WILL FEDERAL COMPUTERS BE READY FOR THE YEAR 2000?

HEARING

BEFORE THE

SUBCOMMITTEE ON GOVERNMENT MANAGEMENT, INFORMATION, AND TECHNOLOGY

OF THE

COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT HOUSE OF REPRESENTATIVES

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WILL FEDERAL COMPUTERS BE READY FOR THE YEAR 2000?

MONDAY, FEBRUARY 24, 1997

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT,
INFORMATION, AND TECHNOLOGY,
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2154, Rayburn House Office Building, Hon. Stephen Horn (chairman of the subcommittee) presiding.

Present: Representatives Horn, Davis of Virginia, Maloney, and Davis of Illinois.

Staff present: J. Russell George, staff director and chief counsel; Mark Uncapher, counsel; Andrea Miller, clerk; Jean Gosa, minority administrative clerk; David McMillen, and Mark Stephenson, minority professional staff member.

Mr. HORN. The Subcommittee on Government Management, Information, and Technology will come to order. Today, the subcommittee will once again visit the so-called year 2000 problem facing the Federal Government and its vast array of computer systems.

For at least three decades, many computer systems have used two digits, not four, to represent the year; for example, "66" instead of 1966. The aim was to gain more electronic storage in the early computers which did not have the capacity which they have today. Although more storage was gained by the two-digit year, major difficulties will arise in the year 2000 when that year is "00" and the computer cannot differentiate between the year 1900 and the year 2000.

When we first looked into this problem a year ago, very few Federal agencies knew or cared about the issue. The good news is that every Federal agency now knows there is a problem. The bad news is that only a few of them have specific, realistic plans to solve the problem before the stroke of midnight on the last day of 1999.

Here is the problem in a nutshell: Not only Federal Government computers, but also computers worldwide, face potentially disastrous disruptions unless they are properly reprogrammed to recognize that a double zero is 2000. If they are not adapted, they will not be able to calculate dates, ages, schedules, or other functions that are essential to running nearly every program of the Federal Government. If we do not fix this problem, we face the potential of electronic chaos.

This has serious implications for millions of Americans who depend on Government computers for Social Security and veterans' benefits, unemployment checks, weather forecasts, airline schedules, and financial transactions as simple as cashing a check or as complex as managing a trillion-dollar currency exchange. In short, the possibility for nationwide disruption is almost endless, and without careful planning and deliberate action, it will be endless.

This morning we will hear from the Chief Information Officers of key Federal Departments and agencies on the progress they have made thus far in preventing a complex and difficult problem from becoming a full-fledged catastrophe. These Chief Information Officers, or CIO's as they are called, are receiving a baptism by fire. Their positions were created only a year ago by the Clinger-Cohen Act which seeks to make Federal agencies more effective in their use of information technology.

Earlier this year the subcommittee asked each Department and agency to respond to detailed questions regarding their plans to address the year 2000 problem. Every Department has responded, which is refreshing; however, the quality of the response varies widely. Frankly, that is very troubling because it suggests a continuing lack of urgency in a situation that faces a very clear and abrupt deadline, which we know down to the exact second, which cannot be extended.

At this point, the subcommittee wants answers to some very basic and vital questions. Among these are: Has each Department now defined the size and scope of the problem? What computer systems are vulnerable to disruption? Do they know how many computer codes need to be reprogrammed? How and when will this be done, and by whom? Most important, has each Department and agency set clear priorities for action? Have the agencies identified the systems that are critical to Government operations?

Congress needs to be reassured that we do not face the possibility of computer disruptions in several critical areas: those affecting the public health and safety, national security and financial systems, including Government benefit programs. Members of Congress would also like to feel certain that we have an overall grasp of the complexities that we face so that the continuing interactions of Federal, State, local and private sector computer networks do not recontaminate systems which we have corrected.

This subcommittee finds it very troubling that 12 of the 14 Federal Departments plan to implement their solutions in the final 3 months of 1999. This strikes me as dangerously optimistic planning, especially since this subcommittee has monitored dozens of Government computer modernization programs that have seldom, if ever, been completed as planned, on time and on budget. Need I mention the IRS and the FAA?

Perhaps it is possible for thousands of computer programmers in hundreds of locations to rewrite millions of lines of code with the precision and the delicacy of a finely choreographed ballet, but I find it hard to believe that the ballerina will also kick a field goal in the final seconds of the last quarter.

I do not mean to be unduly pessimistic or alarming, but I do think we need to be very careful in setting clear priorities and realistic plans to solve what could be either a minor bump on the elec-

tronic superhighway or a full-scale disaster. The difference between those two outcomes will be decided largely by the work of the witnesses who are before us today.

We will receive testimony from Joe Willemssen, the Director of the Accounting and Information Management Division in the General Accounting Office, who will provide the GAO's assessment of the steps which Federal Departments and agencies must take to address the year 2000 problem. He is joined by Keith Alan Rhodes, the technical director of the Office of Chief Scientist, and John Stephenson, the Assistant Director, Accounting and Information Management Division, all from the General Accounting Office.

The second panel will consist of those who have the role of Chief Information Officer in six different Federal Departments: Ms. Eliza McClenaghan of the Department of State; Mr. Emmett Paige of the Department of Defense; Ms. Patricia Lattimore of the Department of Labor; Mr. John Callahan of the Department of Health and Human Services; Mr. Michael Huerta of the Department of Transportation; and Mr. Mark Catlett of the Department of Veterans Affairs.

We welcome all of you. Before getting to the testimony, I will ask the ranking member on the Democratic side, Mrs. Maloney of New York, for her opening statement.

Mrs. MALONEY. Thank you very much, Mr. Chairman.

The public has awakened to this issue since we first raised it last April. I hope that through this hearing we can continue the process of bringing this problem to the attention of the American public. The agencies before us today are involved in some of the most critical functions of our Government: international travel, defense, unemployment insurance, food and drug safety, transportation, and veterans' benefits. We cannot afford for these agencies to fail in their mission because their computer cannot keep track of time across the change in the millennium.

When we surveyed these agencies last spring, I was distressed to learn that over half of the agencies we surveyed are only beginning to address this problem. Since that hearing, there has been substantial progress, but there is a long way to go.

The General Accounting Office has put together a useful assessment guide, and I look forward to hearing more about it today. It is a useful guide for agencies to use in planning their project resolving this computer problem. However, a plan is just a piece of paper and says nothing about implementation.

The Computer Security Act required each agency to prepare a computer security plan, and I am sure each agency could produce that plan for all of us at the drop of a hat. However, as GAO pointed out in the high-risk reports, computer security in Government agencies is woefully inadequate. The plan is useless unless it is implemented.

Today's witnesses are representative of what is happening in Government agencies. Some, like the Department of Transportation, were slow to answer our inquiry. Today, they will report substantial progress from their August 1996 response to our survey. Others, like the Department of State, were in good shape last summer and have progressed from there.

There is still, however, an overriding concern about whether the appropriate level of management oversight and resources are being directed to the problem. We cannot afford a failure in this conversion. That is why the General Accounting Office placed the year 2000 on the high-risk list and that is why we are having this hearing today.

Thank you for coming.

Mr. HORN. I thank the gentlewoman from New York. A quorum is present. Mr. Davis of Virginia, I believe, has a statement that he will provide for the record.

[The prepared statements of Hon. Tom Davis and Hon. Pete Sessions follow:]

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11TH DISTRICT, VIRGINIA

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Opening Statement of Representative Tom Davis
Government Reform and Oversight Committee
Subcommittee on Government Management, Information and Technology
Year 2000 Computer Problem
February 24, 1997

I would like to commend Chairman Horn and Ranking Member Maloney for holding this hearing. As we are all aware, the next few months will be critical as the federal government attempts to ready its computers for the year 2000.

As we continue our oversight of this issue, it is vitally important that Congress is kept up-to-date on the progress of each federal agency and their preparations for the coming of the year 2000. Therefore, I welcome the testimony of our witnesses here today from the Departments of State, Defense, Labor, Health and Human Services, Transportation and Veterans Affairs. Their input into this problem is important and necessary and I am interested in hearing about the progress made since our last hearing on the issue.

With the submission of the FY98 budget request, the Office of Management and Budget issued its report on the Year 2000 computer problem. Initial findings indicate that we are indeed making progress.

The report, released on February 6, 1997, addresses the government's preparedness for the end of the millennium, by looking at a number of important areas including impact on the government, the role of the chief information officers, strategy, schedule and cost.

In addition, the report lays out five government-wide actions which will be taken to complement individual agency efforts.

- OMB is raising awareness of senior managers to the magnitude of this problem.
- The CIO's Council and others are promoting the sharing of management and technical expertise.
- The government will acquire only Year 2000 compliant IT equipment.
- OMB, the CIO Council and the entire government are removing barriers that could impede solutions to the problem.
- OMB will continue to monitor agency progress.

I remain concerned, however, over the President's FY98 Budget Request for Year 2000 obligations. The request totals only $2.3 billion over the next three years to bring agencies into compliance for the year 2000; a number far below the industry estimates of some $25 to $30 billion. Is this enough?

The federal government spends approximately $25 billion each year on operations and maintenance of IT systems and it is conceivable that additional monies for the year 2000 problem will be allocated from existing federal government IT accounts as Congress had requested last year.

We must be careful, however, that in doing this we do not harm our vendors, who have standing contracts with the government in the process.

I am also concerned the schedule discussed in OMB's report is "cutting it too close". Many agencies will not be fully prepared, according to the report, until late 1999 and this leaves little time to correct a problem should anything go wrong. Remember, this deadline is unforgiving.

In addition, agencies who have not yet started working on the problem will discover that the longer they wait, the more expensive it will be.

Again, I commend the Committee for holding this hearing and look forward to the witnesses testimony.

Statement of the Honorable Pete Sessions
Representative, 5th District of Texas
at the hearing before
the Subcommittee on Government Managment,
Information, and Technology
Monday, February 24, 1997

Mr. Chairman, once again you are at the forefront of a problem, trying to solve it before it gets worse. The Year 2000 may bring, in addition to the parties that we are looking forward to celebrating, ominous and disastrous consequences. Your leadership, Mr. Chairman, has brought much attention to this formidable challenge, and I look forward to working with you to solve this problem.

I have known for some time the extent of the problem. Many have already cited the potential results of a computer's calendar reading "00:" IRS miscalculation of deductions for persons over 65, Social Security payments based on erroneous ages, failure of Defense Department weapons systems. I was saddened to learn, however, that the responses to your April 29, 1996 letter were "discouraging." According to this Subcommittee's findings included in its September report, "Four [agencies] were given 'A's' and four agencies were given 'F's.' Ten agencies were given 'D's,' none of which had any plan in place for addressing the problem, or available cost estimates."

It is imperative that the federal government give to this issue the attention it deserves. In addition to your work, Mr. Chairman, I applaud the Office of Management and Budget for creating the interagency working group to solve the Year 2000 problem. I congratulate the General Accounting Office for leading the Congress and the Executive Branch on the path to curing our computers of this impending disaster.

My hope is that with the responses to your letter of January 14, we will have a better sense of the status of the federal government's efforts to address this issue of the Year 2000 and the federal government's computers. I suspect that our concerns will not be completely assuaged, and that our work is just beginning.

Mr. Chairman, I look forward to the testimony we will receive today. I welcome the witnesses, and I yield back the balance of my time. Thank you, Mr. Chairman.

Mr. HORN. We will now begin with the testimony. As you know, the tradition in this committee is to swear all witnesses, so if all three of you would stand.

[Witnesses sworn.]

Mr. HORN. The clerk will note all three witnesses have affirmed.

Mr. Willemssen will please proceed.

STATEMENTS OF JOEL C. WILLEMSSEN, DIRECTOR, INFORMATION RESOURCES MANAGEMENT, ACCOUNTING AND INFORMATION MANAGEMENT DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY KEITH ALAN RHODES, TECHNICAL DIRECTOR, OFFICE OF CHIEF SCIENTIST; AND JOHN STEPHENSON, ASSISTANT DIRECTOR

Mr. WILLEMSSEN. Mr. Chairman, Ranking Member Maloney, Congressman Davis, thank you very much for inviting us here today to testify on the year 2000 problem.

In summarizing my statement, I will briefly touch on the implications of the Y2K issue and then spend a little time talking about a guide that we have put together, sort of a step-by-step approach that agencies can follow in implementing their year 2000 programs.

Mr. Chairman, within the last year, as you pointed out, the awareness of the year 2000 issue has gone up dramatically, in large part due to some of the efforts of this subcommittee. As was mentioned, GAO has recently placed the year 2000 issue on its list of high-risk issues because of the dramatic effects that it could have if not rectified by the year 2000.

Virtually every citizen could be affected by the year 2000 issue if not corrected, and that is why we have placed it on the high-risk area. For example, every Government benefits program, ranging from Social Security to veterans' benefits to subsidized housing, could be affected.

Correcting the problem is going to be labor-intensive and time-consuming. Many of these systems that we are talking about are over 20 years old. They have application languages that are fairly old, in some cases obsolete, and in some cases the documentation is lacking. Also, many of the components of the system, other components beyond the application languages, will be affected by the date problem: operating systems, telecommunications, data base management systems.

However, the challenge involved in the year 2000 issue is primarily managerial. It requires top management, and senior executives in each agency, including the head of the agency and the Chief Information Officer, to be firmly aware of the issue and what they plan to do to resolve it. That awareness and the plan to resolve it need to be communicated throughout the agency.

As I mentioned up front, GAO has developed a guide that provides what we think is a useful framework for agency managers to use in planning and implementing their year 2000 programs. We have put together this guide in large part based on some of the work of the Best Practices Subcommittee of the Federal Year 2000 Interagency Committee. We also identified some of the best practices of the leading information technology organizations in the private sector.

If I may, I want to take a couple of minutes and highlight some of the major phases of the guide that we have put together. That guide, by the way, we are releasing today as an exposure draft.

Mr. HORN. Please do, and at this point, without objection, that guide will be placed in the record to be printed.

[Note.—The report entitled, "Year 2000 Computing Crisis: An Assessment Guide," GAO/AIMD–10.1.14, can be found in subcommittee files.]

Mr. WILLEMSSEN. As shown here on the chart, we have laid out the five phases, each of which needs to be supported by strong program and project management.

The first phase, the awareness phase, as you have previously pointed out, we have pretty much completed.

We have come a long way on this in the last year, but among the critical elements that need to take place in this phase is important for the agency to explicitly define the problem, make sure that you have executive support for not only problem identification, but the need to put a plan in place to rectify the problem.

It is also important that the word be spread across the agency, that all employees know about the problem and what the plans are to fix it. Similarly, it is very important that an agency establish an overall team to take the lead in putting together the plan and, most importantly, implementing that plan before the year 2000.

The second major phase of the guide is the assessment phase. As you pointed out, most of the Federal agencies are in that phase currently. It is a crucial phase that includes such activities as assessing in much more detail the kind of impact that can occur with the Y2K problem, which could happen on any mission-critical system.

In addition, it is important that an agency identify its core lines of business as part of that inventory and prioritize its systems. It is not necessarily realistic to think that an agency is going to be able to fix every system. It is important in this assessment phase to set priorities and decide what we are going to fix first, and what we will fix second, and so on.

Also, an important element within this phase is the need for an agency to put together a contingency plan: What happens in the event of a year 2000 failure? Then, what do we do? It is important that kind of plan be in place.

The next critical phase is the renovation phase. Essentially this is where the agency needs to go in and make the changes to its systems. In doing that, an agency essentially has three options.

One, it can go into its existing systems and modify the code as necessary to try to get it to be year 2000 compliant; or, second, it can design and implement entirely new systems that would be year 2000 compliant and replace its existing systems; or, third, in going through the priority-setting process, agencies may find that they have systems that really are not that important anymore. In fact, that could be one of the side benefits of this entire exercise, is that agencies identify systems that are no longer needed and they can simply eliminate them.

Another key aspect within this phase is the need for the agency to modify its interfaces after identifying them. An agency needs to be careful that it does not allow data from outside sources to come

into its internal systems and corrupt their system. So it is an especially important point for them to cover within this phase.

The next phase: validation. This is, again, an especially critical area that we want to make sure that agencies spend enough time on. Essentially what we are looking at here is agencies testing to make sure that the changes they have put in are, in fact, going to work. In many cases this is going to take agencies at least a year to do, and we generally have set aside the entire calendar year 1999, to address most of this phase.

And the last phase, somewhat in conjunction with putting our changed systems into effect, will still include some amount of testing, especially as it relates to integration and acceptance testing. Some agencies may also find it is very useful to have two systems running in parallel, the existing system and the new system, to reduce risks.

In summary, Mr. Chairman, I would like to reiterate for any organization or agency that does not take the year 2000 issue seriously, they are risking a crisis. Fortunately, within the last year the awareness level is up. So we have an opportunity, I think, through executive management support and leadership to actually fix this problem.

That concludes a summary of my statement. I would be pleased to address any questions that you may have or the other Members.

[The prepared statement of Mr. Willemssen follows:]

Statement of Joel C. Willemssen
Director, Information Resources Management
Accounting and Information Management Division

Mr. Chairman and Members of the Subcommittee:

I know that you are understandably concerned about the potential serious disruption to critical government functions and services that may result from the upcoming change of century. The year 2000 computing problem has received a great deal of attention, deservedly so, in large part thanks to the pioneering work by this subcommittee examining the potential impact of this issue on federal agencies.

As you know, this area has recently been added to our list of high-risk issues because of its potential for widespread adverse impact on government operations. There is much that needs to be done if the federal government is to avoid the disruption of important services on which millions of Americans depend--and, fortunately, much that we can do. I am pleased to share with you today information gathered from numerous sources about the steps agencies can take to reduce the risk of year 2000 computer system failures by making their systems what is called year 2000-compliant.

Let me begin by very briefly summarizing the problem. For the past several decades, systems have typically used two digits to represent the year, such as "97" for 1997, in order to conserve electronic data storage and reduce operating costs. In this format, however, 2000 is indistinguishable from 1900 because both are represented as "00." As a result, if not modified, computer systems or applications that use dates or perform date- or time-sensitive calculations may generate incorrect results beyond 1999.

Who could be affected? Virtually every citizen. Every government program that provides benefits in any way is subject to these problems, from social security and veterans' benefits to student loans and subsidized housing. This is not simply a government issue, it is something that will touch us all.

Mr. Chairman, correcting the problem, in government as in the private sector, will be labor-intensive and time-consuming--and must be done while systems continue to operate. Many of the federal government's computer systems were originally designed and developed 20 to 25 years ago, are poorly documented, and use a wide variety of computer languages--many of which are old or obsolete. The systems consist of tens or hundreds of computer programs, each with thousands, tens of thousands, or even millions of lines of code, which must be examined for date format problems. In addition, the systems have numerous components--hardware, operating systems, communications applications, and database software--that are affected by the date problem.

