases Not Sufficiently Detailed In The Year 2000 Plan

The generally accepted makeup of a successful Year 2000 plan includes five distinct phases that provide an organized approach to identifying and implementing a solution. (See Exhibit, page 15). However, the House's Year 2000 plan primarily covered only the first two phases (Awareness and Assessment). While we did find broadly stated elements of the other three phases (Renovation, Validation, and Implementation) in the Plan, these phases were neither spelled out in detail, nor were there references to future provisions in the Year 2000 plan for their completion. Of the five phases involved in a Year 2000 plan, the last three generally account for about 75 percent of the time and cost of the initiative. The Validation phase alone, which includes testing, may take over a year to complete and may actually consume about half of the Year 2000 budget and resources. Since these phases primarily drive budget and resources requirements, it is critical to incorporate them early on in the Year 2000 initiative.

Detailed implementation plans for the Renovation phase need to be developed immediately for all systems. These plans should help in determining the resource requirements and detailed schedules. Pre-requisites for the Validation phase need to commence as well, including the development of detailed test methodologies and test plans. Methodologies should be developed to run different tests which ensure that corrections are functioning according to design and that ties to external customers and systems do not compromise the effectiveness of the House's Year 2000 compliant systems. Furthermore, plans need to be made to ensure effective quality assurance and system, integration, and acceptance testing are carried out. These tests should be as rigorous as tests used in initiating new systems. While we were told testing capacity within HIR should not be a problem and that they have budgeted for software testing tools, capacity planning and scheduling requirements need to be determined and verified to ensure sufficient computer resources can be allocated for testing purposes.

Since Year 2000 is a phased process and detailed implementation plans are not available on a system-by-system basis, we believe HIR would benefit by preparing a follow-on document to the existing Year 2000 plan which addresses in detail the latter three phases of the initiative. One source of information on strategies for these three phases is the Chief Information Officer (CIO) Council Subcommittee on Year 2000, which provides group sessions on Year 2000 issues. Participants have gained valuable information and excellent opportunities to share experiences and ideas with others engaged in similar efforts.

Cost Estimates May Fall Short Of Actual Funds Needed

Based on current industry practices/standards covering Year 2000 conversion costs, it is possible that HIR's cost estimates³ may fall short of actual funds needed for this initiative by as much as \$2,387,000. HIR's Year 2000 plan estimates costs for the initiative at \$1,243,000--which equates to roughly \$1.00 per line of code times 1.25 million lines of code.⁴ We found that HIR's estimate for lines of code and rate per line for the initiative may be understated as follows.

	<u>Lines of code</u>	<u>Rate per line</u>	<u>Totals</u>
HIR estimate	1,250,000	\$.9944	\$1,243,000
OIG estimate	1,650,000	\$2.20	\$3,630,000
HIR understatement			(\$2,387,000)

While a November 1996 Year 2000 contractor report estimated the lines of code at 1.29 million, the same contractor indicated a change in the number of lines to 1.65 million in a March 1997 update to its initial report. The second report attributed the line increase to the fact that certain House applications were not included in the initial inventory. When presented with these contradictory numbers, the Year 2000 project leader said the 1.65 million was incorrect, but provided no rationale for this position. (The contractor did not provide HIR with any of the supporting work papers for the original or the updated numbers so neither HIR nor we can determine the accuracy of the contractor's numbers.) Even if we use HIR's lower rate per line,⁵ at 1.65 million lines, the estimate is still short by about \$400,000.

Moreover, the \$1.00 rate per line of code may be understated. The Gartner Group's 1997 estimate⁶ puts the rate per line of code at \$2.20.⁷ This rate can be used with the actual number of lines of code in an organization to determine a rough Year 2000 cost estimate for budget purposes. We used the \$2.20 rate because it represents one of the most current, comprehensive, generally accepted industry benchmarks available. Also, since HIR has limited actual cost data for the remaining three project phases--which account for the majority of a Year 2000 initiative costs--we felt that the \$2.20 rate should be used until better cost data is available. One method that can reduce this rate is to use in-house resources rather than contracting-out, however, the mix of services needed has not as yet been determined. In addition, the number of lines could be reduced if certain Group 3 support systems are not converted, a decision which has yet to be made.

In addition, the Gartner Group also estimates needing one FTE for every 100,000 lines of codes. At 1.6 million lines of code, this would equate to approximately 16 FTE's. HIR's Year 2000 plan indicates that eight FTE's are available in FY 1997, but in our discussions with HIR we were told that there are a number of employees participating in the initiative on a part-time basis from various groups and that five of them are working on LIMS, but only on a part-time basis. HIR's

³ Estimates do not include the FMS Payroll module and OSM replacement costs.