Make no mistake: *Every* federal agency is at risk of system failures. Modifying systems will be a massive undertaking, and agencies must begin to address this challenge now--if they have not already started.

Ironically, perhaps, the enormous challenge involved in achieving year 2000 compliance is not technical; it is, rather, *managerial*. Whether agencies succeed or fail will be largely

influenced by the quality of executive leadership and program management. Executive leadership sets the tone; program management makes it happen. It will be imperative for top agency management--including the agency head and the chief information officer, or CIO--to not only be fully aware of the importance of this undertaking, but to communicate this awareness and urgency to all agency personnel in such a way that everyone understands why year 2000 compliance is so important.

An agency's ability to successfully manage its year 2000 program will also depend on the degree to which the agency has institutionalized key systems development and program management practices, and on its experience in managing large-scale software conversion or systems development efforts. GAO has reported on numerous occasions that agencies need to address and improve their management of information technology. Accordingly, to carry out their year 2000 programs, agencies likewise need to assess their information resources management, or IRM, capabilities and, if necessary, upgrade them. In this process agencies should also consider soliciting assistance from organizations experienced in managing major software conversions.

Mr. Chairman, GAO has developed a guide that constitutes a framework that agencies can use to assess their readiness to achieve year 2000 compliance. It provides information on the scope of the challenge and offers a structured, step-by-step approach for reviewing the adequacy of agency planning and management of its year 2000 program. The guide draws heavily on the work of the Best Practices Subcommittee of

the Interagency Year 2000 Committee and incorporates guidance and practices identified by leading information technology organizations. An exposure draft of this guide is being released at this hearing today.

The guide is divided into five sections that correspond with the five phases that we see representing a year 2000 program. Most of the remainder of my statement today will discuss the substance of these five phases: ***awareness, assessment, renovation, validation,*** and ***implementation***. Let me first describe each in broad terms. (Attached are illustrations of both the year 2000 program phases, and a timeline showing the important milestones from awareness through implementation.)

Phase 1, **AWARENESS**, encompasses problem definition and executive support and sponsorship; the year 2000 team is assembled and an overall strategy developed. In phase 2, **ASSESSMENT**, the impact of the century change on the organization is examined, and core business processes are identified. Phase 3 is **RENOVATION**, in which technical system elements are converted or replaced. In phase 4, **VALIDATION**, replaced elements are thoroughly tested, as is overall performance. Finally, phase 5 is **IMPLEMENTATION**: New elements are integrated as part of the system.

It must be remembered that management of the overall year 2000 program and its individual projects is ongoing, throughout all phases. The year 2000 program should be planned and managed as a single, large information-systems project. Along with

planned monitoring, policies and procedures that must be in place include quality assurance, risk management, scheduling and tracking, and budgeting.

At this time, Mr. Chairman, I'd like to highlight in more detail the main points in each of the five phases.

AWARENESS

As mentioned earlier while discussing executive leadership, awareness is a critical first step. Many people who may have heard something about a year 2000 computer problem do not yet fully understand what it's about and why it matters. For agency personnel, this is imperative. This is also the phase in which an organization within the agency is identified to take the lead in correcting the problem. The CIO, in concert with the project teams, must select a workable approach to the problem, examine the existing IRM infrastructure, and obtain needed resources.

More specifically, during this phase, agencies should focus their energies on defining the year 2000 problem and its potential impact, assessing the adequacy of program management capabilities, developing a strategy, establishing an executive management council, appointing a program manager, and establishing a program office.

ASSESSMENT

The main thrust of assessment is separating the mission-critical systems--which *must* be converted or replaced--from important ones that *should* be converted or replaced and marginal ones that *may* be addressed now or deferred. It is important to remember that the year 2000 problem is primarily a *business* problem, not just an issue of information technology. This is why it is essential to assess the impact of potential year 2000-induced system failures on core business functions and mission-critical processes.

To determine specifically what must be done and when, agencies should inventory their information systems in each business area, assign priority to individual systems, establish project teams for business areas and major systems, and develop a program plan. Agencies should also develop validation strategies and testing plans, identify and acquire tools, and develop contingency plans. Assessments also need to include other systems that affect the business, such as telephone switching systems.

RENOVATION

This phase deals with making actual changes, whether eliminating, converting, or replacing hardware and software, and documenting those changes. In all cases, it will be important to consider the complex interdependencies among systems and applications. All changes also need to be consistent agencywide, and information about changes clearly disseminated to users.

In addition to the conversion of selected applications and related system components, agencies must address data exchange issues, document code and system changes, and track and measure renovation processes.

VALIDATION

The validation phase may well take agencies over a year to complete, and consume up to half of the year 2000 program's budget and resources. This is due to the complex interrelationships among scores of applications, databases, and operating systems. Yet this is precisely why the testing and validation are so essential: It is the only way to ensure that changes expected to work do in fact work. It will be important for agencies to satisfy themselves that their testing procedures are indeed up to this challenge, that their results can be trusted.

During this phase, agencies should develop and document test plans and schedules; develop a strategy for managing testing of contractor-converted systems; implement a year 2000 test facility; perform system testing; and define, collect, and use test measurements for managing the validation process.

IMPLEMENTATION

Implementing year 2000-compliant systems and their components requires extensive integration and acceptance testing to ensure that all components perform as needed in a

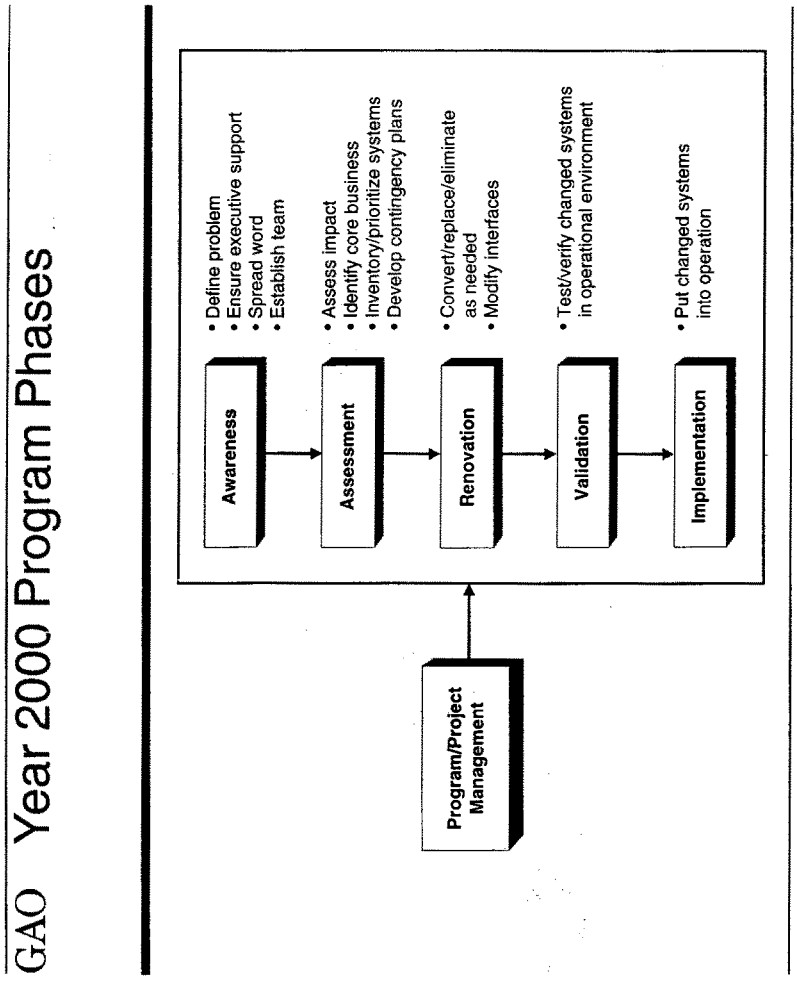
heterogeneous operating environment. In addition, since not all components will be converted or replaced simultaneously, agencies may for a time operate with a mix of year 2000-compliant and noncompliant systems. To reduce risk as systems are converted or replaced, it may be wise for agencies to operate in a parallel processing mode for a period for selected systems--using the old and new systems side-by-side simultaneously --so that this redundancy may act as a fail-safe mechanism until it is clear that all changed systems are operating correctly.

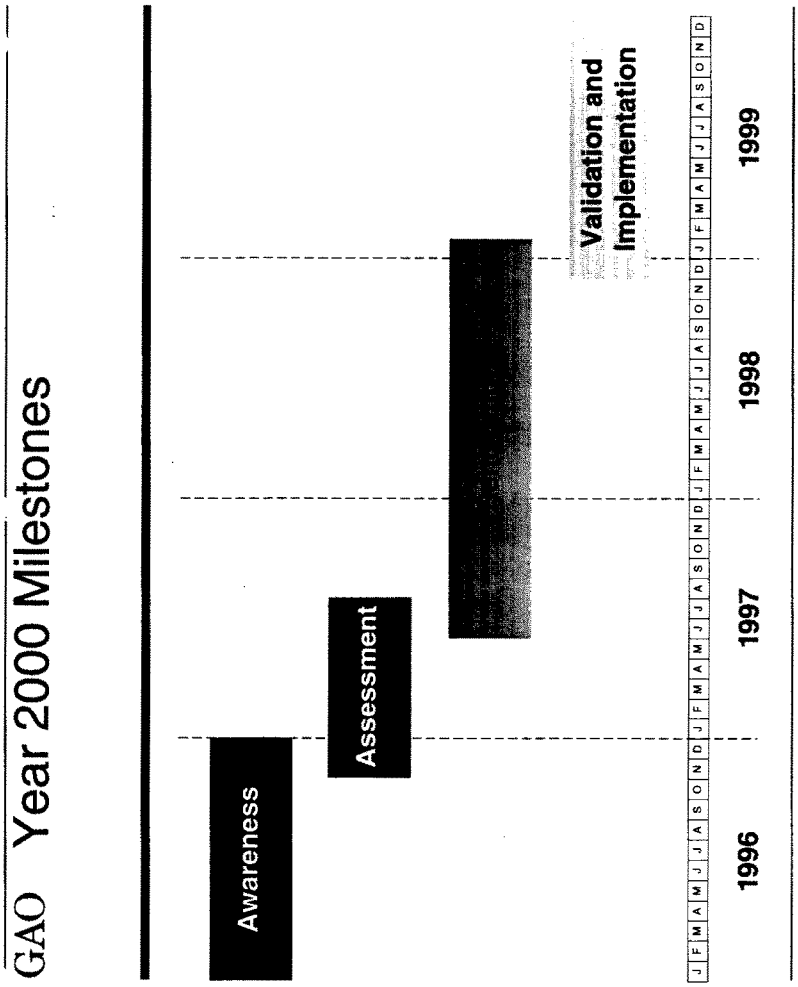
During this phase, agencies must also define the transition environment and procedures, develop an implementation schedule, resolve interagency and data exchange concerns, address database questions, complete acceptance testing, develop contingency plans, and update or develop disaster recovery plans.

In closing, Mr. Chairman, I'd like to reiterate that while the year 2000 problem is serious and could well become a crisis for any organization--public or private--that fails to take its demands seriously, it is correctable. It will take long, hard effort, but it can--and must--be done. There is much that can be done, and the time is now.

This concludes my statement, Mr. Chairman. I'd be pleased to respond to any questions you or other members of the Subcommittee may have at this time.

(511415)


GAO Year 2000 Program Phases
Awareness
• Define problem
• Ensure executive support
• Spread word
• Establish team
Assessment
• Assess impact
• Identify core business
• Inventory/prioritize systems
• Develop contingency plans
Renovation
• Convert/replace/eliminate as needed
• Modify interfaces
Validation
• Test/verify changed systems in operational environment
Implementation
• Put changed systems into operation
Program/Project Management


GAO Year 2000 Milestones
Awareness
Assessment
Validation and Implementation
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1996
1997
1998
1999

Mr. HORN. We thank you very much for that concise statement. I thought your testimony, which I read last night, was excellent, and I think that handbook is going to be very helpful.

As you know, when we started these hearings about a year ago, the Gardner Group said this is a $600 billion worldwide problem, and since America has half the computers, it is a $300 billion U.S. problem and it would be a $30 billion Federal Government problem.

I felt those figures were a little high. Now, our latest figure from the Office of Management and Budget, the President's management arm, says that, well, they estimate about $2.3 billion will be the cost of conversion. As I read Mr. Paige's testimony, the Chief Information Officer of the Department of Defense, DOD would be half of that $2.3 billion.

Now, based on your experience, where does GAO come out on this as to the estimated cost to the Federal Government?

Mr. WILLEMSSEN. I think the estimate that has been provided to date, $2.3 billion, we have to keep in mind that that is considered not the most reliable estimate in view of the fact that almost all agencies are not yet through the assessment phase. I think between now and this summer you are going to see estimates varying dramatically from what we have now.

I think OMB is the first to recognize that. They have come up with a dollar figure right now, but that amount is going to, I think, change quite a bit once agencies really get in and understand what they have to fix. Most agencies are not at that stage yet and will not be for several more months.

Mr. HORN. In my discussions with the Director of OMB a month ago, I expressed the hope that this would not be seeking new money, but that they would reprogram existing money. The main reason being, No. 1, they have the funds there, most of these Departments, for reprogramming; No. 2, if we sit around waiting for a new budget year, we will lose a year, and it is urgent we move in this direction.

Does the General Accounting Office have any view on that matter?

Mr. WILLEMSSEN. Not to reiterate, but it is important that the assessment phase get completed as quickly as possible. But I would also point out it is important that agencies look at their year 2000 program in view of other priorities that they may have in the information technology arena.

This cannot necessarily be seen as just a simple add-on to other modernization projects that they may have. This has to be looked at in total, year 2000 program plus all the other funds that we spend on information technology, and there needs to be a prioritization process that the agency goes through for all of those.

Mr. HORN. You heard my testimony about being a little distressed that they are pushing the envelope, if you will, so close to when actual D-Day is. Do you feel that is a major problem and they should move things up earlier to allow for the usual snafus that occur in computer programs?

Mr. WILLEMSSEN. Our biggest point on the timeframes was, it is absolutely critical that at least a year be left at the end for 1999, to do most of the testing and implementation. If an agency is in

1999, and still making major changes and has not entered its testing program yet, then I would be very concerned. So at this point any schedule for an agency that shows testing starting sometime late in that year, I would be concerned.

Mr. HORN. We are going to be hearing from some of the key Chief Information Officers. We are not hearing from all of them. We will follow that up in writing. Of those that are testifying this morning, does the GAO have any sense of which ones are much further behind than they say they are?

Mr. WILLEMSSEN. Unfortunately, we have not yet completed any work on specific agencies. As you may know, we do have ongoing work at several agencies, including the Department of Defense, the Veterans Administration, the Social Security Administration, the Health Care Financing Administration, and the Internal Revenue Service, and we will very shortly be beginning a review at the Federal Aviation Administration.

We have tried to select those agencies where we think the impact of a Y2K failure would be most dramatic on the American citizenry.

Mr. HORN. Very good.

I now yield to the ranking Democrat, Mrs. Maloney of New York.

Mrs. MALONEY. First, I want to thank you and the General Accounting Office for laying out a very useful guide for how agencies can prepare for the millennium problem. But, as I said in my opening statement, a plan is just that, a plan, a piece of paper, and I would like to ask what do you think that your Department or what do you think Congress should be doing to make sure that the agencies respond; that they actually implement the plan? What followup do you think is necessary?

Mr. WILLEMSSEN. I will first cover us and then speak toward the Congress.

Our strategy essentially in doing work in this area is threefold: One is to put together some guidance that Federal agencies could use, which we are, as you said, releasing that exposure draft today.

The second element of our strategy is to go into the more high-risk agencies and do readiness assessment reviews, which we currently have ongoing at five agencies. And then as we near the deadline, the third part of our strategy is to go into some depth on selected mission-critical systems, to see that indeed the fixes that need to be in place are there.

Speaking from the Hill's perspective, I think one of the most useful things that you can do is to continue to have forums such as this, so that the word keeps getting out that this is an important issue. We have to see progress. I think the more routine that you hold hearings like this, the more we can be assured that progress is being made.

As an aside, look at where we are today on the awareness issue compared to the hearing that was held last April. It has made quite a difference.

Mrs. MALONEY. Do you believe that Congress needs to write any type of legislation or just use the oversight power?

Mr. WILLEMSSEN. My initial reaction is to use oversight, but I have not, to be honest, given that a lot of thought.

Mrs. MALONEY. As you said in your statement, it is probable to believe that some agencies will have some failure in this endeavor

in getting ready for the millennium problem. At this point in time, what do you think the probability is that we will have a failure in some of our official systems?

Mr. WILLEMSSEN. I think there is a high probability that there will be some failures. I think the important point is that those failures be limited to low-priority systems and lines of business.

In fact, as I might have mentioned earlier, I do not think it is necessarily realistic to think an agency can fix everything and, therefore, I think setting priorities is especially important. To the extent that we can limit our exposure to the lower priority applications, I think we will be better off.

Mrs. MALONEY. Does each agency now have an oversight team and a budget to address this problem?

Mr. WILLEMSSEN. I cannot speak toward that. I do not have the information. It would be my guess that they have done something in terms of reporting to OMB, but we have not done the detailed work at each of the 24 agencies to know that for sure.

Mrs. MALONEY. I think that is a critical question. If they have not even appointed a staff and allocated a budget to address the problem, I can assure you it will not be handled. I would think that that is something you should begin today to look at.

Second, do you have any form now for evaluating which critical systems would possibly collapse, are not going to be able to respond to the "00" crisis?

Mr. WILLEMSSEN. The form we are using predominantly right now is the detailed step-by-step instructions in the guide that we are publishing. I think a key element that gets at your question is to identify again the highest priority systems. And then, as I pointed out earlier, we will plan to go in some depth with some of our senior technical staff in looking at the coding to see that the system fixes have been made.

Mrs. MALONEY. Obviously, some areas are of a greater crisis potentially for the Nation: Social Security, transportation. I would think that you should make a list of those that are the most critical to the functioning of the Nation and go in there immediately and make sure that it is taken care of. I can see a monumental problem in this country if we do not address this, and there is no reason we cannot begin in the timeframe we have.

Mr. WILLEMSSEN. We have started at the Social Security Administration, and we are just initiating work at the Federal Aviation Administration.

Mrs. MALONEY. What other agencies are on your list for high critical?

Mr. WILLEMSSEN. Well, the Department of Defense has been a critical Department that we have wanted to look at, and we have been in there for several months. In addition, the Health Care Financing Administration, which is responsible for Medicare and Medicaid programs, and also the Veterans Administration, which is responsible for issuing veterans' benefits.

We are also considering looking at the Federal Reserve and the Securities and Exchange Commission to see what oversight activities they have in mind for banks and financial institutions.

Mrs. MALONEY. Well, there are two stages. No. 1 is isolating those agencies which are the most critical to the Nation; the second

is whether or not these agencies are responding to the crisis. It appears you have not done anything in the second level.

Mr. WILLEMSSEN. We have not published any work yet on that second level. We do have the ongoing reviews and will be publishing later this spring and this summer, and we will be able to comment on some of those high-profile agencies.

Mr. HORN. I thank the ranking Democrat, and I now yield to Mr. Davis of Virginia for 5 minutes of questioning.

Mr. DAVIS OF VIRGINIA. I found very interesting the fact you noted that some of the severely older, poorly programmed and documented applications developed 15 years ago, that this, in a sense, may be the silver lining because it may be cheaper to come in and, rather than convert these, replace these applications. That is an opportunity to do that.

I do not know how the timeframe stretches out in terms of our ability to do that; where the level of analysis is on these so we can plan right away to do that. Do you have any feel for how far along they are?

Mr. WILLEMSSEN. Generally speaking, the agencies are in the midst of doing that. Some are a little further ahead than others. In addition to the opportunity to replace, I think there is an opportunity to eliminate, also.

Mr. DAVIS OF VIRGINIA. That is a good point.

I think it was in the 6th century A.D. when Dionysius Exiguus, again among the first who brought the consecutive year calendar to America—I mean to the world; and the year 999, with the end of the millennium, history writers would recall that people, both Christians and pagans, were crowing at the moon.

At the end of the millennium, now we find out in the year 999 nobody even knew what year it was. Frankly, the calendar was kind of an "in" thing and most people did not know what it was. The irony is that in the year 1999 everyone will know it is the year 1999 except the computers, who have obviously a very important role to play in our world today, and we will not be ready for that.

I am concerned about what the costs are going to be in terms of what the administration has set forward at this point. You have done some analysis and say we are still in the middle of that, but I do not see, under any scenario, where the costs the administration is coming in with are going to be enough.

If we do not address that in the fiscal appropriation for this year and have a better feel for this in a very short order, we will be way behind the eight ball a year from now when we go through the next appropriation period, and it will be hard to get any contracts out or anything else.

Any thoughts on that?

Mr. WILLEMSSEN. One issue I would bring up, possibly when the panel of CIO's is up here, is I think the CIO's may have revised and in some cases have larger cost estimates today than what they had even a few weeks ago when they reported to OMB, as they have gone further into the assessment process. So I would encourage you to continue asking the cost question, because as agencies go further into the assessment phase and learn more about what they actually have to do, even within the next month or two, I think you will get more reliable cost figures.

Mr. DAVIS OF VIRGINIA. I think that is important for us to get a handle for on this reason: It does not have to be the President's budget because Congress will end up putting the appropriation together anyway. But to the extent that is not addressed as part of the appropriations process, and the work needs to get done and the agencies recognize it has to get done, what they will do is go into other IT procurements and then cancel those or put those off, and Congress will not get a say in them at all. And there will be some devastating consequences for many of our IT contractors, but also for the kind of work we want to do that we think needs updating in other Departments.

Any thoughts on that?

Mr. WILLEMSSEN. Well, it is absolutely critical that as part of this process, to pick up on the point you made, agencies have to look at priorities from the whole information technology budget arena and think about trading off some of the year 2000 compliant activities against other initiatives that they may have ongoing, because there will obviously be a limit on the amount of resources that are available.

Mr. DAVIS OF VIRGINIA. Do you have any feel for, at this point, the level of what could go wrong if we do not make the changes? We know some agencies are way ahead of the curve. We have Chairman Horn's report card last year. I think everybody is looking for an improved grade this time. But I wonder if you can share some of the consequences if this is not followed through on.

Mr. WILLEMSSEN. Certainly. I will let Mr. Rhodes, who has followed that issue a little more closely, respond to that, if that is OK.

Mr. Rhodes.

Mr. RHODES. I can give you one example from the Defense Logistics Agency. They have a system at DLA Columbus that issues contracts for 3 years. They have already encountered in microcosm this problem.

A contract was let for 3 years to begin on January 1, 1997. A 1997 year delinquency notice was issued. It was caught in time and not given to the contractor. The contract lasted for 3 years and, of course, will end on January 1, 2000.

This is just on the business side. It is one thing if I am an individual contractor, and I get a 1997 year delinquency notice, and I live in Columbus and I come back and say, "Well, obviously this is incorrect." But the errors that are smaller than that can be much more insidious, and the ability for the contractor to then come back and even understand that the problem has existed—that is where you move into the level of crisis. If everyone's getting a 1997 year delinquency notice on their contract, then there are a lot of people standing at your contracting officer's door.

Mr. DAVIS OF VIRGINIA. So you can pay me now or pay me later, and it is more expensive to fix under pressure than doing it now. My concern is you can fix your system, but then you are talking to other systems, and you have to go that back and forth.

Mr. WILLEMSSEN. That is a critical concern, dealing with those interfaces. Agencies will probably have to set up some filters or data bridges in order that the data that is coming in from those external sources, is identified and scrubbed before you allow it into your system. That is a critical issue.

Mr. DAVIS OF VIRGINIA. Mr. Chairman, I see my time is up. I note one thing. I notice Visa is encountering this problem worldwide as the expiration dates now go to "00", and about 10 percent of the cards are kicking back, from what I can see across, and then they are trying to deal with that. If we are faced with that at the Government level, there are some severe repercussions.

Thank you.

Mr. HORN. I might add, before calling on Mr. Davis of Illinois, that I was fascinated by the exchange on the Columbus processing center. I think it is a great improvement when they are issuing 1997 year delinquencies, because last year when we held a hearing they were issuing million dollar checks to contractors who said, "We never did the job and we do not want the check." And they said, "Oh, yes, you did; keep the check." So I think we have made much progress here, and we will be holding a hearing on that in a month or so.

We are delighted to welcome a newly elected Member of Congress, Mr. Davis of Illinois.

Mr. DAVIS OF ILLINOIS. Thank you very much, Mr. Chairman, and let me just say I am delighted to be here.

You indicated that corrective action would be labor-intensive and quite time-consuming. Do we have much of a handle on how much internal capacity we currently have as opposed to what we are going to have to seek from other sources?

Mr. WILLEMSSEN. It is clear that in most cases agencies are not going to be able to handle this totally internally. That is why it is imperative to get through the assessment phase as quickly as possible, so that an agency can identify what the resource needs are, and can go out and contract for those needs that it cannot meet internally as quickly as possible.

In many cases we are looking at systems which were programmed in COBOL. There are simply not a lot of COBOL programmers available, or if they are available, there are not necessarily a lot of them within the agency. So we are going to have to look at innovative approaches to get the kind of talent in that is needed to make these changes.

Mr. DAVIS OF ILLINOIS. So the level of assessment will have a great deal to do with the timeliness of our ability to respond?

Mr. WILLEMSSEN. Yes, sir.

Mr. DAVIS OF ILLINOIS. Thank you.

Mr. HORN. Mrs. Maloney has a followup question.

Mrs. MALONEY. You mentioned that we may not have, quote, the talent, end quote, in the agencies to respond to this problem. Oftentimes our more talented programmers are hired by the private sector. Also, with the reinventing Government there has been a general downsizing of Government.

How do you propose that we get the talent that we need to handle this problem? You responded to Mr. Davis' question by saying he is entirely right we may not have the talent to address it. And you said there would be innovative approaches. What are the innovative approaches that you are looking at to bring the talent in to address it?

Mr. WILLEMSSEN. Innovative approaches such as putting together requests for proposals for a given level of programming sup-

port, for a given application language, for a certain mission-critical system. If you don't have it in-house, put it out in the marketplace and see if you can get an adequate response.

My only concern is that we need to do that quickly because the more we wait, the less talent in total, private and public, that will be available.

Mrs. MALONEY. And then to followup with a question posed by the chairman earlier on the cost, the $30 billion estimate is now $2.1 billion. Does the $2.1 billion include the cost for innovative proposals to possibly the private sector to bring in talented programmers to handle it?

Mr. WILLEMSSEN. Not to be evasive, but I am not sure. My guess would be it probably generally does not, but we have not analyzed that in depth for each of the 24 agencies at this point.

Mrs. MALONEY. Well, we are galloping toward a budget, hopefully, so any information needs to be put before us very quickly.

Mr. WILLEMSSEN. We will do that.

Mr. HORN. I thank the gentlewoman. Some of my questions to end this are related to cost.

One of them is, when we make these estimates as to what it is going to cost to make the conversion, to what degree is it appropriate to try and estimate the lines of code that are affected by the "00" bit and put a value on those lines to change?

As I remember, a lot of estimates have been made. I do not know if it is out of the air or not, if we have a line of code affected, we have to bring it up and deal with it and it is $1 in cost, so if you have 30 million lines you have a $30 million problem.

Do you think that is a sensible basis on which to make these estimates?

Mr. WILLEMSSEN. Lines of code can be one useful metric or indicator to use, but using lines of code alone is probably not wise. In fact, with some application languages you may not want to use them at all. You may want to choose something like function points. When we are looking at 40, 50, 60 different types of application languages. In some cases lines of codes can work and the dollar-per-line estimate is reasonable; in other cases it is not.

So I would not say throw it away; I would say it is useful, but only in conjunction with other available metrics.

Mr. HORN. Have you had a chance to talk to the people at OMB that made the $2.3 billion estimate, and what is their basis for that? Was there any comparability between departments?

Mr. WILLEMSSEN. My understanding is that that estimate is essentially a compilation of what was submitted by the agencies.

Mr. HORN. We do not know if there is a common criterion by which a judgment can be made.

Mr. WILLEMSSEN. I think that is a good question to ask some of the CIO's.

Mr. HORN. We will get to that, then, so those CIO's in the audience, phone your Deputy and see what happened before you take the oath.

Some observers have suggested that the year 2000 problem is most severe with the older, poorly programmed and documented applications that were developed, say a decade and a half, two decades ago. Does it make more sense for the Federal Government

simply to replace those rather than convert those? Is there any feeling at GAO on this?

Mr. WILLEMSSEN. I think it really needs to be taken on a case-by-case basis. In many cases it may be wise to replace, but, again, we have to keep the calendar in mind so that we can put in a replacement system in time. We have to be able to start now.

In some cases where the code is old, it may have been written in an assembler language that is tied to a particular piece of hardware and there are not a lot of folks around anymore who actually know that language, it may be most beneficial to actually just try to replace. Again, assuming it is a high-priority system.

Mr. HORN. Let me move to another area. The gentleman from Virginia is the distinguished chairman of our Subcommittee on the District of Columbia. To what degree do we know, if any, that the District of Columbia, to which the Federal Government has a major interest, do they have any problems in this area? Are we even looking at them or thinking about them?

Mr. WILLEMSSEN. Unfortunately, I have no basis to comment on that. We have not done any work and at this point we have no plans to do so.

Mr. DAVIS OF VIRGINIA. It is good news/bad news. Unfortunately, the city has invested so little in information technology they do not have much to repair. They are so far behind where they need to be otherwise, so I do not think it is the huge problem it has been in other States.

Mr. HORN. So if they do something, they can be Cinderella.

Mr. DAVIS OF VIRGINIA. Exactly.

Mr. HORN. That is good news. Any further questions from any member of the panel of the GAO?

Will you gentlemen be here to hear some of the other testimony?

Mr. WILLEMSSEN. Certainly, if that is what you would like.

Mr. HORN. Yes, I would like you to listen to it, and maybe at the end come back and we will have a discussion of what we heard and what we think we ought to be doing in the GAO area.

I thank you all for coming. You always do a splendid job in laying out the case for it. I was very impressed by the written testimony. Obviously, all of this is in the record, even though you summarized a lot of that, and I think that handbook will be immensely helpful.

Mr. WILLEMSSEN. Thank you, Mr. Chairman.

Mr. HORN. We now have the Chief Information Officers of the various agencies, if they would please come forward. We will swear you in.

[Witnesses sworn.]

Mr. HORN. All six affirm, I will so inform the clerk, and it will be noted in the record.

We will simply go in the order in which we have listed you under panel two, and the first Chief Information Officer would be Eliza McClenaghan.

We are delighted to have you here from the Department of State, and we would welcome a summary basically of your testimony, because some, Department of Labor in particular, while very interesting, is also very long, and in order to get to the questions Members have, we would be most grateful if you could summarize it in 5

minutes. If that takes a little longer, that will not bother me, but I don't want a half-hour reading of the written statements. That is automatically in the record anyhow. So if we can summarize most of the testimony, we will be grateful.

STATEMENTS OF ELIZA McCLENAGHAN, CHIEF INFORMATION OFFICER, DEPARTMENT OF STATE; EMMETT PAIGE, ASSISTANT SECRETARY, COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS AND INTELLIGENCE, DEPARTMENT OF DEFENSE, ACCOMPANIED BY BILL JAMES, U.S. AIR FORCE; PATRICIA LATTIMORE, CHIEF INFORMATION OFFICER, DEPARTMENT OF LABOR; JOHN J. CALLAHAN, CHIEF INFORMATION OFFICER, DEPARTMENT OF HEALTH AND HUMAN SERVICES; MICHAEL HUERTA, ASSOCIATE DEPUTY SECRETARY, ACTING CHIEF INFORMATION OFFICER, DEPARTMENT OF TRANSPORTATION; AND MARK D. CATLETT, CHIEF INFORMATION OFFICER, DEPARTMENT OF VETERANS AFFAIRS

Ms. MCCLENAGHAN. Thank you, Mr. Chairman.

I am Eliza McClenaghan, Chief Information Officer of the Department of State. I have the responsibility for providing policy guidance and direction to ensure that, among other things, Department of State computer hardware and software applications will be able to handle the year 2000 calculations.

The Department responded to a request for information the subcommittee made on January 14, 1997. I understand the description we provided for our year 2000 activities will be made a part of the hearing record. Accordingly, in my opening remarks I will briefly highlight our activities to date, note the next steps in our program and reiterate our management structure.

The problem: We began to address the year 2000 challenge in fiscal year 1996. We used the better part of that year to analyze Department hardware and software applications as they relate to the problem. As a result of the surveys at our domestic and overseas sites, and extensive discussions among our systems managers and with outside consultants, we have accurately defined the problem we face.

In total, the Department has over 220 applications consisting of 35.3 million lines of code. They are written in 17 different programming languages. We have determined that 141 applications consisting of 27.7 million lines of code will need to be corrected.

With respect to hardware, the Department has 250 minicomputers, more than 18,000 personal computers, and several hundred network systems that support these 141 applications. Our biggest challenge is the minicomputer base that will have to be upgraded or replaced and the applications on the minicomputers that will have to be corrected.

It will also be necessary to have appropriately trained personnel to, for example, manage contracts, validate and test changes, and implement revised systems. We estimate the total cost will be approximately $135.2 million.

Our plans: There are several components to our strategy. We are capitalizing on the fact the year 2000 problem comes at a time when we are investing in an infrastructure modernization program.

We will make investments that satisfy year 2000 in infrastructure modernization goals.

Secretary Albright has cited our need for resources necessary to maintain U.S. leadership and for the tools required to get that job done. To support the Secretary we have established, under the leadership of the CIO, a strategic information resources plan that will, when fully implemented, replace our current dependence on substantially obsolete and proprietary technology that cannot readily accommodate many standard business applications. By integrating our year 2000 investment plans for the information resource capital investment plans necessary to modernize our infrastructure, we will leverage our investments to the maximum advantage.

A planning process is integral to development of an IRM strategic plan. That process includes procedures for the analysis and prioritization of proposed IRM capital investments. We have studied, for example, the 141 software applications to which I referred earlier and determined, in consultation with the department users, that 85 are mission-critical.

We have defined mission-critical as either directly affecting the public, such as passport and visa processing; essential department operations such as payroll, personnel and telegram distribution; or essential to national security responsibilities such as intelligence research. Of the 85 mission-critical applications, 57 are not year 2000 compliant, and these 57 account for 19.8 million lines of code.

The code in 40 of the applications will be rewritten and the balance will be replaced. Those applications are either developed centrally for deployment to multiple domestic and overseas sites or are centrally developed and operated.

Department applications are supported by four major systems platforms: mainframes, minicomputers, personal computers, and client service systems. Our biggest problem is in the minicomputer base: 271 minicomputer systems are noncompliant and the manufacturer will not have the year 2000 operating system for 74 of them. These latter systems must, therefore, be replaced.

Our milestones: The Department has established milestones to ensure timely conversion of its systems and platforms. Using guidelines provided by OMB, we have successfully completed the awareness milestone and the inventory phase of the assessment milestone. By June 1997, we will have completed our renovation schedule and our test plans. Renovation and validation and implementation of mission-critical systems and other systems will be completed in August and November 1999, respectively, so that the Department can meet its commitment to be fully compliant by December 1999.

The cost: As I noted earlier, we estimate the total cost to become year 2000 compliant will run $135.2 million. This estimate covers the cost between fiscal year 1996 and fiscal year 2000 to identify necessary changes, evaluate the cost effectiveness of making those changes, make changes, test systems and develop contingency plans. The cost estimate does not include the cost of upgrades or replacements that would otherwise occur as part of the normal system life cycle cost.

Management: We do not underestimate the scope of the problem at hand, and have put in place a management structure that will

provide policy direction and oversight to all operating elements of the department. As I stated at the outset, I have met the responsibility for providing policy guidance and direction to ensure that Department of State computer systems and hardware and software applications will handle year 2000 calculations. Our year 2000 project office is responsible for implementing that guidance and direction.

I have a good working relationship with the system managers throughout the department, at domestic sites and overseas. I believe we have a collegial environment conducive to productive collaboration. At the same time, we have established a functioning IRM program board, comprised of 12 senior department officials and chaired by the CIO, which will review program implementation at key decision points. On balance, I believe our management structure is appropriate and sound.

Mr. Chairman, that concludes my opening remarks and I will be happy to answer your questions.

[The prepared statement of Ms. McClenaghan follows:]

STATEMENT OF ELIZA MCCLENAGHAN
CHIEF INFORMATION OFFICER
DEPARTMENT OF STATE

Department of State Year 2000 Activities

Background

As the nation's lead foreign affairs agency, the Department of State is well aware of the challenge posed by the Year 2000. Despite some recent progress, the Department is handicapped by outdated technology that is inadequate to meet the demands of today, let alone those of the 21st Century. A comprehensive upgrading of our systems is long overdue. The Department has embarked upon an IRM Strategic and Performance Management plan to modernize its systems. Our strategic plan identifies the Year 2000 issue as the Department's highest Information System (IS) priority. We are committed to ensuring that each of its mission-critical systems is operating properly on or before January 1, 2000. We have conducted a comprehensive review of our application portfolio, platforms, and technological infrastructure with a view to prioritizing and modernizing the most critical elements.