⁴ A generally accepted method of estimating Year 2000 costs is to multiply the number of lines of source code in an application(s) by the current rate per line. Programmers, with the assistance of available software tools, review the individual lines of source code to locate and convert date fields.

⁵ HIR said it was purely coincidental that the 1.25 million lines equated to about \$1.00 rate per line.

⁶ Gartner Group, Inc. is recognized as one of the authorities on the Year 2000 issue.

⁷ The Gartner Group estimated rate for converting a line of code was at \$1.10 in 1996 and the current rate is \$2.20 a line. Other estimates per line are as high as \$8.80 as the Year 2000 deadline approaches.

approach, which involves converting from a 2-digit to a 4-digit date field, requires the greatest amount of resources since all date related files and programs which handle date routines would have to be identified and then altered. However, HIR has not prepared a level of effort analysis for this initiative which would help solidify resource requirements for individual tasks. While our cost estimates may be high, we would rather ensure that the level of funding and the number of resources are adequate to complete this critical initiative, as opposed to using what we believe are unsupported and unrealistic estimates.

HIR Has Not Budgeted Sufficient Funds For The Year 2000 Conversion Initiative

HIR estimated the Year 2000 initiative will cost about \$1,243,000 but has not ensured adequate funds have been budgeted for this initiative. The Year 2000 plan calls for \$368,000 in 1997 to initiate the work, however, this amount was not incorporated into HIR’s FY 1997 budget request. In fact, HIR did not specifically request any funds in FY 1997 for the Year 2000, but has subsequently made \$20,000 available.

The Year 2000 plan also calls for \$755,000 for FY 1998, but to date no funds have been approved for 1998. Again, the total amount anticipated for FY 1998 was not incorporated into HIR’s budget justification process. We found that HIR’s FY 1998 budget submission to the CAO requested only \$450,000 for the Year 2000 conversion effort, but contained no details to support this cost estimate. We were told this amount represented all the money HIR could “scrape together” without disrupting other projects. Because this estimate appeared low, the Acting CAO subsequently added \$500,000 to the request before it was submitted to the Subcommittee on Legislative of the Committee on Appropriations. The Year 2000 plan estimates that \$120,000 is needed for FY 1999, however, the FY 1999 budget process has not started. The chart below illustrates the funds planned, requested, and funded to date for Year 2000.

<u>Year</u>	<u>Year 2000 Plan⁸</u>	<u>Budget Request</u>	<u>Funded</u>
FY 1997	\$368,000	--	\$20,000
FY 1998	<u>755,000</u>	<u>\$950,000</u>	--
Subtotal	\$1,123,000	\$950,000	\$20,000
FY 1999	<u>120,000</u>	--	--
Totals To Date	\$1,243,000	\$950,000	\$20,000

Because HIR has not ensured the budgeting of sufficient funds, they have not procured the necessary resources critical to the Year 2000 initiative. For example, HIR has not been in a position to purchase any software tools to assist with software conversion or hire a contractor for LIMS to assist with the Year 2000 renovation. Even if the FY 1997 funds and the FY 1998 requested funds (totaling \$970,000) are available, this funding level falls short of HIR’s projection (\$1,123,000) by \$153,000.

Coordination Of Year 2000 Solutions Outside The House Is Needed

⁸ These numbers first appeared in an April 1997 draft HIR’s Year 2000 Plan and do not link to HIR’s budget process.

The House, like other organizations facing the Year 2000 issue, is vulnerable in areas outside of its control, such as interfaces with the automated systems of other Legislative and Executive Branch agencies, and software and hardware provided by commercial vendors. While the Year 2000 plan generally addresses the coordination issue through the issuance of compliance letters with vendors and other organizations (e.g., Library of Congress, Congressional Research Service, etc.), we suggest that a more formal coordination effort be employed in dealing with the latter group. This is especially needed since some of the Legislative modernization efforts are going on concurrently. While the House works on making its systems compliant, they still face the possibility of failure if they interface with other non-compliant systems. For example, if communication software at any of the Legislative Branch agencies (such as the Architect of the Capitol, Government Printing Office, Congressional Budget Office, and Library of Congress) on CAPNET⁹ is not Year 2000 compliant, this may adversely impact the entire network. We raised this issue at a June 12, 1997, meeting of the Legislative Branch Financial Managers Council to find out if this possibility had been considered as part of their Year 2000 planning efforts. The possibility of someone else's non-compliant system adversely affecting the operation of the CAPNET had not been considered. Architect of the Capitol representatives indicated there had been no Year 2000 discussions or considerations regarding CAPNET. (CAPNET is managed by a committee comprised of representatives of each Legislative Branch organization and is currently chaired by a Senior Engineer of HIR Communications. CAPNET has traditionally fallen under the umbrella of the Legislative Branch Telecommunications Network, a working group comprised of each Legislative Branch Information Systems Organization, chaired by the Architect of the Capitol.) Members of the Council expressed concern that action had not been taken with respect to CAPNET and the Architect of the Capitol representatives promised to arrange a meeting as soon as possible to discuss this matter. (That meeting had not been scheduled at the time this report was completed.)