In summary, the Department considers the Year 2000 issue to be a part of the larger problem of obsolete systems. We have already begun to replace our oldest systems, albeit too slowly to meet the needs of modern diplomacy. Solving the Year 2000 problem will require us to divert scarce resources from new development to preserve critical legacy systems. The Year 2000 has motivated us to inventory our systems, prioritize our needs, and accelerate plans for retirement or replacement of old technologies.

Year 2000 Project Office

The Department began investigating the Year 2000 problem in November 1995. In March 1996 a project proposal was prepared and presented to senior Department management. The proposal, which included the establishment of the Year 2000 Project Office to provide overall coordination of the Department's Year 2000 efforts, was approved in April 1996.

The Department is organized into a number of domestic bureaus and 249 embassies, consulates, and other posts abroad. The decentralized software development approach that exists within the Department complicates the process of ensuring Year 2000 compliance. This was a major factor in our decision to form the Year 2000 Project Office to provide overall coordination of the effort. The Year 2000 Project Manager is guided by and reports to the Department of State Chief Information Officer.

Management Planning

Only through an enterprise-wide mutual effort can we ensure that an integrated approach is taken and that all potentially impacted systems are examined and corrected. A management plan has been developed, along with formal initiatives to guide and direct each of the Department's components in meeting Year 2000 requirements. A key element of the plan is the definition of specific roles and responsibilities of component organizations. The Year 2000 Project Office works closely with the Department's Information Resources Management (IRM) Program Board, the Year 2000 coordinators appointed by the executive directors of each bureau, and designated system administrators and software development managers within the bureaus. The Information

Management (IM) office and the bureaus are required to incorporate an analysis of Year 2000 issues and specifically identify plans to address the problem in their Bureau Program Plans. Since we cannot plan on new funds being available, bureaus are being required to take measures to prioritize their modernization investments to ensure that their systems are Year 2000 compliant. Bureaus are also required to incorporate Year 2000 planning considerations in new requests to be considered by the IRM Program Board.

Government-Wide Initiatives

The Department has been attending and actively participating in the Year 2000 Interagency Working Group since December 1995 and the CIO Council since its establishment. We have found these sessions to be both a valuable source of information and a excellent opportunity share experiences and ideas with other agencies engaged in similar efforts. The CIO Council is providing further visibility and useful direction to Year 2000 efforts. The leadership efforts of the Congress and OMB in making agencies aware of the issue and of GSA in addressing procurement aspects have also been helpful.

Awareness and Guidance Program

A key element of the Department's Year 2000 initiative is awareness, and in a larger sense, communication of needs, issues, and solutions. The Year 2000 Project Office has conducted an ongoing comprehensive program of awareness of the problem and guidance in finding and implementing solutions. The program covers all levels of the organization and employs a variety of media. The Project Office has disseminated a brochure and authored articles in internal periodicals published by acquisitions and the foreign service community. We publish a monthly Year 2000 newsletter for developers via paper and email. We have held several seminars and conferences dedicated to the Year 2000 issue, with guest speakers from industry, SSA, and other government agencies. All management plans and inventory information have been made available to bureau developers. In addition, we have distributed formal standards and guidance, including (1) a memorandum to all developers regarding the Federal standards for data interchange, (2) cable notices to all our overseas posts regarding the Year 2000 problem and outlining their responsibilities regarding date compliance, and (3) notice of Year 2000 procurement requirements consistent with recent changes to Federal acquisition regulations. We routinely provide information to bureau Year 2000 coordinators and software developers via email and other media and have established an interactive Intranet site, which will soon be available to Department users who have a web browser and communications access. In 1996, the Department's annual technology product exposition for developers highlighted Year 2000 software tools.

Department of State Year 2000 Activities

Inventory and Assessment of the Problem

The Department of State has conducted comprehensive ongoing surveys and reviews of its systems to assess the potential adverse effects of the Year 2000 date change. To date, the Department has been able to make corrections as problems occur. When the Year 2000 arrives, however, about two thirds of the Department's systems would be affected by erroneous date processing unless corrections are made. In summary, the application inventory shows that the Department has approximately 141 applications constituting 27.7M lines of code in 17 different programming languages that require conversion to Year 2000 compliance or replacement by compliant applications. Current plans are to convert about 52% of the non-compliant code and replace 48%. The hardware survey focused on the number, location, and compliance of the platforms that support the applications. In addition to the Department's mainframe computers, the world-wide inventory includes over 250 minicomputers; almost 20,000 PCs; and several hundred local area network systems. The non-compliant minicomputer systems represent the biggest challenge. Many of the system replacement initiatives are already planned or underway, but may have to be accelerated because of the deadline imposed by the Year 2000.

Priorities and Strategy

As a part of the Year 2000 inventory and assessment process, each bureau has reviewed its portfolio and categorized each application into one of the following four categories of prioritization: (1) Mission Critical Application/Multiple Site; (2) Mission Critical Application/Single Site; (3) Non-Mission Critical Application (4) Post Application. Mission critical applications are those which impact the public directly, have national security implications, or are otherwise essential to the Department's mission. They include legacy applications developed and maintained by the Consular Affairs bureau, the Chief Financial Officer, and central Information Management. Although both categories (1) and (2) are of equal criticality, they require somewhat different strategies. Category (1) includes mission critical applications that are developed centrally for deployment to multiple domestic and overseas sites, which require long lead times for conversion or migration to new platforms. Most of these applications are implemented on minicomputers and are in process of or will be scheduled for reengineering on new platforms. Category (2) includes mission critical applications that are centrally developed and operated. These include mainframe applications, most of which will require conversion, rather than more time-consuming reengineering or migration. Category (3) includes the remaining applications. Our current schedule calls for achieving compliance of mission critical applications with at least a year for testing, and six months testing for non-mission critical systems. This may be too optimistic. The first priority, therefore, is to preserve mission critical functionality. Achieving Year 2000 compliance of non-mission critical applications will depend on availability of resources after ensuring the mission critical applications.

Pilot Projects

The general strategy for Year 2000 date compliance is to (1) replace minicomputer-based applications and (2) convert mainframe applications. While there is a need to accelerate replacement of the minicomputers because of the Year 2000 deadline, some of this work is already in progress, employing a variety of methods. Year 2000 conversion efforts, on the other hand, can be achieved with a more standardized approach. (Conversion also is a contingency strategy that may be necessary should replacement of all minicomputer applications prove to be impracticable.) The Department has begun pilot conversion of several of its mainframe mission critical applications. A test bed, separate from other production and testing processes, is being dedicated to Year 2000 conversion and testing, which will be available for all the Department's mainframe applications. Individual bureaus have also initiated migration of several mission critical applications from minicomputers to networked PC platforms. The various methods and tools employed in these projects will be assessed as to relative effectiveness as a model for bringing the remaining applications into compliance. At the same time, each bureau is being required to move forward with its own Year 2000 efforts as part of its overall development and maintenance responsibility, using methods, resources, and tools appropriate to its unique needs.

Mr. HORN. Well, we thank you very much. We are going to ask all the panel to testify before we throw it open to questions.

Our next witness has made frequent appearances before both the subcommittee and the full committee. General Paige comes to this job with a distinguished career in the Army, where he retired as a Lieutenant General, and he has evidenced more Distinguished Service Medals out of the civilian sector and the military sector, I think, than almost anyone I know.

So welcome in your new role as Chief Information Officer.

Ltg. PAIGE. Thank you very much, Mr. Chairman and members of the committee. I want to thank you for the opportunity to testify before you today, and I do not want to tell you that I am looking forward to coming back again and again, but I do appreciate being here this morning.

As I testified to you in April 1996, the Department of Defense considers the year 2000 millennium change to be potentially a serious problem and we are dealing with it aggressively. All of DOD is using the structured five-phase approach for resolving the problem.

This approach, as you might know, was first developed by the Air Force and was adopted for use across the Federal Government through the Chief Information Officer Council's Year 2000 Interagency Committee. We are well into the first phase of that approach, which is to raise awareness of the problem with the senior leaders, managers and decisionmakers throughout the Department.

As you are probably aware, we officially began the awareness campaign in November 1995, after many earlier e-mails alerting people all around the world that the problem existed. Today, I would like to believe that virtually every commander or senior leader in the Department is aware that the problem exists and that it could affect them in many ways.

Taken as a whole, the Department is far down the road to completing the second phase, in which our systems are assessed for the year 2000 impact and compliance. We have a backbone management tool, the Defense Integration Support Tools, or the DIST, that we are using as a corporate data base to maintain inventory and track essential elements of information about our systems. We are using the tool to record the progress of our systems as they move toward retirement or year 2000 compliance.

Each of the components, including the military departments, report the results of their ongoing assessments, and all actions planned are taken to my office. This information will also be given to the General Accounting Office in their ongoing year 2000 audit of the Department.

Some of our defense agencies have progressed beyond the assessment phase into the renovation and validation phases, primarily because they started on the problem early, as early as 1991 in some cases. In the case of the defense agencies that started early, and in most of our weapon systems programs, the year 2000 fixes are taking place as normal systems maintenance. And I have no doubt that they will be ready long before that dreaded Saturday morning of January 1, 2000.

The Comptroller and I co-chaired the first of a series of interface assessment workshops to ensure the systems that are in his func-

tional area or that have direct interfaces with the financial systems will be year 2000 compliant. These interface assessment workshops will continue semiannually until all of our systems in each of the functional areas, that is, not only finance, intelligence, but on and on, are compliant.

Dr. Hamre and the senior leaders in the entire financial community across the Department have left no doubt that they are aware and concerned. Their participation and assumption of leadership to make it happen was clearly demonstrated during that functional area assessment.

Since I last testified, we have undertaken a number of year 2000 activities. Our participation in the Federal CIO Interagency Council has been continuous, and has resulted not only in the adoption of the five-phase process for the Federal Government but also in the development of a best-practices document to back up that process, a Federal Acquisition Regulation clause, and conferences to raise awareness and share lessons learned on assessments.

We are working closely with OMB and GAO to share the status of our activities and concepts on how to fix the year 2000 problem. We established a Year 2000 Steering Committee, led by our Deputy Secretary of Defense, the Honorable John White, so that critical issues are brought before the Department's senior leadership for immediate decision and action.

We are working toward fixing the year 2000 problems in the Department, and you have the reports furnished in response to your letters to the military departments. If you have had the time to review those responses, I hope that you were as impressed as I am that they understand the problems and are hard at work to solve them. I have had the opportunity to review the detailed plans from some of our overseas commands, and I assure you that the professionalism is evident.

We recognize that we need to get on with it, find, fix and test every mission critical system in the Department, to include our support systems, which were referred to by some folks as management information, or other admin and LOG systems.

As I mentioned earlier, the CIO's of the military departments and I, on February 12, 1997, submitted to this committee responses to 10 questions to help you evaluate where the Department of Defense is in relation to solving the year 2000 problem. These responses reinforce the fact that the Department's senior leaders and systems managers are not waiting until the last minute to test, validate and implement their year 2000 solutions but are, indeed, taking aggressive action to plan for and fix the year 2000 date-related issues early on.

This year we are closer than last year, and we know we cannot change the deadline for solving this problem. January 1, 2000 will be here whether or not we are ready. Each time we are required to answer additional calls for information from the Office of Management and Budget, GAO, or from Members of Congress, it stretches our resources, both manpower and funding, a little thinner. If you were to ask how you can help, my response would be to help in reducing the drain on our resources by reducing the number of special reporting requirements. We are reprogramming resources from all areas to use in solving the year 2000 problem.

We need to use those resources to the maximum extent for that purpose.

I appreciate the opportunity to share with you the year 2000 initiatives that have been put in place to bring the Department's systems to full year 2000 compliance. You can be confident that DOD will get the job done and we will be prepared on January 1, 2000, to perform our mission. We will not let America down. Your continued support is critical to the Department's success.

Thank you.

[The prepared statement of Ltg. Paige follows:]

STATEMENT BY

THE HONORABLE EMMETT PAIGE, JR.

CHIEF INFORMATION OFFICER OF THE DEPARTMENT OF DEFENSE

Mr. Chairman and members of the Committee, thank you for the opportunity to appear before you today to discuss the Department of Defense approach to the Year 2000 problem.

As I testified to you last April 1996, the Department of Defense considers the Year 2000 (Y2K) millennium change to be a serious problem and we – the DoD senior leadership, across the board -- are moving aggressively to address it. We have taken several actions to assure we address all phases of the problem. I would like to share with you some of the actions the Department has taken to bring our systems to full Year 2000 compliance.

As part of our management strategy the DoD adopted a five phase approach for addressing the Year 2000 problem: Awareness, Assessment, Renovation, Validation and Implementation. We are well into the Awareness phase which focuses on promoting awareness of the Year 2000 issues throughout DoD.

In the Assessment phase, each Military Department and Defense Agency inventories and assesses its information systems for Year 2000 compliance. Systems are evaluated and selected to be renovated, replaced, or retired. Systems scheduled for repair are in the Renovation Phase. In the Validation phase, they are tested to assure they will function through January 1, 2000. The last phase is Implementation, where fully tested and validated systems are

put into operation and those to be replaced or retired are removed from the inventory.

This is a costly process. Current estimates are $1.1 billion for finding date related fields, fixing and testing those systems identified to date. These figures may change -- the assessments are still in progress and better estimates are developing as actual engineering fixes are identified. These fixes will be performed within current budget allocations or by reallocation. No additional funding will be requested.

In November 1995 I issued an "All Hands" Year 2000 message which began the formal awareness phase of the DoD five phase management process. The follow-on instructions from Departmental leaders, including the Deputy Secretary of Defense, further increased awareness at all levels in the Department. Memoranda and guidance followed from senior leaders in the Military Departments, Defense Agencies and Joint Staff Components.

The Department has an inventory of approximately 9,300 systems that are at varying stages of the five phase process. The Defense Integration Support Tools (DIST) database is our backbone management tool that tracks these systems and their associated 112,000 programs. Each of these systems, their programs, platforms and languages, must go through the assessment process. About half of the systems listed are in assessment, with a third in the renovation

phase. More than 560 systems are scheduled for elimination. Modifications to the DIST to make it more user friendly and easily accessible are in progress.

To insure that the Year 2000 problem is addressed in both our software and hardware systems, I issued a memo in May 1996 regarding the problem in personal computers (PCs) and workstations Basic Input Output Systems (BIOS) chips. I asked that the problem be publicized across the Department and immediate steps be taken to have prime contractors for PCs, workstations and software assure their products are Y2K compliant and to issue stop work orders on those that fail to comply. I further requested contracting offices to develop plans to upgrade all products expected to be in use on January 1, 2000.

Standard compliance language was adopted by DoD and published in the Federal Acquisitions Circular. This language was also added to the Defense Acquisition Deskbook. Using standard language in acquisitions will assure Year 2000 compliance in Departmental purchases of software and hardware.

In August 1996 the Deputy Secretary and I issued memos reiterating the five phase process adopted by the Department of Defense and advanced by the Federal Interagency Year 2000 Committee. Further, to insure that interface issues are being identified and resolved, the DoD Comptroller and I co-chaired the first of a series of interface assessment workshops to ensure that systems interfaces and data exchanges between systems and functional areas will be

Year 2000 compliant. Additional interface assessment reviews will be scheduled to give each of our functional owners an opportunity to ensure that systems interfaces and data exchanges between systems and functional areas will be Year 2000 compliant.

As a result of the workshop, a joint memorandum to the Military Departments and the Defense Agencies was signed by the Under Secretary of Defense (Comptroller) and the ASD(C3I) requiring registration into the DIST of automated information systems, system interfaces and data exchanges. Systems not registered in the DIST run the risk of losing their funding. My staff and the Comptroller's staff are working together to identify systems not registered in the DIST that are candidates for defunding.

A series of Year 2000 status briefings have been given to the Deputy Secretary of Defense by the Military Departments and Joint Chiefs of Staff. Additional Year 2000 status briefings are being scheduled for the Deputy Secretary of Defense until all of the Defense Components have briefed on their Year 2000 plans and status.

Early this year we submitted to Congress the Department of Defense (DoD) Action Plan for Year 2000 Information Technology (IT) Compliance. This document re-emphasizes Department-wide Y2K guidance. As stated in the Action Plan, we will release the Department of Defense Year 2000 Management

Plan in May 1997. The Management Plan will incorporate the five phase process used in the Action Plan, employ a decentralized implementation strategy and contain the DoD Components Year 2000 Plans, algorithms for determining priorities of fixes, their contingency plans, and status of implementation schedules. The Military Departments and Agencies are preparing or have completed individual management plans containing realistic timetables and milestones.

In order to bring critical issues before the Department's senior leadership for immediate decision and action, we have established a Y2K Steering Committee chaired by the Deputy Secretary of Defense with the DoD CIO serving as the Executive Secretary. The Committee will concentrate on cross-functional and organizational issues such as interfaces among systems that exchange data, migration system fielding, and legacy system elimination. Further, the Committee will provide for integrated development of Year 2000 policy, strategy, planning, solutions, implementation of corrective actions, and identification of vulnerabilities in all DoD information systems. This committee will also be a decision-making body for critical time-sensitive decisions that affect more than one DoD Component.

We are also working closely with Office of Management and Budget and other Federal agencies to develop Federal-wide guidance for reporting and managing Year 2000 issues. Our participation in the Federal CIO Interagency

Council has been continuous and resulted in the adoption of the five phase process, development of a Best Practices document to back up that process, and in participation in conferences to raise awareness and share lessons learned.

To provide another forum for keeping the Department's personnel aware of the Year 2000 (issues) and for disseminating information on lessons learned, our first Year 2000 newsletter will be published next month. Our newsletter will be distributed in a variety of media across DoD to get top priority Year 2000 issues to the field, Department-wide, in a timely manner.

We are working toward a solution for the Year 2000 problem. We recognize that we need to get on with it; find, fix, and test every mission critical system in the Department. On February 12, 1997, the CIOs of the Military Departments and I submitted to this Committee responses to ten questions designed to evaluate where Department of Defense is in relation to solving the Year 2000 problem. These responses reinforce the fact that the Department's senior leaders and system managers are not waiting until the last minute to test, validate and implement their Year 2000 solutions but are taking aggressive action to plan for and fix Year 2000 date related issues early on.

We can't change the deadline for solving the Year 2000 problem. We are spending an enormous amount of time responding to inquiries from various

sources. While we recognize the need for Congress, the General Accounting Office, and the Office of Management and Budget to gather information about our efforts to address these issues, each time we respond to additional requests for information, it stretches our resources – both manpower and funding – a little thinner. If you were to ask how you can help, my response would be to help in reducing the drain on our resources by reducing the number of reporting requirements. We are reprogramming resources from all areas to use in solving the Year 2000 problem. We need to use those resources to the maximum benefit for that purpose.