Also, since LIMS receives data from several external sources, including the Executive Branch, LOC, Senate, and Government Printing Office, it is essential to coordinate data interfaces with all these groups. We found that some coordination efforts have been initiated. For example, the Year 2000 project leader mentioned that the Office of the Clerk was currently setting up a task force to address legislative data transfers--which would include data exchanges involving LIMS. Also, HIR's Internet Services Group participates in joint, weekly meetings to ensure a smooth and coordinated Member Information Network (MIN) migration. However, contact with other entities that exchange data with the House should be initiated and coordinated by appropriate House officials to ensure a complete transition to Year 2000 compliance.

Warranty Language Needs To Be Put Into House Contracts

The Year 2000 plan states that the House will acquire only Year 2000 compliant information technology products using standard "Year 2000 Contract Protection and Warranty Language." However, the House has not adopted the standard language (e.g., compliance definitions and warranty) and thus has not incorporated it into their solicitations and contracts. The Year 2000

⁹ CAPNET is an electronic means for exchanging documents, files, and messages among all Legislative Branch entities and for providing access to shared information resources, including image data.

project leader indicated that he does not plan to issue standard contract language or procurement guidance because most of the vendors will be compliant by the Year 2000. Without incorporating standard warranty language in vendor contracts, the House is unnecessarily exposing itself to the costs of premature software replacements and potential Year 2000 compliance upgrades. Warranty language would place the burden on vendors to make their products Year 2000 compliant, and would protect the House with its interim hardware and software purchases. Subsequent discussions with other HIR officials indicated that any contracts they let will contain a modified version of the General Services Administration standard contract language. However, we were told that the House's version of the language is not ready for incorporation into House contracts to date because it is undergoing review by OPP and legal counsel. Nevertheless, we recommend that the House establish procedures requiring incorporation of Year 2000 language into the boilerplate section of all procurements relating to information technology purchases as soon as possible.

Systems In The Year 2000 Plan May Not Need To Be Converted

While the Year 2000 plan makes recommendations on individual system dispositions, HIR has not yet determined, through a needs study or contact with users, whether all systems are necessary or on which platforms they will ultimately reside. These individual systems are classified in the Year 2000 plan in priority Groups 2 and 3, and include such systems as Lobby, Photography, and Studio Billings. For instance, several Year 2000 plan recommendations involving individual systems include the annotation "replace, for instance, with Foxpro" however, other alternatives need to be considered such as Program Office Desktop. Other, smaller House systems are identified as "outsourcing candidates," but this option needs further clarification. Thus, formal studies need to be conducted immediately to assess the disposition of these systems and the true scope of the initiative. Since our initial inquiries, we were told that the Integration Group initiated a needs survey for those systems listed in the Year 2000 plan under MIN migration. This effort needs to be expanded to the other systems listed in the Year 2000 plan as well. Also, the Year 2000 plan assigns completion dates for many of these systems in late 1999. HIR should determine whether these time-frames can be shortened through increased resources or re-prioritization to make sure these systems are compliant by the Year 2000.

Software Tools And A Detailed Implementation Plan Are Needed For LIMS

Because HIR had not ensured adequate funding, it could not take advantage of any of the Year 2000 software tools to help assist them in the LIMS date expansion effort. LIMS has approximately 766,000¹⁰ lines of code which need to be examined in order to change affected date fields, and HIR is handling the process manually. In our view, manually examining the code, line-by-line, will result in more errors or omissions involving date changes and date interdependencies than would result in an automated review, aided by software tools, that would require a fraction of the time to complete. Although there are no fool-proof automated solutions, the software tools available are set up to identify as much as 90-95 percent of the dates in a system and to help track their flow as they are passed from field to field. In addition, software tools should provide

¹⁰ A March 1997 contractor report stated LIMS contains 766,155 lines of code; HIR officials told us LIMS has approximately 600,000 lines of code, and the Year 2000 plan states 504,000 lines of code for LIMS.

an added level of assurance when converting date fields. Further, the use of a software tool could assist with date field conversions in the smaller House systems, the total of which exceeds 881,000 lines of code.