I appreciate the opportunity to share with you Year 2000 initiatives that have been put in place to bring the Department's systems to full Year 2000 compliance. Your continued support is critical to the Department's success.

Mr. HORN. Thank you, General.

The next witness is Patricia Lattimore, who is now the Chief Information Officer for the U.S. Department of Labor.

Welcome.

Ms. LATTIMORE. Good morning.

I, too, welcome the opportunity to briefly describe the Department's year 2000 preparatory activities. We have reported to you a number of positive efforts to date, some of which began over a decade ago. I think that you will see from our report that the Department is making excellent progress toward our singular goal, to ensure that all Department of Labor systems transition successfully to the next century and do so in a manner that allows the Department to carry out its mission of providing the best possible service to America's workers without interruption.

As the examples in our submission demonstrate, the Department has a long-standing commitment to serving the public and thus to ensuring that its automated systems meet the challenge of the year 2000.

The Department's Chief Information Officer structure is coordinating the Department's year 2000 project plans and detailing required actions. We have 58 mission-critical systems that need conversion. Six of those are already year 2000 compliant; 34 are scheduled to be completed for compliance by the end of 1998; we have 18 that were scheduled for conversion early to mid 1999, and those are currently under review to see if we can move their conversion into the 1998 window.

We are reviewing these plans carefully and closely scrutinizing completion dates, especially those that stretch into 1999, to see if we cannot expedite some of that through additional resources or reprioritization. We have measured our progress to date against the Government-wide year 2000 guidelines published by OMB, and we believe our conversion approach to be consistent with OMB's 5-pronged goal and timetable approach.

As the newly appointed CIO for the Department, I place strong emphasis on achieving a structured and goal-oriented approach to our total information technology environment. We are working to create a stronger, more cohesive IRM program responsive to the mandate and full intent of the Information Technology Management Reform Act.

Through the combined efforts of our actions completed to date, those currently under way, and ongoing coordination and information sharing, we feel we are well on the way to mastering the year 2000 challenge. Nonetheless, we recognize the challenge is unprecedented. The efforts we have undertaken have few models in terms of scope or complexity. A project of this magnitude always has room for improvement, and we hope to benefit by the constructive dialog that this hearing will generate.

[The prepared statement of Ms. Lattimore follows:]

U. S. DEPARTMENT OF LABOR

STATEMENT OF PATRICIA W. LATTIMORE
ACTING ASSISTANT SECRETARY OF LABOR FOR
ADMINISTRATION AND MANAGEMENT/
CHIEF INFORMATION OFFICER
BEFORE THE
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT,
INFORMATION AND TECHNOLOGY
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT

February 24, 1997

Mr. Chairman and distinguished members of the Subcommittee:

As the Chief Information Officer (CIO) for the Department of Labor (DOL), I welcome this opportunity to describe the Department's "Year 2000" activities. We have a number of positive activities to report on, some of which began over a decade ago. I think that you will see that DOL is making excellent progress in addressing this important issue. Our singular goal has been to ensure that all DOL systems transition to the next century and are Year 2000 compliant, so that they correctly calculate benefits, compute dates, and perform other date-related tasks necessary for the Department to carry out its mission and provide the best possible service to the American public.

As CIO, I have set up a comprehensive system for addressing the Year 2000 issue, which I explain below. Before sharing the details of that system, however, I want to highlight some of the Department's accomplishments to date:

o BUREAU OF LABOR STATISTICS

The Bureau of Labor Statistics began addressing the Year 2000 issue in 1985, when it modified a system to accommodate the Year 2000 for 15-year employment projections. Since that time, BLS has taken the Year 2000 issue into account in its planned systems design in the normal course of its system development efforts, so virtually all of its subsystems will be Year 2000 compliant at no extra effort or cost to the taxpayer. An example of a new system is the Census of Fatal Occupational Injuries, which was introduced in 1991 following a National Academy of Sciences report identifying the need for a reliable count of the number of fatal occupational injuries. The system was designed from the beginning to be Year 2000 compliant.

BLS divides its major survey processing systems into discretely operating subsystems. Such processes as sample selection, data collection, the calculation of estimates, and data dissemination are usually handled in discrete subsystems. When BLS revises a system to

meet changing survey requirements, the changes often involve only one or two subsystems rather than every component of a system. Sometimes the change is brought about by modifying one or more subsystems. In other cases, one or two subsystems are retired and replaced with new subsystems. When a subsystem is targeted for modification or replacement, BLS also takes this opportunity to address technology issues in addition to the survey requirements.

When BLS reports a system as not complying with Year 2000 requirements, this is a vast oversimplification. In fact, some subsystems are already Year 2000 compliant, but just one subsystem that is not compliant will result in a "Not Yet Compliant" report for the entire system. For example, the International Price System (IPS), which produces a Principle Economic Indicator that is used in the analysis of trends in U.S. trade, is nearing the completion of a multi-year revision to accommodate a host of programmatic improvements -- sampling method, estimation, coverage of the service sector, increased frequency of publication from quarterly to monthly, etc. As old subsystems that were not Year 2000 compliant were retired, they have been replaced with new subsystems that are Year 2000 compliant. Ten of the twelve IPS subsystems in operation today are Year 2000 compliant, and the last two are scheduled for retirement before the Year 2000.

Most of the BLS subsystems that are not Year 2000 Compliant are scheduled for retirement prior to the year 2000. They are being replaced not due to problems in handling the year 2000, but for a variety of other reasons related to the substance of the survey and the statistical information the system needs to produce. This replacement coincides with extensive downsizing from the mainframe to the client-server environment and a modernization of computing languages. The new subsystems are not being built by taking the code of old systems. They are being designed, programmed, documented, and tested from the outset to be Year 2000 Compliant at no additional cost to the taxpayer.

BLS has reported to the Department in detail on the component subsystems of its major survey processing system. BLS has specific plans to replace most of the subsystems which remain non-compliant with year 2000 processing. BLS is tracking progress on these projects carefully, with special attention to subsystems at risk of being delayed. There are a few instances where BLS plans call for non-compliant subsystems to linger into and beyond the Year 2000, most notably in the Producer Price System and the Current Employment Statistics System. Here BLS is planning modification of code, system testing, the modification of documentation, and in some instances the modification of training material for system users.

o EMPLOYMENT AND TRAINING ADMINISTRATION (ETA)

The Unemployment Insurance Program of the Employment and Training Administration (ETA) requested $200 million in grant funding for fiscal year 1998 to address Year 2000

issues, which was included in the President's budget. This request represented the Federal share of the costs for State information systems that support Federal programs. ETA has, in fact, taken the lead in working with its grantee community. It has planned and is hosting a Year 2000 National Colloquium with the grantee community to address issues, share information, and resolve problems. Further, ETA is working with State Employment Security Agencies (SESAs) on Year 2000 modification planning. And ETA has conducted a nation-wide survey of the SESA organizations, which served both to alert State organizations to the Year 2000 issue and to provide valuable data to highlight potential problem areas and to estimate costs. State Labor Commissioners recently came forward to request a briefing from the Department on Year 2000 computer issues, and this will be provided.

ETA -- Year 2000 Impact on ETA LAN

ETA recently completed an upgrade of its operating system to Novell, a windows-based environment. All applications residing on the ETA LAN that are DOS-based will be converted to a Windows-based environment. As custom software is evaluated and rewritten, the plan is to move to a Client/Server platform with Oracle 7 software. This rewrite effort will require a full examination of existing applications if it is determined that the systems are still required. The redesign will take advantage of current technology to help make ETA more productive. Because of the Year 2000, this process will be compressed into the next two years.

In addition, ETA will review its entire computer system, desk top PCS, servers and all underlying operating system software and hardware and software applications to ensure that it does not have any critical year code that is written in two digits. All commercial off-the-shelf software that is not currently Year 2000 compliant will be replaced or upgraded as Year 2000 certified software becomes available. Our first major conversion will be the Corel Office Suite conversion tentatively scheduled for this fiscal year and GroupWise 5 tentatively scheduled for the end of calendar year 1997.

Existing custom software that is supported by ETA will not be evaluated for Year 2000 compliance. Rather the entire applications will be evaluated and redesigned if an initial assessment determines they are still necessary. To review this existing software, line-by-line, for Year 2000 compliance would be counterproductive, since most of it is DOS-based and no longer supported by the operating system. ETA has determined that resources will be better utilized by the redesign process.

ETA has set a target date of July 1999, the beginning of Program Year 1999, for major systems and applications to be implemented. This date is necessary for states and other grantees who operate on the Program Year cycle to adapt to any changes.

At the same time ETA is redesigning, it must also maintain existing applications. These applications will not be terminated until the new systems are in place and working. ETA

does not propose to change any of the current reporting requirements, however, the design will be able to accommodate any such changes that take place during the redesign as well as after.

ETA -- Year 2000 Impact on States

ETA has also been assessing the impact of the Year 2000 problem in the State Employment Security Agencies (SESAs) composed of Unemployment Insurance (UI) and Employment Service (ES) and on state administration of the Job Training Partnership Act (JTPA). The Federal programs affected are the Tax and Benefits programs of the Unemployment Insurance program and management information operations in the Employment Service and Job Training Partnership programs.

Because of the manner in which UI benefit entitlement is computed, problems in the Benefit area will actually surface beginning January, 1999 -- one full year prior to the year 2000.

ETA's current estimate, based on surveys conducted with the SESAs (latest update, January 21, 1997) is that out of the 30 SESAs which report that they plan to have compliant UI systems (for both Benefits and Tax) before 1999, it appears that at least 10 have not begun the process of conversion and are still in the problem analysis stage. With 21 additional SESAs having no time lines developed for converting both UI systems, it would appear that over half of the SESAs are in danger of not being able to complete their conversion, testing, and implementation processes in time. Accordingly, the ability to collect taxes and to pay benefits are substantially at risk in those states.

The status of conversion efforts in the Employment Service area is unknown in 17 SESAs. The status of conversion efforts in state financial systems is currently unknown in 33 states. Approximately half the states have not responded to information requests on JTPA reporting systems. The impact at local levels cannot be determined. Because of the lack of information, precise cost measurements to resolve these problems are not available. However, ETA estimates total costs to SESAs for the Year 2000 conversion efforts for all SESA programs to be $477 M.

The President's budget includes a $200 M request for new funding to address this problem. In addition, on February 19-21, ETA is sponsoring a three-day colloquium on the Year 2000 issue and problems to further alert the states to explore collective actions, obtain additional status information and promote solutions.

o VETERANS' EMPLOYMENT AND TRAINING SERVICE

The Veterans' Employment and Training Service (VETS) completed its survey of Year 2000 Conversion needs on January 31, 1997. The agency survey was designed to learn

whether its inventory of hardware, software and reporting systems were year 2000 compliant.

In addition, the VETS plan for Year 2000 conversion includes surveying its partners, State Employment Security Agencies for the VETS 200 and VETS 300 reports; and employers submitting electronic information for the VETS-100 report; to learn whether their systems can continue to submit information electronically after the Year 2000. The target date for completion of this effort is July 31, 1997.

The agency's hardware survey identified 27 personal computers that were not Year 2000 compliant. VETS will replace 21 of these during fiscal year 1997, and will replace the remaining six during fiscal year 1998. VETS requested funds in the fiscal year 1998 budget for these replacements.

The agency's software survey concluded that most software in use in the agency is part of the Employee Computer Network, and that is generally compliant. VETS also uses off-the-shelf software programs that are not part of the Employee Computer Network. These were tested and found to be compliant.

The Veterans' Employment and Training Service also surveyed its reporting systems to determine whether they were Year 2000 compliant. They were found to be compliant.

However, since VETS receives data electronically for some of its reports, a survey is underway to determine whether the providers of the electronic data will be able to continue electronic transmission of data past the Year 2000. This effort is on-going, with a target date of July 31, 1997. The survey results will enable the agency to determine the budget implications, if any, of helping our partners achieve Year 2000 compliance.

o THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

The Occupational Safety and Health Administration's (OSHA) Integrated Management Information System (IMIS) Consultation and Discrimination databases have already been converted to Year 2000 compliance, and are operational. These IMIS databases are national in scope and contain data integral to the conduct of OSHA's Compliance Assistance Program and to agency efforts to protect the right of employees to seek safety and health on the job without fear of punishment.

OSHA's major Year 2000 conversion effort began during the summer of 1994 with the conversion of the IMIS Discrimination and Consultation databases. Since that time, OSHA has launched an aggressive agency-wide infrastructure modernization program, including agency systems, software, hardware and telecommunications facilities. The modernization program has resulted in substantial progress being made toward addressing

the agency's Year 2000 concerns.

OSHA's major information systems and equipment -- IMIS and OCIS -- have been the primary focus of agency Year 2000 date conversion efforts. Issues regarding States that administer their own occupational safety and health programs through plans approved under Section 18(b) of the Occupational Safety and Health Act of 1970, using IMIS hardware and software, are being addressed in current IMIS Year 2000 plans.

OSHA is moving ahead to expand the scope of its activities to specifically address other computer systems and equipment agency-wide, as well as in the private sector and State governments that could affect OSHA's programs and activities. OSHA's Year 2000 plans and activities include addressing the seven critical activities identified by the General Accounting Office's Accounting and Information Management Division, which are Awareness; Enterprise Assessment; Conversion, Replacement or Elimination; Unit Testing and Validation; Incremental Release and Version Control; Integration and System Testing; and Program Management. More specifically, the agency is moving ahead to: 1) develop concrete, formalized Year 2000 plans, especially for major systems and applications; 2) convert as rapidly as possible, its critical legacy applications; 3) expand assessment of its vulnerabilities agency-wide; 4) design and implement a reporting structure, identifying key responsible personnel; and, 5) design and implement processes and procedures to document agency Year 2000 plans and activities and to regularly report progress towards the plans to OSHA management, to DOL's Chief Information Officer (CIO), and to interested oversight organizations.

OSHA -- Status of System Conversion Efforts

Mission critical systems have been identified as OSHA's Integrated Management Information System (IMIS), Computerized Information System (OCIS), and OSHA's Property Management Information System (OPMIS); and each of these priority systems is being converted.

Consistent with OSHA's Strategic IRM Plans, over the past 3-4 years agency systems enhancements and infrastructure modernization efforts have addressed the Year 2000 issue. Major legacy IMIS subsystems, including the Consultation Data System and the Discrimination System, have been designed and rewritten. They are now Year 2000 compliant. As OSHA proceeds to implement its modernization plan, major work has already begun on both the Host and the Micro to bring the Enforcement System into Year 2000 compliance. Bite size chunks of the enforcement application are scheduled to be converted in a test environment to be followed by migration to production. The current timetable reflects an estimated calendar year 1998 completion, with the possibility of some additional minor work to be completed in early 1999.

In November of 1996, two DEC VAX minicomputers (Host for OCIS) at the Salt Lake Technical Center were replaced by two DEC Alphas, Year 2000 compliant hardware.

Over the past 6 months, work was started on conversion of the databases to Oracle 7, Year 2000 compliant software. The OCIS database conversion is expected to be completed over the next 6 months. Most of the other DEC software is good for 10-30 years past 2000 and will be replaced by newer versions as they are released. Consistent with agency modernization plans, some hardware will be replaced by entirely different hardware. Older Microsoft PC software is expected to be replaced in the next 3 years with Year 2000 compliant versions.

The DEC VAX at the Cincinnati Technical Center (Host for the Property Management System) was replaced in 1995. Work is in progress to convert the property management database to Oracle which is Year 2000 compliant. The project is expected to be completed by the end of the calendar year 1997.

In other Year 2000 readiness actions, OSHA has replaced older, non-compliant hardware by phasing out all 386 class personal computer over the past two years.. The agency has acquired more than 2000 Pentium laptop and desktop computers, and is in the process of phasing out non-compliant 486 class personal computers. Testing routines are being structured and implemented to test and verify all hardware for Year 2000 compliance as soon as possible. OSHA is , and much of the non-compliant software has been replaced. A recent inventory was conducted to identify any non-compliant software still in use. Plans are underway to upgrade or replace the software over the next two years.

o EMPLOYMENT STANDARDS ADMINISTRATION (ESA)

The Employment Standards Administration has been working towards Year 2000 compliance for several years. Starting in fiscal year 1995, ESA began a major redesign and upgrade of its ADP platform which includes Sequent SE30 minicomputers, a UNIX based operating system and an Informix relational database management system - all of these are Year 2000 compliant. All ESA programs are also in the process of replacing or expanding the number of PCS in each office; all of the new PCS, and the software that is being purchased to run on them, have been determined to be Year 2000 compliant. Any new software applications that are being designed will be designed to run on the Sequent and will be Year 2000 compliant. Although there is still much work to be accomplished to bring the many ESA mission critical systems and subsystems into compliance, the agency is actively engaged in completing these tasks..

Understanding the importance of this issue, ESA has established a work group composed of responsible individuals from each of the four ESA programs - Wage and Hour Division (WHD), Office of Federal Contract Compliance Programs (OFCCP), Office of Workers' Compensation Programs (OWCP), which includes the Office of Federal Employees' Compensation (FECA), the Division of Coal Mine Workers' Compensation (DCMWC) and the Division of Longshore and Harbor Workers' Compensation (DLHWC) and

Office of Labor Management Standards (OLMS). This effort is led by and overseen by the Office of Management, Administration and Planning (OMAP). These individuals are charged with ensuring that detailed work plans that contain milestones and deadlines are in place, or are being developed, for all of the systems/subsystems in their program, that quarterly reporting against these plans occurs beginning with the second quarter of fiscal year 1997, and that sufficient funding is available for the work effort required to bring the systems into compliance. As ESA had been planning to upgrade and replace obsolete systems, funding for these upgrades had been requested and received in previous fiscal years. No additional funding requests are anticipated for Year 2000 compliance.

Each program has designated as top priority those systems/subsystems that are considered mission critical and in some way interface with outside entities. Examples of this would be some of the subsystems within FECA's FECS (Federal Employees Compensation System). The Medical Bill Processing System of the Division of Federal Employees' Compensation is Year 2000 compliant. This system supports the Federal Employees' Compensation Act (FECA) using artificial intelligence to accept or reject bills from medical providers, select correct payment, or return the bill for needed information. It then electronically transmits requests to the Department of the Treasury for payment of authorized medical bills under FECA. The Automated Compensation Payment System (ACPS) which determines benefits for injured federal workers and transmits this data to Treasury for payment, and also contains the FECA Chargeback System which calculates each federal agency's annual FECA costs and prepares the annual bills, has parts of the system which reside on the Sequent minicomputer and are compliant and parts which reside on the IBM mainframe and need revisions to become compliant. FECA is currently developing a plan to bring the entire system into compliance and has committed resources to ensure that this occurs before October 1, 1999. All of the other FECS subsystems reside on the Sequent now, or detailed planning is underway for their conversion to the Sequent, and thus will be Year 2000 compliant, before the end of fiscal year 1999.