Although the Year 2000 plan contained high level conversion strategies, the Year 2000 project leader indicated that detailed implementation plans will be prepared for each individual system conversion. We obtained and examined the three-page LIMS detailed implementation plan and found it contained a limited number of detailed steps and milestones to monitor the preliminary conversion phase, but did not contain programs, data issues, file conversions, resources, and continuous milestones as prescribed in the higher level Year 2000 plan. Additionally, as in the Year 2000 plan, the Validation (testing) and Implementation phases were not covered sufficiently in the detailed plan. Because LIMS is a highly integrated system, HIR officials indicated that problems are already anticipated with the testing phase of LIMS. Moreover, the Year 2000 plan identified eight full-time employees to be assigned to the LIMS project in FY 1997, however, to date only five HIR Integration Group personnel are working on this effort--all on a part-time basis. The existing detailed implementation plan needs to be expanded and standardized for LIMS and the other systems needing Year 2000 attention. These detailed implementation plans should be prepared when decisions are made about the disposition of each system. Together, the Year 2000 plan covering the five conversion phases, and the detailed implementation plans should serve as a basis for successfully completing the Year 2000 initiative.

Immediate Action Needed On OSM System Replacement

While \$800,000 has been identified as being needed for the OSM system replacement and preliminary inquiries have been made on alternatives, the House has not taken significant action to ensure timely replacement. Although the Acting Associate Administrator, Media and Support Services was aware that the system needs to be replaced because it is not Year 2000 compliant, she told us that she believed HIR was taking the lead on the replacement project. As previously mentioned, the Year 2000 project leader indicated that HIR had not taken the lead on this effort, and in turn, referred us to OSM. The Acting Associate Administrator, Media and Support Services agreed that OSM, HIR, and the Office of Procurement and Purchasing (OPP) needed to get together to develop a replacement plan, but, to date, that has not happened. In our view, planning for this should be done immediately. This would include, but not be limited to, appointing a project leader to report and oversee the progress of the OSM replacement effort, assigning formal roles and responsibilities, and establishing milestones for the replacement project. The actual system replacement effort should be planned--from the initial stages (i.e., complete a needs analysis, requirements definition, and RFP, etc.) to system implementation. We suggest extremely close monitoring of this project, and again recommend that a contingency plan be developed in case the replacement effort goes beyond the Year 2000.

No Slack Time For FMS Payroll System Replacement

Although the FMS Payroll replacement project has identified \$2 million dollars as being needed for funding, its status remains in the preliminary planning stage. A discussion with the Acting Associate Administrator, Office of Finance indicated that a statement of work has been prepared

to obtain a contractor for a needs assessment, requirements analysis, system specifications, RFP, and an initial evaluation. A contract for this initial phase is scheduled to be awarded by October 1997 with an estimated completion date of June 1998. Once this initial phase is completed and a contractor is selected, actual system replacement will commence. The replacement is estimated to take 18 months and be completed by December 1999. In effect, the entire implementation schedule for the replacement equates to 27 months, and as of October 1997, the Year 2000 deadline will also be 27 months away. Our concern is that this schedule has no slack time and leaves no room for errors or unforeseen circumstances. If any delays occur, the critical path of the project will be affected. As in the OSM replacement effort noted above, we suggest extremely close monitoring of this effort, and recommend that a contingency plan be developed (i.e., contracting with a service provider to issue payroll checks for a short-term period) to safeguard the House in the event that the replacement project goes beyond the Year 2000.

Conclusions

The House has recognized and is attempting to meet the Year 2000 challenge. However, in order to be successful, i.e., institute changes that guarantee Year 2000 compliance so that systems will be running smoothly on January 1, 2000, the House needs to take this effort to a higher level. HIR management has to refocus its objectives, dedicate additional resources, and raise its priorities in planning, budgeting, technology, and every other facet of project management in order to address the Year 2000 issue. Considerable work has been expended but not all of it is focused or channeled in the right direction. Problems still exist and management needs to take immediate action to correct them.

Recommendations:

We recommend that the CAO:

1. Establish formal project management controls and techniques as follows.
 - a. Define the role of the Year 2000 project leader and establish it as a full-time position.
 - b. Prepare a Year 2000 charter which formally assigns the authority and responsibilities for the Year 2000 initiative to the project leader and staff within HIR, and defines the project leader roles and responsibilities with respect to organizations/activities outside HIR whose systems may be affected by the Year 2000 problem.
 - c. Institute a status reporting mechanism to inform upper management of Year 2000 progress.
 - d. Conduct a detailed level of effort analysis which estimates the resources needed to complete the initiative.

- e. Purchase software tools and secure a contractor, as necessary, to assist with conversions and testing.
 - f. Determine whether all systems are needed and on which platform they will reside.
 - g. Attend the CIO Council Subcommittee on Year 2000, as appropriate.
2. Revise and prepare follow-on document(s) to the Year 2000 plan which include the following activities.
- a. Prepare a schedule of Year 2000 tasks (e.g., PERT¹¹ chart concept) showing milestones and interdependencies of issues/organizations.
 - b. As necessary, re-prioritize and accelerate out-year projects in the Year 2000 plan to meet remaining government milestones.
 - c. Develop detailed implementation plans for each system to be converted.
 - d. Expeditiously develop a follow-on document to the Year 2000 plan which addresses, in detail, the last three phases of the Year 2000 effort for review and approval by the CHO.
 - e. In preparing the follow-on document, as recommended in 2.d. above, develop testing strategies, plans, milestones, and ensure testing capacity is available, and quality assurance is an integral element.
3. As necessary, revise the Year 2000 cost estimates and prepare revised budget requests based on these new figures.

¹¹ Program Evaluation and Review Techniques.

4. Coordinate data exchange issues with the external organizations that interact with the House's systems.
5. Adopt the standard Year 2000 contract language and incorporate this language into all procurements relating to information technology purchases.
6. Expedite decisions regarding OSM and FMS Payroll replacement efforts, closely monitor these activities to ensure timely completion, and prepare contingency plans, as necessary.

Management Response

On September 9, 1997, the CAO concurred with the recommendations in this finding (see Appendix).

The CAO agreed to establish formal project management controls and techniques. Specifically, the role of the Year 2000 project leader and its establishment as a full time position will be addressed at two levels within the CAO. First, the CAO will form a Technology Coordination Task Force (Task Force). This group will report to the CAO and consist of each Associate Administrator and one of their staff, with the chairman being appointed by the CAO. The mission of this group will be to ensure that information technology issues, including the Year 2000 project, are coordinated throughout the CAO. Under the guidance of the Task Force charter and with CHO input, they will develop a CAO strategy for the deployment of mission critical administrative applications, and will work to ensure that the plans and initiatives of each CAO organization are consistent with overall CAO goals, including interoperability. As part of this strategy, the Task Force will solicit input from Member, Committee and House Officer users and it will honor user needs criteria. In addition, the Task Force will examine industry best-practices to determine the best approach for the House and will use an acceptable SDLC process. The CAO plans to have the Task Force operational by the first week of October 1997. Second, the HIR Associate Administrator will designate a project manager who will be responsible for the management and coordination of Year 2000 issues across the HIR groups, the CAO, and external organizations with which they exchange data. This position will ensure that the technical details of the Year 2000 project are fully addressed. The project manager will be responsible for ensuring the timely completion of all Year 2000 work and oversee development of detailed system plans for each application--releasing updates of Year 2000 plans as necessary. The project manager's first tasks will be to establish schedules, milestones, and priorities, including addressing the Year 2000 audit recommendations. Working with the HIR Associate Administrator, the project manager will establish priorities and resource availability within the HIR groups. Critical issues will be escalated to the CAO as necessary. This position will be a full time assignment, staffed by either an HIR employee or a contractor. The CAO plans to have the project manager established by the end of October 1997.

In addition, the Task Force Charter will include the authority and responsibilities for the Year 2000 initiative. This charter will define the role of the group in developing an overall Information Technology strategy for the CAO organization. The primary objective will be to ensure that new

systems follow the strategic direction of the CAO. The Task Force will review all major information projects within the CAO, including the Year 2000 project, the Payroll and OSM replacement projects, and new procurement systems. Also, the CAO will develop a Statement of Work for the Year 2000 project manager. This statement will detail the specific duties, responsibilities, timelines, and deliverables of the project. The project manager will provide staff support for the Task Force, be responsible for the technical aspects of the process to determine the technical needs of the House, and coordinate resources within HIR. Further, the Year 2000 project manager will develop a standard reporting mechanism that will advise management of progress and inform them regarding issues and problems as necessary.