The DCMWC Automated Support Package (ASP) has three subsystems - Black Lung Accounting System (BLAS), Disability Benefits Processing Subsystem (DBPS) and the Interagency Data Exchange (IADE) that would be considered mission critical and are not currently compliant. However, there is a Request for Proposals (RFP) that closed on February 18, 1997, for a contractor to operate ASP. The RFP includes the requirement that all of the ASP subsystems be Year 2000 compliant by December 31, 1999.

The two systems in DLSHW are not yet compliant. However, funds have been allocated in fiscal years 1997 and 1998 to make the changes necessary for compliance. This is particularly important for the Longshore Special Fund System (LSFS) which is the program's disbursement and accounting system for benefits and also calculates the annual assessments for insurance carriers and self-insured employers. Detailed plans are being developed and will be monitored closely to ensure timely compliance.

The Wage Hour Management Information System (WHMIS) is a legacy mainframe system which is not Year 2000 compliant. WH clearly recognizes the work that needs to be done to ensure compliance. Problems in this system relate to data capturing and reporting mechanisms which affect statistical reports that show program impact. WHD has projected a cost of $500,000 to fix the program and is in the first stage of developing a requirements analysis for a complete redesign of the system. Completion of system implementation is targeted for the end of fiscal year 1998. The redesigned system will be migrated from the mainframe to run on the Sequent.

WHD has completed the redevelopment of the new Civil Money Penalty Tracking and Accounting System (CMP), and implementation is scheduled for March, 1997. This system supports enforcement activities under the Fair Labor Standards Act, from assessment through final orders/legal proceedings, and for the first time allows tracking of civil monetary penalties in a consistent manner. The system runs on the Sequent minicomputer and is Year 2000 compliant.

A requirements analysis is currently under way to determine the development effort needed to bring another WH system, the Back Wage Collection and Disbursement System (BCDS), into compliance. Implementation is targeted for fiscal year 1998 at a cost of $250,000. This system will be tied into the redesigned CMP system thus simplifying the data entry/data retrieval requirements.

WH also has two platform products - ADABAS and COBOL - that need to be changed to be Year 2000 compliant. In the instance of ADABAS, the data base management system will be redesigned to run in a UNIX format on the Sequent minicomputer. Regarding COBOL, all programs are currently being analyzed and the expectation is that a new system, running on the Sequent, using DELPHI, will be completed by the end of fiscal year 1998. Cost estimates and work plans are being developed for these changes.

OFCCP has two major management information systems - Complaint Administration System (CAS) and Compliance Review System (CRIS) - which need to be revised to be Year 2000 compliant. Preliminary plans have been developed and initial resource requirements have been identified. Both systems currently reside on the IBM mainframe. Plans are under development to redesign them and move them totally to the Sequent during fiscal year 1999.

OLMS has two major ADP systems - Case Management System (CMS) and Labor Organization Reporting System (LORS) - which currently run on LANS and are not Year 2000 compliant. CMS is currently being redesigned, with and anticipated completion date of October 1, 1997, which will make it Year 2000 compliant. Minor revisions are needed to be made to LORS to make it Year 2000 compliant; these will be completed during fiscal years 1997 and 1998.

In summary, ESA ADP systems/subsystems are in various stages of Year 2000 compliance; some systems are already compliant, some only need minor revisions and others will undergo a complete redesign. All of the ESA programs have committed the level of effort that is necessary to bring all of their programs into compliance.

o PENSION AND WELFARE BENEFITS ADMINISTRATION (PWBA)

The Pension and Welfare Benefits Administration's (PWBA) new major system initiative, the Employee Retirement Income Security Act (ERISA) Filing and Acceptance System (EFAST), will replace the current Internal Revenue Service (IRS) processing system for ERISA annual financial reports (the Form 5500 series) that are filed by private sector retirement and welfare plans. PWBA's EFAST system will collect and process the financial reports in a way that uses the latest available technology for scanning, imaging, storing and disseminating form data.

The EFAST system planning and development are on schedule. The system design is the subject of a Request for Procurement (RFP) which is expected to be released by March 31, 1997. Full Year 2000 compliance is a mandatory specification. PWBA is also working with IRS, the Social Security Administration (SSA), and the Pension Benefit Guaranty Corporation (PBGC) on designing the system's functional requirements to meet the ERISA data needs of each of these agencies and representatives of each agency will work with us to evaluate the proposals of qualified respondents to the RFP. Award is anticipated by September 30, 1997 and the system will be fully operational before the year 2000.

EFAST is designed to make annual report data more readily available to the public and it will be less expensive to operate than the current IRS processing system. Because EFAST is being designed from the ground up with Year 2000 compliance built in, there will be no special funding requirements.

o OFFICE OF THE CHIEF FINANCIAL OFFICER (OCFO)

The Office of the Chief Financial Officer (CFO) has completed Year 2000 modifications for some of its financial systems, and has plans developed or in progress for others. The Capitalized Asset Tracking and Reporting System (CATARS), an accounting (DOLAR$) subsystem, which allows tracking of expenditures and depreciation of capitalized assets, is fully Year 2000 compliant and is in its second year of operation. The Automated Time and Attendance System (ATA), which is a Payroll subsystem, has been modernized to include many new features and is Year 2000 compliant. Three other Payroll subsystems have been converted to Year 2000 compliance, including the Inquiry Compensation System, the Health Reconciliation System, and the Unemployment Compensation Billing

System.

The Office of the Chief Financial Officer (OCFO) formed a Year 2000 project team responsible for the conversion of the Department of Labor's (DOL) two major financial administrative systems, the Department of Labor's Accounting and Related Systems (DOLAR$) and the Interactive Payroll System (IPS). The team has a project manager responsible for the overall effort, a day-to-day project leader, and analysts assigned to each system. A complete inventory of system software and an identification of all external agency interfaces has been completed for both major systems. Performance indicators are being developed with the detailed conversion plans and will be reflected as milestones for tracking performance against deadlines. The performance indicators will be added to the standards for those OCFO individuals involved in the conversion effort.

The OCFO has determined that it has the required skills and resources within its own organization to convert the Department's payroll system. Indeed, work has already begun on this conversion. As mandated legislative or other changes are applied to the system, required Year 2000 changes are being included in the efforts.

A final decision on the conversion of the Department's accounting system is pending. We are evaluating the most effective mix of contractor and in-house effort to accomplish this.

A key factor in the conversion of both of these major systems is identification of and coordination with all agencies, both internal and external to DOL, with whom these systems exchange data. OCFO has identified all agency interfaces and plans to contact each for coordination of Year 2000 efforts. As an example, in order to ensure that all DOL employees continue to receive paychecks, DOL must coordinate with the Treasury Department, who in turn must coordinate with the Federal Reserve banks, who must coordinate with local banks. An interim solution to this timing problem can be applied. Software interfaces can be written to convert data moving to or from the payroll and accounting systems. If DOL implements a 4-digit year before Treasury is ready, a temporary conversion back to a 2-digit year can be completed before transmitting the data. Once Treasury is ready, the interim conversion software can be removed. This works in both directions and the concept will be applied to the DOL accounting system interfaces as well.

Finally, both the accounting and payroll systems are located and processed at SunGard Computer Services in Voorhees, New Jersey under a time sharing contract, as are other DOL agency systems with whom we exchange data. The OCFO represents DOL as the Contracting Officers Technical Representative (COTR) in negotiations with this vendor. SunGard has assured us that their system will be Year 2000 enabled and they will provide all DOL agencies using their service with a separate Year 2000 test environment for their conversions.

The OCFO is moving quickly to create its Year 2000 detailed conversion plan and to resolve all environmental issues.

o MINE SAFETY AND HEALTH ADMINISTRATION (MSHA)

The Mine Safety and Health Administration's (MSHA) Accident Investigation System is fully Year 2000 compliant. The Accident Investigation System is designed to create a repository of accident investigation information collected by MSHA accident investigators or inspectors, which enables comprehensive analyses of the causes and contributing factors associated with serious/fatal mining accidents. These analyses can then be used in the formulation of accident prevention measures, and the development of new or revised safety or health regulations to protect American workers. A comprehensive assessment of MSHA's older systems has been completed, and action is being taken to transfer processing to the Defense Megacenter (San Antonio, Texas) and proceed with system conversions to Year 2000 compliance.

MSHA -- Current Environment
The Mine Safety and Health Administration (MSHA) currently operates its mainframe legacy systems on two host platforms: the agency's Honeywell computer at the Information Resource Center in Lakewood, Colorado; and the Department's contract service provider SunGard Systems in Voorhees, New Jersey.

MSHA has operated a proprietary Honeywell data center in Lakewood, Colorado since 1976. The equipment has been upgraded several times and currently consists of two DPS 8000 processors and supporting peripheral devices. Operating on the Honeywell facility are the agency's primary enforcement systems, including the Coal Mine Safety and Health Management Information System, the Metal and Nonmetal Mine Safety and Health Management Information System, the Assessments System, and the Educational Policy and Development System.

Operating on the SunGard IBM facility are the Part 50 Accident, Injury and Employment system and the Technical Support administrative systems.

To provide access to relational data from these two hosts, the agency also operates a Teradata data base machine in Lakewood. This machine is currently loaded with data tables from the mine address portion of its MISs and with Part 50 Accident/Injury and Employment/Production data. Users access this information with a systems query language package.

The agency also has several general-use PC-based systems, including the Accident Investigation system, the Inspectors Portable Application for Laptops (IPAL), and the Technical Support engineering applications.

All of these various platforms and systems are interconnected via MSHA's wide area network (WAN) which consists of primary local area networks (LANs) in Lakewood, Colorado, Beckley, West Virginia, and Arlington, Virginia, along with dial-up lines from its field enforcement locations. The agency is currently involved in a major initiative to extend its WAN by installing LANs in the enforcement district offices throughout the country. This project is scheduled for completion early in fiscal year 1998.

MSHA -- Data Center Consolidation Plans

As stated above, MSHA operates a proprietary Honeywell facility at its Information Resource Center in Lakewood, Colorado. The current hardware and software maintenance contracts for this equipment expire in September, 1997.

The Office of Management and Budget issued Bulletin 96-02 in October of 1995 mandating that federal agencies close their small to mid-size data centers by the end of fiscal year 1998, and migrate their systems onto larger federal megacenters or onto private sector service providers. Because of its relatively small size, MSHA has been instructed to close its data center and migrate its Honeywell-based systems to another facility. In order to avoid the costs and administrative burden of recompeting the maintenance contracts that expire in September, MSHA has identified an alternative Honeywell facility at the Defense Megacenter in San Antonio, Texas. This is a fully-compatible Honeywell facility, has excess capacity, and is not subject to the provisions of 96-02 as it is a designated megacenter.

As a result, MSHA has begun migrating its Honeywell-based systems from its proprietary facility in Lakewood, to the San Antonio facility. That process will take the better part of this fiscal year to complete. Once the migration is completed and all the systems are tested and fully functional, the agency will excess out and remove its Honeywell equipment. This will bring MSHA into full compliance with 96-02 by the end of this fiscal year.

It is important to note that MSHA maintains the only remaining independent data center in the Department, thus the only agency subject to 96-02 within the Department. As a result, this puts MSHA in a unique position in regard to its year 2000 efforts as it will not be able to begin the bulk of conversion efforts until the migration to the San Antonio facility is completed and systems are tested and fully operational. However, there will be sufficient time for this conversion and testing during 1998, leaving 1999 for operation of the converted software before 2000.

MSHA -- Year 2000 Activities

To date, MSHA has completed an evaluation of the Year 2000 impact on all its mainframe computer systems and developed initial project plans for the needed conversion work on each of those systems. The agency has also determined which of its general use PC-based systems are already Year 2000 compliant, and which will need to be converted.

Conversion plans for those systems will be developed by the end of fiscal year 1997. The agency is also surveying all its program areas for a complete inventory of local PC-based end-user systems to determine where assistance will be needed in converting those systems.

MSHA -- Conversion Progress

At this time, MSHA has one major application that is already Year 2000 compliant. That is the Accident Investigation (AI) system, which has been implemented in the Coal Mine Safety and Health Denver District Office and in the Metal and Nonmetal Mine Safety and Health Rocky Mountain (Denver) District Office. The system will be implemented in the rest of the enforcement district offices during the course of fiscal year 1997 as Local Area Networks (LANs) are installed in those districts. The AI system was written in Access and operates on PCs and LANs. The system captures data and narrative information on accident investigations conducted at coal and non-coal mines following serious and fatal accidents. This information is then analyzed to determine ways to prevent future accidents and to identify areas for possible rule-making.

MSHA is also developing the Inspectors Portable Application for Laptops (IPAL), which is being written in Access for use on the laptop computers recently purchased for Coal and Metal and Nonmetal inspectors, to be Year 2000 compliant. In conjunction with the laptop computers, IPAL will provide on-site inspection event data, as well as generate citation and order forms for the mine operators. It will also provide MSHA inspectors with reference material and report generation capability. This system will be implemented in July 1997.

Conversion work on the agency's mainframe legacy systems will begin in fiscal year 1998. As stated above, project plans for the conversion work have been developed and four contractor person-years will be used in fiscal year 1998 to assist with the conversion of these systems. The agency plans to have all its mainframe systems fully converted and tested by the end of calendar year 1998.

o OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION AND MANAGEMENT

The Office of the Assistant Secretary for Administration and Management (OASAM) currently operates two applications systems designated as Level I priority for Year 2000 conversion. The first of the those systems, the Department's automated personnel system (PERMIS) is a version of the Air Force personnel system. The Department of Labor uses PERMIS through inter-agency agreement with the Air Force, which is responsible for maintaining the system. PERMIS system processing for the Department is carried out at a GSA computer center in Kansas City, Missouri, through inter-agency agreement. Although OASAM neither maintains the system code nor operates the computer hardware

on which the personnel system is run, we are concerned about the need for Year 2000 compliance. The Air Force is currently developing a new personnel system, a "federalized" version of a commercial personnel system product. The new personnel system, which will be Year 2000 compliant, is intended to replace the current system before the Year 2000 date change becomes an issue for personnel processing. OASAM staff are tracking Air Force progress in implementing the new personnel system, and are also assessing alternatives, such as obtaining cross-servicing from other civilian agencies. A final recommendation on whether to stay with Air Force or move to an alternative service provider is anticipated within the next three months.

The other OASAM Level I system is the Purchase Request Information System Module (PRISM), a commercial software package used to process all simplified purchases. Simplified purchases (general purchase orders) include all open market purchases up to $50,000, as well as, all General Services Administration scheduled buys. This application includes the ability to process simplified purchases electronically over the Federal Network Entry Points (FNEP) and the Internet. The Office of the Assistant Secretary for Administration and Management uses PRISM to process all simplified purchases. Some large contracts within the Department of Labor, Office of the Inspector General are currently being tested for application using PRISM and may be administered by October 1997. PRISM is in the process of being converted from a DOS client-server application (which is not Year 2000 compliant) to an "Alpha" Windows platform which is Year 2000 compliant. The "Alpha" Windows product is scheduled to be released from internal quality assurance April 1997. The "Alpha" Windows version of PRISM is anticipated to be fully operational at the Department by the beginning of fiscal year 1998. Current funding levels are sufficient for the accomplishment of the conversion from DOS to Windows. It is important to note that this PRISM commercial software is also used by Department of Transportation, Department of Health and Human Services, Food and Drug Administration, National Aeronautics and Safety Administration, National Institute of Health, as well as, several other civilian and Department of Defense agencies and sub-agencies.

As the above descriptions of system progress demonstrate, the Department of Labor has a longstanding commitment to serving the public and ensuring that its automated systems meet the challenge of the Year 2000. With the increased focus on the Year 2000 challenge during 1996, we redoubled our efforts to address this important area of concern. We recognize that there is much work to be done -- we have a number of accomplishments to point to, but we do not wish to minimize the effort remaining. We have, therefore, established a process for managing the Department's Year 2000 activities, which consists of a number of measures described below.

To ensure strong and effective management of Year 2000 activities I have designated a Departmental Year 2000 Project Manager and a Year 2000 Project Coordinator. The Year 2000 Project Manager is the Deputy Chief Information Officer, who is also the director of the Information Technology Center, which provides staff support to the Chief Information Officer.

Each DOL program agency has also designated Year 2000 project managers and project coordinators. These project managers are responsible for overseeing the Year 2000 conversion work in their agencies and for reporting on progress to the Department. The project coordinators work with the individual project leaders in their agencies who are assigned responsibility for specific applications systems in order to ensure consistent efforts and timely results. As DOL agencies have become more aware of the critical nature of the Year 2000 challenge, several have added specific Year 2000 duties in formal performance standards for project leaders and project coordinators.

To develop a Department-wide plan for managing Year 2000 activities, we have established a planning framework consisting of the following elements: Awareness, Assessment/Scoping, System Changes/Schedule, Testing/Renovation, and Implementation. This framework is based upon guidance from the Office of Management and Budget (OMB), which in consultation with the Chief Information Officers Council, set government-wide goals for completion of each phase of agency Year 2000 activities. We are following OMB's guidance, have measured our progress against it, and are working across the Department to meet OMB's goals. In our planning process, the Department has utilized a three-tiered structure to evaluate and rank applications systems. This ranking was done to prioritize effort and to ensure that no adverse impact on the public occurs due to systems which do not correctly calculate benefits, compute dates, or fail in other date-related tests as January 1, 2000 is approached. It is based upon the definitions found in the Computer Security Act of 1987 and the OMB's Circular A-130. Mission critical systems, which affect our client population, our enforcement activities, or our financial status are recognized as the highest priority for Year 2000 modification completion and have been designated Level I priority. Internal agency or organizational systems, used to improve timeliness and efficiency of processes and operations are defined as Level II priority. Frequently these systems are actually subsystems or small add-ons to major systems. Small office or personal systems tailored to specific functional processes are assigned a Level III priority. Also considered priority III systems are those which, within their normal life cycle, are scheduled to be discontinued prior to the Year 2000. These systems will not be converted to be Year 2000 compliant.

In conjunction with the planning framework, agencies develop individual Year 2000 plans, with milestones geared to programmatic requirements. We are reviewing these plans carefully as they are developed, looking for consistency and completeness and paying special attention to any potential problem areas. For example, we are scrutinizing completion dates that stretch into late 1999, and we will be working with our agencies to see if these time frames can and should be shortened through increased resources or re-prioritization. Together, the Department's planning framework and the individual agency action plans constitute a Departmental Year 2000 Plan against which the Department will track and measure its progress in addressing Year 2000 readiness. The elements of our planning framework, along with current status, are further described Attachment I.