In the next phase of the Year 2000 Plan, detailed plans for each application will be developed. The first step will be to develop a master schedule of when each individual plan will be completed. The detailed plan for each system will include the proposed solution, detailed analysis of the impact, and an implementation plan. Major milestones for each major phase will be established and intermediate milestones will be detailed. The estimates of computer resources will be compared with available resources as early in the process as possible. The plans will be reviewed and updated regularly. The objective is to have an implementation plan in place by the end of March 1998. Also, HIR is actively researching the market for Year 2000 tools. The CAO plans to hire contractors who are experts with the software tool and who can train CAO staff on optimum use of the tool, as well as assist with the conversion effort. This effort will proceed based upon the availability of funding and resources. Final decisions on most of the applications identified in the Year 2000 Plan should be made over the next 6-8 months with guidance and coordination from the Task Force. For replacements of retired systems, the necessary analysis will be completed to determine the system that best meets requirements. Subsequent versions of the Year 2000 Plan will document these decisions. The CAO will also involve both management and staff in Year 2000 groups. The CIO Council has been contacted, and the CAO will begin participating in the activities of this Council.

The CAO also agreed to revise and prepare follow-on document(s) to the Year 2000 Plan, including additional levels of detail, as needed. Milestones, dependencies, and issues will also be documented, and appropriate charts prepared to illustrate project resources, milestones, dependencies, and overall sequence. In addition, the Task Force will continue to monitor the Year 2000 project and make any necessary adjustments. Those applications that are mission critical to the entire House will continue to receive the highest priority.

In addition, the CAO agreed to revise the Year 2000 cost estimates and prepare revised budget requests based on these revised figures. Updates of the Year 2000 Plan will be released regularly. These updates will reflect any policy changes, new requirements, and necessary revisions to overall time and cost estimates. Updates to the plan will drive the budget requests for FYs 1999 and 2000.

Also, the CAO will coordinate data exchange issues with the external organizations that interact with the House's systems. The CAO is a member of the Legislative Branch Technical Coordination Group that is addressing Year 2000 issues among Legislative branch organizations. The Year 2000 project manager, in conjunction with the Task Force, will coordinate activities

with outside organizations that exchange data with the CAO and keep them informed of the CAO's progress and plans. Communication Services is already planning for the readiness of remote networks (including CAPNET). An inventory of files that are exchanged with outside organizations has been compiled. Items on this inventory will be monitored, and a dialog with the organization will be maintained.

The CAO has adopted the standard Year 2000 contract language and incorporated this language into all procurements relating to information technology purchases. HIR, in conjunction with the Office of Procurement and Policy (OPP), has already modified the GSA standard Year 2000 Warranty language for incorporation into solicitations for contracts drafted by HIR. This language was used in the House's Wide Area Data Communications solicitation. OPP will develop similar, appropriate language for incorporation into the standard House Terms and Conditions applicable to purchase orders.

The CAO agreed that progress is needed on OSM and FMS Payroll replacement initiatives. The Task Force will closely monitor both projects and work to expedite the process. HIR expects to work closely with OSM and Human Resources on the replacement of both of these systems. OSM and Human Resources will have the lead role in their respective projects, and HIR will assist on technical and requirements issues. The Task Force will work to ensure that these projects are coordinated and receive the required resources. The implementation of these new systems is critical to the overall HIR Year 2000 conversion effort. Both systems represent a major software conversion effort, and failure to implement new systems before Year 2000 would adversely impact the success of the Year 2000 Plan.

Office of Inspector General Comments

The CAO's current and planned actions are responsive to the issues we identified and, when fully implemented, should satisfy the intent of our recommendations.

YEAR 2000 DATE CONVERSION PHASES¹²

The Year 2000 problem is the most challenging project in terms of size and scope ever undertaken by any Information Technology organization. In order for the project to be successful, government and private industry sources recommend the following five project management phases be adhered to.

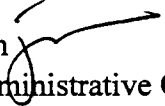
- AWARENESS:** Define the Year 2000 problem and gain executive level support and sponsorship. Establish Year 2000 program team and develop an overall strategy. Ensure that everyone in the organization is fully aware of the issue.
- ASSESSMENT:** Assess the Year 2000 impact on the enterprise. Identify core business areas and processes, inventory and analyze systems supporting core business areas, and prioritize their conversion or replacement. Develop contingency plans to handle data exchange issues, lack of data, and bad data. Identify and secure the necessary resources.
- RENOVATION:** Convert, replace, or eliminate selected platforms, applications, databases, and utilities. Modify interfaces.
- VALIDATION:** Test, verify, and validate converted or replaced platforms, applications, databases, and utilities. Test the performance, functionality, and integration of converted or replaced platforms, applications, databases, utilities, and interfaces in an operational environment.
- IMPLEMENTATION:** Implement converted or replaced platforms, applications, databases, utilities, and interfaces. Implement data exchange contingency plans, if necessary.

¹² The Phases were derived from the General Accounting Office “Year 2000 Computing Crisis: An Assessment Guide.”

Office of the
Chief Administrative Officer
U.S. House of Representatives
Washington, DC 20515

MEMORANDUM

TO: John W. Lainhart, IV
Inspector General

FROM: Jay Eagen 
Chief Administrative Officer

DATE: SEP 09 1997

SUBJECT: Draft Audit Report - Year 2000 Audit

Thank you for the opportunity to comment on your draft report. We have carefully reviewed the draft audit report, "**House Needs to Refocus Its Efforts To Meet The Year 2000 Deadline**" and carefully considered the recommendations contained therein. We appreciate the thought that has gone into the document and we are generally supportive of the recommendations.

Our specific responses to the recommendations are as follows:

Recommendations:

1. Establish formal project management controls and techniques as follows.

(a) Define the role of the year 2000 project leader and establish it as a full time position.

CAO Response: Concur

This recommendation will be addressed at two levels within the CAO.

First, the CAO will form a Technology Coordination Task Force. Each of the CAO AA's and one of their staff will participate. The chairman of the task force will be appointed by the CAO with input from the HIR AA. The mission of this group will be to ensure that information technology issues are coordinated throughout the CAO, including the Year 2000 project. Under the guidance of the charter described in 1(b) and with CHO input, they will develop a CAO strategy for the deployment of mission critical administrative applications, and will work to ensure that the plans and initiatives of each CAO organization are consistent with overall CAO

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Committee and House Officer users and user needs criteria will be honored . Industry best-practices will be examined to determine the best approach for the House and an acceptable SDLC process will be used. This group will report to the CAO. We plan to have the task force operational by the first week of October 1997.

Second, the HIR AA will designate a project manager who will be responsible for the management and coordination of Year 2000 issues across the HIR groups, the CAO and external organizations with which we exchange data. He will ensure that the technical details of the Year 2000 project are fully addressed. The project manager will be responsible for insuring the timely completion of all Year 2000 work. He will oversee development of detailed system plans for each application and release updates of the Year 2000 plan as necessary. The first tasks will be to establish schedules, milestones, and priorities, including addressing the Year 2000 audit recommendations. Working with the HIR AA, he will establish priorities and resource availability within the HIR groups. Critical issues will be escalated to the CAO as necessary. The position will be staffed by either an HIR employee or a contractor, and the Year 2000 project will be a full time assignment. We plan to have the project manager established by the end of October 1997.

(b) Prepare a Year 2000 charter which formally assigns the authority and responsibilities for the Year 2000 initiative to the project leader and staff within HIR, and defines the project leader roles and responsibilities with respect to organizations/activities outside HIR whose systems may be affected by the Year 2000 problem.

CAO Response: Concur

The charter of the Technology Coordination Task Force will include the authority and responsibilities for the Year 2000 initiative.

The Task Force charter will define the role of the group in developing an overall Information Technology strategy for the CAO organization. The primary objective will be to ensure that new systems follow the strategic direction of the CAO. They will review all major information projects within the CAO, including the Year 2000 project, the Payroll and OSM replacement projects and new procurement systems.

A Statement of Work also will be developed for the Year 2000 project manager. It will detail the specific duties, responsibilities, timelines, and deliverables of the project. The project manager will provide staff support for the Technology Coordination Task Force, be responsible for the technical aspects of the process to determine the technical needs of the House, and coordinate resources within HIR.

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(c) Institute a status reporting mechanism to inform upper management of Year 2000 progress.

CAO Response: Concur

The Year 2000 project manager will develop a standard reporting mechanism that will advise management of progress and inform them regarding issues and problems as necessary. The reports will be delivered to the Task Force, the CAO and others as appropriate. Regular reporting will assure House management that milestones are being met and alert them to potential problems. Status reporting will also facilitate resolution of any cross-organizational issues. New or additional work requirements will be documented, assessed, and prioritized.

(d) Conduct a detailed level of effort analysis which estimates the resources needed to complete the initiative.

CAO Response: Concur

The Year 2000 Plan estimates the overall resources to solve the Year 2000 problem. In the next phase, detailed plans for each application will be developed. The first step will be to develop a master schedule of when each individual plan will be completed.

The detail plan for each system will include the proposed solution, detailed analysis of the impact including end user involvement, resources required, unit and integrated test plans, and an implementation plan. Major milestones for each major phase will be established and intermediate milestones will be detailed. Both storage space and processing capacity will be documented within each plan. The estimates of computer resources will be compared with available resources as early in the process as possible. The plans will be reviewed and updated regularly. Our objective is to have an implementation plan in place by the end of March 1998.