To facilitate assessing the scope of Year 2000 conversion requirements, the CIO organization requested Year 2000 budget estimates from Department of Labor component agencies. Based on

the results of that survey, the Department provided a summary report to OMB, in which we estimated Year 2000 conversion costs to be approximately $15.3 million for the five year period from fiscal year 1996 to fiscal year 2000. The costs show that the bulk of Year 2000 conversion work will be done in fiscal years 1997 and 1998, with decreasing levels of resources needed in fiscal years 1999 and 2000. The costs for fiscal year 2000 represent the first quarter of the fiscal year, which is in calendar year 1999, along with estimates for monitoring activities and contingency for corrective action should unanticipated problems be encountered. As agencies complete system assessments and develop Year 2000 project plans more fully, the Department will review its projected costs. Some changes in budget estimates may result from this planned review, which will be conducted as soon as specific plans are finalized. Our goal is to ensure that all Year 2000 costs are identified, and that there will be no last minute surprises for the Department or for Congress.

Although many information technology staff have been aware of the Year 2000 issue for some time, we have used the newly create CIO organization as a vehicle to facilitate information sharing among our agencies and to increase awareness of the special challenges of the Year 2000 at all levels of the Department. Through a series of briefings with executive staff, administrative officers, and information technology managers, we have worked to ensure that executive and senior management levels of the Department are fully aware of the importance of the Year 2000 issue. Through these briefings, we have shared information on the challenges posed by the date change at the turn of the century -- challenges to mission-critical computer software and hardware, and challenges to a range of equipment, from elevators to security systems -- all of which use internal computer chips that may fail at the onset of the Year 2000, if they are not transformed to properly process the date change to the new century. We are also ensuring that our agencies are aware that there can be date-related processing difficulties occurring well before January 1, 2000. As an example, a benefits system in operation during calendar year 1999 could calculate an eligibility period extending into the Year 2000. If that system were not Year 2000 compliant at the time the calculation is performed, there could be problems with system failure or with erroneous results. To address this issue, we are asking our agencies to identify the earliest date at which each mission critical system must be Year 2000 compliant, and we will continue to work with them to ensure timely completion of corrective actions.

In addition to the individualized program system efforts described above, which focus on software applications, technical staff across the Department are actively addressing the Year 2000 issue as it relates to computer hardware (from personal computers to mainframes), networks, and telecommunications systems. Published industry test scenarios are available for hardware testing, and DOL technical staff are performing pre-determined tests against hardware to indicate whether it is Year 2000 compliant, needs modification, or needs replacement. As an example, the Department is currently converting its approximately 3,000 users of the Employee Computer Network (ECN) from Windows for Workgroups to the Win95 operating system. As technicians move from workstation to workstation to carry out the operating system conversion, they are also performing Year 2000 compliance testing. Technical staff have been provided with a printed, 27-step procedure for testing Year 2000 compliance on personal computers. This procedure is based

on a published industry standard test. Results of the test are being documented, and microcomputers that fail the test are being slated for timely replacement.

To track progress and share information on Year 2000 readiness, we have instituted two levels of monthly meetings in the Department, one with Year 2000 project managers and another with the Department's information technology managers. To keep senior management informed on an ongoing basis, Year 2000 status reports are provided to the Capital Planning and Investment Board, which I chair, and which includes among its members the heads of the major DOL program agencies and the Chief Financial Officer.

As the newly appointed CIO for the Department, I have placed strong emphasis on achieving a structured and goal-oriented information technology environment. We are working to create a stronger, more cohesive IRM program, responsive to the mandate and full intent of the Information Technology Management Reform Act of 1996 (ITMRA). To that end, we have a number of initiatives planned or underway. We are strengthening our information technology strategic planning process by integrating our Information Technology Strategic Plan features and dates with the Strategic Business Plan, using GPRA authority. We are improving our information technology capital planning process, as required by ITMRA, and CIO staff are participating with the CIO Council work group on capital planning. We are also moving toward a more unified information technology environment for the Department. In other areas, we are working to maximize data sharing across systems, to reduce the information collection budget burden upon the public, to improve the technical skills of our information technology staff, and also to improve the computer literacy of all Department of Labor employees.

Through the combined effects of actions completed, those currently underway, and ongoing coordination and information sharing, the Department is well on the way to meeting the Year 2000 challenge. Nonetheless, it would be difficult to overstate the magnitude of the challenge, and there are areas of potential problems that need to be monitored closely. The Department, like other organizations facing the Year 2000 issue, is vulnerable in areas outside of our control, such as interfaces to automated systems of other Federal agencies, State agencies, and private sector organizations with which we interact. Clearly, there is a great deal of work to be done, and we at the Department of Labor are working -- through careful planning, monitoring, and the appropriate application of technology -- to complete all necessary Year 2000 tasks for the benefit of America's working citizens. The Year 2000 challenge is unprecedented, and the efforts we have undertaken have few models in scope or complexity. A project of this magnitude always has room for improvement, and we therefore hope to benefit by any constructive dialogue this hearing may generate.

ATTACHMENT I

The elements of the Department of Labor's Year 2000 planning framework, along with current status, are as follows:

I. AWARENESS

The Department's CIO has worked closely with Department of Labor agencies to educate and raise awareness of the Year 2000 problem, and to work toward effective solutions. The CIO designated a Departmental project manager for Year 2000, and together the CIO and Departmental project manager have held a series of briefings with executive staff, administrative officers, and information technology managers to ensure that executive and senior management levels of the Department are fully aware of the importance of the Year 2000 issue. The CIO directed each DOL component agency to designate Year 2000 project managers, and they did so. The CIO and Departmental Year 2000 project manager instituted two levels of monthly meetings in the Department, one with Year 2000 project managers and another with the Department's information technology managers to track progress and share information on Year 2000 project activities. To keep senior management informed on an ongoing basis, Year 2000 status reports are provided to the Capital Planning Investment Board, which is chaired by the CIO and includes the heads of major DOL program agencies and the Department's Chief Financial Officer among its members (see Note, below). To ensure that the Department of Labor is a full participan with other Federal agencies in this important Year 2000 effort, two senior staff members from the CIO organization actively represent the Department on the Federal Interagency Working Group on the Year 2000.

The OMB goal for completion of the Awareness phase was December, 1996. The Department of Labor met this goal by the end of 1996, which was reported to OMB.

NOTE: Membership of the Capital Planning and Investment Board is as follows:

Principals are the following agency heads:

- Chief Information Officer, Chair.
- Chief Financial Officer
- Bureau of Labor Statistics
- Employment Standards Administration
- Employment and Training Administration
- Mine Safety and Health Administration
- Office of the Assistant Secretary for Administration and Management (Deputy)

- Occupational Safety and Health Administration
- Pension and Welfare Benefits Administration

Board advisors are as follows:

- Deputy Assistant Secretary for Policy
- Assistant Commissioner for Technology and Survey Processing, BLS
- Deputy Chief Financial Officer
- Director, Information Technology Center, OASAM (Executive Secretary)
- Deputy Assistant Secretary for Budget, OASAM
- Solicitor of Labor

II. ASSESSMENT/SCOPING

To facilitate assessing the scope of the Year 2000 problem, the CIO organization requested Year 2000 budget estimates and project plans from Department of Labor component agencies. The increased focus on the Year 2000 problem during 1996 resulted in better understanding of the work to be done and better planning to accomplish it. Budget estimates were forwarded to OMB, as required, and detailed project plans have been developed or are under development.

The Department has completed this goal already for some systems, although we are awaiting vendor assessment for some other systems, such as the Department's accounting system, which is a commercial product. Some increases in budget estimates provided to OMB may result as agencies receive vendor proposals and complete this phase.

The OMB goal for completion of this phase is March, 1997. The Department will meet this goal.

III. SYSTEM CHANGES/SCHEDULE

As stated above in the description of Phase II, the CIO organization has requested project plans from DOL component agencies. These are the key products of the System Changes/Schedule phase, which consists of development of a plan or schedule to effect required system changes identified in the Assessment/Scoping phase. This phase is currently ongoing, although most of the Department's major agencies have at least drafted preliminary or summary plans. As Department of Labor agencies work on these plans, they are aware of the need to consider data interfaces outside of the Department, such as other Federal agencies, State agencies, and private sector organizations. As we review

agency plans, we will pay particular attention to projected completion dates stretching late into 1999, and work with the agencies to see if these time frames can be shortened through increased resources or re-prioritization.

The Department's and OMB's goal for completion of this phase is June, 1997. Through monthly meetings and individual contact with program agencies, the CIO's Year 2000 project manager provides the interface for the sharing of documented progress, results, and lessons learned. The CIO organization will continue to work with the Department's agencies to meet this goal.

IV. TESTING/RENOVATION

The Testing/Renovation phase involves the completion of coding needed to accommodate the Year 2000, along with software testing. This work is ongoing.

The OMB goal for completion of this phase is December, 1998. Through monthly meetings and individual contacts with program agencies, the CIO's Year 2000 project manager provides the interface for the sharing of documented progress, results, and lessons learned. The CIO organization will continue to work with the Department's agencies to meet this goal, although current agency plans show some work will be ongoing in 1999.

V. IMPLEMENTATION

The Implementation phase is the final phase of the Year 2000 plan and includes final validation of converted systems and full production operation. This work is ongoing, and there are a number of Year 2000 compliant systems and subsystems already operational.

The OMB goal for completion of this phase is November, 1999. Through monthly meetings and individual contacts with program agencies, the CIO's Year 2000 project manager provides the interface for the sharing of documented progress, results, and lessons learned. Initial DOL estimates reflected a December 1999 completion date, however, the CIO organization will continue to work with the Department's agencies to meet the OMB goal and ensure no adverse impact on our clients. Further, as stated above, the CIO organization will pay particular attention to projected completion dates stretching late into 1999, and will work with the agencies to see if these time frames can be shortened through increased resources or re-prioritization.

Mr. HORN. We thank you very much.

Our next Chief Information Officer is John J. Callahan, Department of Health and Human Services.

Mr. CALLAHAN. Thank you very much, Chairman Horn and Ranking Member Congresswoman Maloney. We appreciate the opportunity to testify before the subcommittee today.

I am also accompanied by Dr. Neil Stillman, who is the Deputy Chief Information Officer in the Department. We have submitted our testimony for the record, and I will summarize, as requested.

The subcommittee is correct about the nature and the urgency of the problem. We at the Department are very cognizant of the need to have year 2000 compliant systems. We understand the sensitive nature of our various programs underneath our jurisdiction, and it is our intent, obviously, to meet the deadlines contained therein.

Clearly, the subcommittee is also correct that there are different estimates of the severity of the year 2000 problem. Some say that we can't possibly succeed and we'll have massive failures of our computer systems. Others, I believe incorrectly, say it is a bit of a minimal problem, it is not rocket science—you've probably all heard that—and that we'll be able to get there from here.

The Department, in general, views the problem as serious but manageable, and we feel that all our OPDIV's will meet the goal of having—operational divisions, will meet the goal of having year 2000 compliant systems.

Let me briefly talk about the HHS response to the year 2000 compliance problem. First of all, in the area of organization, we have to meet our year 2000 compliance plan problem along the lines of our operating divisions. We have 13 operating divisions, and they are all in the process of constructing and organizing their plans. We have CIO's in every single operating division, Deputy CIO's in each operating division, as well as day-to-day year 2000 compliance managers for those operating divisions.

As to priority, both the Secretary and the Deputy Secretary have made this a top priority of the Department as well as I in my capacity as the Chief Information Officer. At this point, if I could, Chairman Horn, I would like to submit for the record a communication from the Deputy Secretary to that effect.

Mr. HORN. Without objection, it will be inserted and printed in the record at this point.

[The information referred to follows:]

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Deputy Secretary

Washington, D.C. 20201

FEB 24 1997

MEMORANDUM TO: OPDIV HEADS
CHIEF INFORMATION OFFICERS

FROM : Kevin Thurm
Deputy Secretary

SUBJECT : Progress on Year 2000 Readiness of HHS Computer Systems

Preparing HHS computer systems to function properly into the next millennium is crucial to our mission. The purpose of this memorandum is to reiterate my commitment to accomplishing our Year 2000 projects and to update you on Year 2000 oversight activities.

Last week, John Callahan, the Assistant Secretary for Management and Budget, in his capacity as Departmental Chief Information Officer (CIO), met with the CIO of each OPDIV for a status briefing on Year 2000 projects. John told me that, overall, the briefings were informative and encouraging. I am holding John accountable jointly with you for assuring Departmental success in this endeavor.

The level of awareness of Year 2000 risks for our computer systems was uniformly high. Our efforts to make detailed assessments of these risks and to plan cost-effective responses to avoid service problems are already completed in most cases and will be completed within weeks in all other cases.

Much work needs to be done over the next two years to fulfill our plans. We must renovate, test, and implement necessary changes to a wide array of applications software and information technology infrastructure. I have asked that periodic briefings be scheduled for the purpose of monitoring our continued progress on Year 2000 projects.

OMB and the Congress are closely monitoring agency progress on Year 2000 projects as well. The Departmental CIO and Deputy CIO will appear on February 24, 1997, before the House Subcommittee on Government Management, Information, and Technology of the Committee on Government Reform and Oversight, to testify about our progress.

ASMB staff are working with the oversight agencies to coordinate reporting and budgetary requirements of Year 2000 projects. Our objective in this regard is to satisfy their needs while imposing minimal burden on your limited project management staff. If, however, it appears that you are not meeting your goals for Year 2000 compliance, I will personally discuss with you how to assure your efforts get back on track.

I look forward to our continued efforts on this critical information technology challenge.

Mr. CALLAHAN. We have just recently completed our personal meetings with all our operating division CIO's. We've gotten good reports from them. These reports form the basis for the material that was submitted to the committee.

Second, the area of budget. You raise a good concern about the budget. Right now we estimate that we will have to spend somewhere on the order of $90.7 million through the year 2000. Seventy-eight percent of that will go to some of our most major agencies: The Health Care Financing Administration, CDC, and NIH. Currently we estimate that they can do this within this budget, but I will say also, I wear the hat as Assistant Secretary for Management and Budget and I can assure you that as we go through the budget process, both in the execution of the 1997 budget and the preparation of the 1999 budget, we will make sure that they have the resources for reprogramming or revised estimates for the year 2000 problem.

Let me just give you a brief synopsis of the dimensions of the problem inside the Department and what we have achieved. All 13 of our operating divisions have completed their awareness phase of the year 2000 problem. We think they will complete their assessments of the year 2000 problem by March 1997. We estimate that six of our operating divisions will be fully compliant by the end of 1997, one by 1998—this is calendar 1998—and we hope that the remaining OPDIV's will be finished up by 1999, hopefully the first quarter. But this is something that we'll look at closely.

Of our 1,027 information systems, 389, we believe, will be year 2000 compliant at the end of 1997, 39 percent by 1998, and 23 percent by 1999.

The big ones are complex. You know the complexity of these systems. HCFA, for example, has 69 information systems. This is the agency that administers Medicare, Medicaid, and a variety of systems. They have 15.6 million lines of code to analyze and to determine the priority of their various systems. They are doing that now, and this is one of the agencies which we will take a close look at.

The CDC, a different type of complexity: 230 information systems, 12 million lines of code, but their big problem is dealing with their external partners, State health agencies, et cetera, and they are now in the process of devising systems so that they will be able to accept a noncompliant year 2000 data system and make it compliant within their own systems.

The FDA is replacing a good deal of its internal systems. They are pursuing an agency-wide system of architecture, and we feel that they are making good progress in that area.

Then finally, NIH works with the university research community throughout the country in terms of making their systems compliant.

Problems in meeting our year 2000 goal: Clearly, budget is one; you've correctly identified it. We are going to go back once again and ask them for very, very precise and prudent and reliable budget estimates, and those will be rolled into our budget process.

Interface with external systems: This is also a major problem. Quite frankly, we cannot be sure that all State and local data systems that we interact with will be year 2000 compliant. We intend

to cooperate with the National Association of State Information Resource Management officials, and we will develop in each agency a system to make sure we only accept year 2000 compliant systems.

We also need to continue to monitor with inside the agency our purchase of hardware and make sure we have the appropriate warranties which we will have and make sure the agencies use that 90-day period to ensure that their hardware is year 2000 compliant.

So in conclusion, Chairman Horn, we think the year 2000 problem is a serious one. The Department on behalf of Secretary Shalala and Deputy Secretary Thurm would commend you for your oversight hearings, would urge you to keep them up; it may get painful at times, but it is a necessary process. We think it's a manageable goal, and we will try to meet it as best we can.

Thank you.

[The prepared statement of Mr. Callahan follows:]

STATEMENT OF JOHN J. CALLAHAN
ASSISTANT SECRETARY FOR MANAGEMENT AND BUDGET
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

I. INTRODUCTION

Good Morning. I am Dr. John Callahan, Assistant Secretary for Management and Budget and the Chief Information Officer in the Department of Health & Human Services. I am accompanied by Dr. Neil Stillman, the Department's Deputy Chief Information Officer. I am pleased to appear before the subcommittee today to participate in your hearing on "Will Federal Government Computers be Ready for the Year 2000?" The Department of Health & Human Services has already taken significant steps to ensure that our information systems are Year 2000 (Y2K) compliant. I appreciate the opportunity to share our track record on this issue with you today.

II. GENERAL NATURE OF THE PROBLEM

This hearing should help us understand the complexities of what appears on the surface to be a simple problem: will computers recognize and respond to the year 2000 when the millennium arrives?

Many computer systems have been designed to use an abbreviated form of the date. For example, "97" means 1997. In the next century we will understand the meaning of "00" to be 2000; computer systems, however, may or may not. If the hardware and software of a system fails to understand the meaning of "00" it could result in errors or a complete inability to function. Calculations involving dates which calculate age, years of service, length of time for insurance or investment purposes, and device or system operation schedules may be miscalculated and thereby disrupt many facets of our lives. Any device run by computer (e.g., elevator, airplane/air traffic control, electric company turbine, desktop computing device) and any money-based program requiring a computation (e.g., insurance, banking, taxes, social security, Medicare) will fail if the Year 2000 problem is not fixed in time.

There are some who believe that the magnitude of the Year 2000 problem is such that we cannot possibly marshall the resources to meet the challenge. There are others who believe that the problem is overblown and will be handled with minimal effort. Our assessment is between these polarized views. The problem is serious, but it is a manageable one. However, it must be addressed in a planned and deliberate fashion. After all, this is one deadline that cannot be extended.