(e) Purchase software tools and secure a contractor, as necessary, to assist with conversions and testing.

CAO Response: Concur

HIR is actively researching the market for Year 2000 tools, especially ones that can process Adabas/Natural code. Plans are to hire contractors who are experts with the software tool and who can train CAO staff on optimum use of the tool, as well as assist with the conversion effort. This effort will proceed based upon the availability of funding and resources.

(f) Determine whether all systems are needed and on which platform they will reside.

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CAO Response: Concur

The Year 2000 Plan recommends a disposition for the systems in use at the House. The CHO has provided guidance on LIMS, payroll and OSM Asset Management systems. CHO is in the process of reviewing the remaining recommendations and will advise HIR on how to proceed. Final decisions on most of these applications should be made over the next 6-8 months with guidance and coordination from the Technology Coordination Task Force. For replacements of retired systems, the necessary analysis will be completed to determine the system that best meets requirements. Subsequent versions of the Year 2000 plan will document these decisions.

(g) Attend the CIO Council Subcommittee on Year 2000, as appropriate.

CAO Response: Concur

The CAO will involve both management and staff in Year 2000 groups. The CIO Council has been contacted, and we will begin participating in their activities.

2. Revise and prepare follow-on document(s) to the Year 2000 plan which include the following activities.

(a) Prepare a schedule of Year 2000 tasks (e.g., PERT chart concept) showing milestones and interdependencies of issues/organizations.

CAO Response: Concur

The Year 2000 plan will be expanded to include additional levels of detail. Milestones, dependencies, and issues will be documented. Appropriate charts will be prepared to illustrate project resources, milestones, dependencies, and overall sequence.

(b) As necessary, re-prioritize and accelerate out-year projects in the Year 2000 plan to meet remaining government milestones.

CAO Response: Concur

The Task Force will continue to monitor the Year 2000 project and make any necessary adjustments. Those applications that are mission critical to the entire House will continue to receive the highest priority.

(c) Develop detailed implementation plans for each system to be converted.

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See Item 1d above.

(d) Expeditiously develop a follow-on document, develop testing strategies, plans, milestones, and ensure testing capacity is available, and quality assurance is an integral element.

CAO Response: Concur

See Item 1d above.

(e) In preparing the follow-on document, as recommended in 2d above, develop testing strategies, plans, milestones, and ensure testing capacity is available, and quality assurance is an integral element.

CAO Response: Concur

See Item 1d above.

3. As necessary, revise the Year 2000 cost estimates and prepare revised budget requests based on these new figures.

CAO Response: Concur

Updates of the Year 2000 plan will be released regularly. These will reflect any policy changes, new requirements, and necessary revisions to overall time and cost estimates. Updates to the plan will drive the budget requests for FY1999 and FY2000.

4. Coordinate data exchange issues with the external organizations that interact with the House's systems.

CAO Response: Concur

The CAO is a member of the Legislative Branch Technical Coordination Group that is addressing Year 2000 issues among Legislative branch organizations. The Year 2000 project manager, in conjunction with the Technology Coordination Task Force, will coordinate activities with outside organizations that exchange data with the CAO and keep them informed of the CAO's progress and plans. Communication Services is already planning for the readiness of remote networks (including CAPNET). An inventory of files that are exchanged with outside organizations has been compiled. Items on this inventory will be monitored, and a dialog with

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the organization will be maintained. The CAO format for this inventory will be used by other legislative branch organizations.

5. Adopt the standard Year 2000 contract language and incorporate this language into all procurements relating to information technology purchases.

CAO Response: Concur

HIR in conjunction with OPP has already modified the GSA standard Year 2000 Warranty language for incorporation into solicitations for contracts drafted by HIR. This language was used in the House's Wide Area Data Communications solicitation. The OPP will develop similar, appropriate language for incorporation into the standard House Terms and Conditions applicable to purchase orders.

6. Expedite decision regarding OSM and FMS Payroll replacement efforts, closely monitor these activities to ensure timely completion, and prepare contingency plans, as necessary.

CAO Response: Concur

The CAO agrees that progress is needed on these two major initiatives. The Task Force will closely monitor both projects and work to expedite the process. HIR expects to work closely with OSM and Human Resources on the replacement of both these systems. OSM and Human Resources will have the lead role in their respective projects, and HIR will assist on technical and requirements issues. The Task Force will work to ensure that these projects are coordinated and receive the resources that they require.

The implementation of these new systems is critical to the overall HIR Year 2000 conversion effort. Both these systems would represent a major software conversion effort, and failure to implement new systems before Year 2000 would adversely impact the success of the Year 2000 plan.