We believe that our prudent and measured actions will mitigate the problem. None of our Operating Divisions (OPDIVs) believe that they are in danger of failing to solve our Year 2000 problem. In fact, some of our smaller OPDIVs are today close to full implementation of their Year 2000 date issue solutions. Most of our OPDIVs already have some compliant systems, either because they have been fixed or because they are new or have been newly re-engineered (e.g., the conversion of mainframe applications to a client-server platform) as a matter of routine not directly influenced by the need for four digit dates.

Additional detail on the status of the HHS Year 2000 effort is found in the chart which follows this written testimony.

The complexity of the problem varies across OPDIVs. Some OPDIVs, such as the Substance Abuse and Mental Health Administration (SAMSHA) have no mainframe applications and no external system interfaces, making their problem relatively simple. Other OPDIVs, however, such as the Centers for Disease Control (CDC), the Food and Drug Administration (FDA), and the National Institutes of Health (NIH) have both mainframe and networked personal computer (PC) based applications, with many external system interfaces.

III. HHS RESPONSE TO DATE

1. Organizational Structure

The HHS Y2K Plan consists of the individual plans of each of our thirteen OPDIVs. Each plan is based on the unique requirements of that OPDIV. All are following the five stage model (awareness, assessment, renovation, validation, and implementation) endorsed by the Year 2000 Interagency Committee, a subcommittee of the Chief Information Officers' Council. As the CIO and the Assistant Secretary for Management and Budget I have overall responsibility for the Y2K issue. Dr. Neil J. Stillman, my Deputy Assistant Secretary for Information Resources Management and the Department's Deputy CIO, has day-to day responsibility. Dr. Stillman is supported by the staff of his Office of Information Technology, Planning and Investments. The CIO of each OPDIV has overall responsibility for his or her OPDIV Year 2000 plan. Each OPDIV CIO has designated a day-to-day project manager for the plan.

2. Departmental Priority

As the Department's Chief Information Officer, I have designated the Year 20 0 date conversion as one of our highest information technology priorities. I have personally met with all thirteen of the HHS OPDIV CIOs to discuss Y2K issues and progress. I intend to continue such meetings regularly until the millennium. The Secretary and the Deputy Secretary completely support the Department's plan and are accountable for the results along with the OPDIV heads and OPDIV CIOs. The Office of Information Resources Management (OIRM) is monitoring the efforts of all OPDIVs and providing me quarterly progress reports. Additionally, OIRM represents the Department on the Interagency Working Group on the Year 2000 Reporting procedures have been implemented at the OPDIV level for those Divisions which have Centers or Regions; they must report their activities to a central information resources management office.

3. *Budget Numbers*

DEPARTMENT OF HEALTH AND HUMAN SERVICES
YEAR 2000 CONVERSION COSTS
(DOLLARS IN MILLIONS)

OPDIV	FY 1997	FY 1998	FY 1999	FY 2000	TOTAL
FDA	$ 2.0	$ 3.0	$ 2.0	$ 1.0	$ 8.0
HRSA	*	*	*	*	*
IHS	2.5	2.5	2.3	*	7.3
CDC	3.0	9.4	1.9	*	14.3
NIH	9.2	11.2	3.4	1.5	25.3
SAMHSA	*	*	*	*	*
AHCPR	*	*	*	*	*
HCFA	10.2	15.6	3.7	2.0	31.5
ACF	0.5	1.0	1.0	1.0	3.5
AoA	*	*	*	*	*
OS/OIG	0.1	0.1	0.1	0.1	0.4
PSC	0.2	0.1	0.1	*	0.4
TOTAL	**$27.7**	**$42.9**	**$14.5**	**$ 5.6**	**$ 90.7**

(* expenditures less than $100,000.00 per annum)

4. *Differential Dimensions of OPDIV Year 2000 Plans*

The detail and level of sophistication of each of the thirteen OPDIV plans varies based on the size of the OPDIV and its relative dependence on computer technology. Therefore, each OPDIV is engaged in different Y2K activities. OMB has set government-wide goals (dates) for achieving the five stage model for compliance. All thirteen OPDIVs completed the ongoing Y2K awareness stage by the December 1996 deadline. Additionally, all thirteen OPDIVs have completed the assessment stage prior to the suggested deadline of March 1997.

Due to the differing sizes, levels of decentralization, and technological dependence of the OPDIVs, each is at a different stage in reaching total Y2K compliance. At present nearly one-half of all the OPDIVs report that they will be Y2K compliant by the end of 1997. They include the Indian Health Service (IHS), the Agency for Health Care Policy and Research (ACHPR), the Health Resources and Services Administration

(HRSA), the Office of the Inspector General (OIG), the Program Support System (PSC), and the Administration on Aging (AoA). These OPDIVs have already developed renovation schedules and plans for testing. Additionally, the Office of the Secretary (OS) anticipates full compliance by the end of 1998.

Some OPDIVs must contend with additional conversion challenges based on sheer size of the OPDIV and the level of interface they have with external information systems. The Health Care Financing Administration (HCFA) and the Centers for Disease Control (CDC) typify the efforts being made by the largest OPDIVs. HCFA evaluated each of its 69 systems in terms of timeliness and mission-criticality, as well as complexity of resolving the problem. An overall score was developed for each system and they have been rated as high, medium, or low priority. Based on such calculations, milestones have been calculated for development, testing and implementation.

Similarly, CDC surveyed each of its 230 information systems in 1996 to form the basis for their prioritization efforts, conversion, and compliance plans. Additionally, since CDC is almost completely dependent on externally derived data for disease surveillance and health monitoring, they have formed a multi-disciplinary work group of epidemiologists and statisticians to develop strategies and software interfaces to address automatic detection, interpretation, and/or translation of previously archived non-Year 2000 compliant data.

The Food and Drug Administration (FDA) has established a full time Y2K project manager and a task force. Their strategy includes a three stage process: identification of applications requiring conversion, replacement or termination; development of strategic initiatives (with Year 2000 compliance as a central component of their design) which will replace a significant portion of the major systems in the agency; and, an initiative for developing an Agency-wide Information Systems Architecture (ISA), that will use Year 2000 compliance as key criterion in its selection and establishment of information technology standards.

The National Institutes of Health (NIH), organized into 25 Institutes/Centers/Divisions (ICDs), began addressing the Y2K issue several years ago. They adopted a formalized approach with centralized management and decentralized execution in April 1996. They are currently wrapping up assessment activities and have begun renovation and validation of the systems that have been determined to require conversion. Their plans include protective contract language to ensure future acquisitions of equipment and software are Y2K compliant.

A few smaller OPDIVs are undertaking similar efforts and I am confident that they will benefit from the experiences of the OPDIVs which are further along in implementing their plans. I will be working closely with them, monitoring their progress and ensuring that future OMB milestone deadlines are met and that their systems are Y2K compliant.

IV. POTENTIAL PROBLEMS IN MEETING Y2K GOALS

HHS foresees some specific obstacles to achieving our Year 2000 goals. Budgeting and finance obstacles are paramount, simply because correcting year 2000 date problems requires money. We are concerned about the possibility that budget estimates may rise as time goes on, even where they are accurate in today's market. Many analysts think that prices for Year 2000 date issue work will continue to increase as more and more Government and private organizations compete for a finite level of resources. In addition, we are concerned that appropriations may be reduced, especially in the salaries and expenses category which includes contract labor. If that happens, there is only so much that can be absorbed within a lower salary and expense base. Therefore, we are taking great care to work closely with our OPDIVS to make sure that budget estimates are both prudent and defensible. Where such action can be justified as essential, we will not hesitate to request additional appropriations to preserve service levels to our citizens. Thus, the President's budget for 1998 does include additional funds for HCFA's Year 2000 date change initiative.

We are also very concerned about HHS' interface with external systems for essential information, and we are requiring our OPDIVs to be cognizant of potential problem areas, and to develop solid working relationships with our external partners. For example, CDC collects morbidity and mortality data from the State health departments. Although CDC is working closely with the States, there may be cases in which the State either has not been able to make the necessary system changes, or has implemented system fixes that are not compatible with CDC's fixes. To avoid serious errors, CDC is developing an automated method to detect the presence of non-compliant date information and reformat it to be compliant before entering the data into their systems. The Administration for Children and Families (ACF) is working with States to develop Year 2000 compliant formats that are compatible with ACF's systems. NIH is undertaking a similar process within the university/research community.

To support HHS and other agencies, we will be working with the National Association for State IRM Executives (NASIRE) and other organizations to facilitate productive State-Federal action in this vital endeavor. We cannot control State Year 2000 initiatives, but we will take the steps needed to ensure that non-Year 2000 compliant data from our external partners will not compromise our information technology systems.

We are also concerned with ensuring that commercial off-the-shelf software (COTS) vendors meet their obligations to upgrade their installed base of products to ensure Year 2000 compliance, especially with the need for PC upgrading or replacement.

In addition, the daunting nature of the task of upgrading or replacing old PCs to ensure Year 2000 compliant clocks is apparent to us. Many PCs will be swapped for newer, compliant models as a matter of routine business.

Finally, we are monitoring closely those OPDIVs (e.g., ACF, IHS) that are relying on system re-engineering and conversion to client server systems to meet their Year 2000 compliance goals. As with PC replacement, much of this system development and enhancement work is occurring independently of the Year 2000 effort, but of course must include built-in compliance. Again, we will exercise positive and active oversight in keeping these projects on track, and in providing sufficient but not overly generous funding, to the best of our ability.

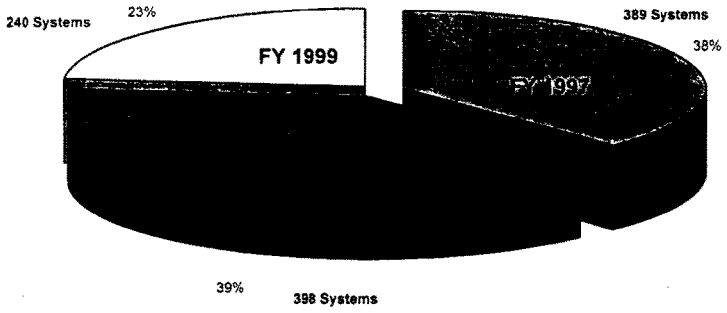
V. CONCLUSIONS

The challenge presented to find and implement solutions for the year 2000 problem are substantial. However, I am confident in the ability of HHS CIOs and OPDIV heads to meet this task. Because of the time critical element of the situation we are constantly pushing forward to our goal of total compliance. Year 2000 is a Departmental priority. On behalf of Secretary Donna Shalala and Deputy Secretary Kevin Thurm, we thank the subcommittee for its continuing interest and oversight on this issue. We welcome your support for our efforts.

Percent Conversion by Fiscal Year

Fiscal Year	1997	1998	1999	Total
AHCPR	0	0	0	0
ACF	9	38	49	96
CDC	131	60	39	230
FDA	43	54	58	155
HCFA	17	52	0	69
HRSA	18	4	0	22
IHS	15	15	15	45
NIH	128	156	65	349
OS/OIG	9	9	8	26
PSC	11	6	5	22
SAMHSA	8	4	1	13
	389	398	240	1027

Year 2000
Percentage of Conversions Completed
by Fiscal Year (Estimated)



Mr. HORN. Thank you very much.

Our next witness has also been before us a number of times. The Associate Deputy Secretary of the Department of Transportation, Mr. Huerta, is now the Acting Chief Information Officer.

Welcome.

Mr. HUERTA. Thank you, Mr. Chairman, Ranking Member Maloney, and members of the committee. Thank you for the opportunity to share with you how the Department of Transportation is addressing the year 2000 problem. Clearly this is one of the great challenges of the information age.

For years we've been developing more and better computer systems to improve the way we do business and to improve our lives. Now, in just 34 short months, if we do not take appropriate actions, those systems we have come to depend on may fail us.

At the Department of Transportation, we recognize that we cannot afford to allow our systems to fail. One of our critical missions is to ensure the safety of the American traveling public. Many of our systems, which we are discovering cannot operate in the year 2000, directly support that mission.

Our goal is to renovate the year 2000 affected systems by December 1998. This will allow a full year to test and ensure smooth implementations that have no impact on our missions. We know this is ambitious, but we have little choice.

I regret that our delayed and limited response to your April 1996 inquiry created an impression that the Department was not actively addressing this impending problem. In fact, several of our operating administrations were actively pursuing solutions to the year 2000 problem at that time. Admittedly, however, we did lack a consistent, high level departmental sense of urgency. Your inquiry elevated this issue from the program offices who operate the Department's systems to the most senior management levels in the Department.

One change that occurred is that I was named the Department's Acting Chief Information Officer, and the responsibility for overall leadership in DOT on this issue now resides with me. I have on my staff a full-time project manager whose daily responsibilities include maintaining the Department's inventory of systems, tracking our progress, and sharing other Government agencies' best practices, as well as serving as a facilitator and clearinghouse of information for our 10 operating administrations.

The Department's organizational structure and its many program offices and their supporting automation—hardware, software, and systems—makes solving this pervasive problem a real challenge. Consequently, we have placed the responsibility for corrective actions within our operating administrations. Each now has an active year 2000 program under the leadership of a senior executive. Also, they have the detailed knowledge of their systems and the mission requirement to fix problems in their systems.

In order to ensure support from the top of each operating administration, I have personally briefed our Secretary's Management Council on the possible consequences if the year 2000 problem is not solved. The Council is chaired by the Deputy Secretary and attended by the Deputy Administrators of all of the operating administrations.

In terms of the year 2000 approach, the Department is generally following the five-phased best practices framework that you heard about earlier this morning and which is outlined by the Interagency Year 2000 Committee. These phases, of course, are awareness, assessment, renovation, validation, and implementation. We recently reported to the Office of Management and Budget that DOT has now substantially completed the awareness phase, will complete the assessment phase by December 1997, and the renovation phase by December 1998. The validation and implementation phases, which will run concurrently, will be completed by December 1999.

As you can imagine, our operating administrations face different problems depending upon the complexities of their individual systems. In an October 1996 survey, we collected important information about 180 systems that were being evaluated for year 2000 problems. We've created a data base of information which will be essential for tracking our progress. We see the information collection process as dynamic and will continue to refine and update the data base as additional system assessments are completed.

The information we now have provides a good foundation on which to build, but because all of the assessments have not yet been completed, it still lacks complete cost information. We will be requiring monthly updates to the data base from all of our operating administrations.

A large and crucial piece missing from our initial inventory is information regarding the Federal Aviation Administration's air traffic control systems. Sophisticated assessments of the en route and terminal systems applications are currently under way at the FAA Technical Center in Atlantic City, NJ. The FAA expects to have the preliminary assessment of this component of the air traffic control system completed in May of this year.

Another major portion of the air traffic control systems are the communications, navigations, and surveillance components. These components include radar weather systems, voice switching and recording, radio communications, radar systems, global positioning systems, and others. These systems are beginning their assessment which the FAA will complete by December 31. Once assessments of these systems are completed, they will be added to our inventory data base and of course will be prioritized and then renovated.

As a final note on our status, I'm pleased to report that renovations are either under way or have been completed on several of our systems. These include the Department's Integrated Personnel and Payroll System and the Federal Highway Administration's Motor Carrier Management Information System.

In our recent report to OMB, we provided preliminary cost estimates over the next 3 years of $80.4 million to address the year 2000 problem. This has since been updated to include an additional $10 million for the U.S. Coast Guard, who have completed their assessment. It is safe to assume that as our system assessments are refined, the assessment of all the air traffic control components systems is completed, that our cost estimates will change and may rise.

In summary, the Department of Transportation has made good progress in elevating the urgency of the year 2000 problem across

the Department. Additionally, management structures are in place in our operating administrations and in the Office of the Secretary to lead to corrective efforts. Our assessments of system vulnerabilities are ongoing and continue to improve.

In some, albeit limited cases, systems have already been fixed to accommodate the year 2000. We also recognize, however, that we have a long way to go. Until we are finished with our assessment of the large, complex, and critical air traffic control systems, we will have only a partial picture of the magnitude of the work which we have ahead of us. Clearly, only the most effective use of the coming months will lead to success, and successful we must be.

Thank you, and I would be happy to respond to any questions that you or members of the committee might have on anything that I have said this morning or anything that is contained in my written testimony.

[The prepared statement of Mr. Huerta follows:]

TESTIMONY OF MICHAEL P. HUERTA
ASSOCIATE DEPUTY SECRETARY
ACTING CHIEF INFORMATION OFFICER
ON THE DEPARTMENT OF TRANSPORTATION'S
"YEAR 2000" ACTIVITIES
BEFORE THE
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT,
INFORMATION AND TECHNOLOGY
COMMITTEE ON GOVERNMENT REFORM
AND OVERSIGHT
U.S. HOUSE OF REPRESENTATIVES

FEBRUARY 24, 1997

Chairman Horn and members of the Subcommittee. I am pleased to appear before you today to discuss the Department of Transportation's "Year 2000" activities.

The Department of Transportation (DOT) welcomes the opportunity to update the Subcommittee on our efforts to address the Year 2000 problem. Our goal is to complete Year 2000 conversions by December 1998 and to fully test those conversions before the turn of the century. In the last year, we have made substantial progress towards achieving that goal.

The most important mission of the Department of Transportation is to ensure the safety of the American traveling public. We are sensitive to the risks that the Year 2000 problem poses to that critical mission. As the Chief Information Officer (CIO), I am responsible for leading the Department's Year 2000 efforts.

The Department is following the five phases outlined in the "Best Practices" planning framework developed by the Best Practices Subcommittee of the Interagency Year 2000 Committee. Let me

summarize our progress in each of these phases.

Awareness Phase: Our awareness campaign has been extensive and directed at all levels of the Department. For example, in November 1996, the Senior Management Council, which is chaired by the Deputy Secretary and attended by the Deputy Administrators of all of the DOT operating administrations, was briefed on the potential consequences of the Year 2000 problem. Additionally, we are using in-house television, our Intranet site and printed material to alert people to this problem. Other examples of outreach include extensive Year 2000 awareness sessions hosted by both the United States Coast Guard and the Federal Aviation Administration this past fall, attended by representatives from their Headquarters and field offices. We estimate this phase is about 90% complete, but recognize that there will be a continuing level of effort throughout the life of this project.

Assessment Phase: My staff surveyed the operating administrations in October 1996, in order to inventory our Information Technology systems and to assess progress on corrective activities. We received information on 180 systems, of which 163 are considered critical. The Air Traffic Control systems were not included in the survey results, as they are undergoing more extensive evaluation due to their complexities. Additionally, a number of the systems that were surveyed are undergoing further assessment. Our intention is to meet the goal reported to the Office of Management and Budget (OMB) of December 1997.

Renovation Phase: The renovation phase will include not only changes to source code in

applications, but also securing Year 2000 compliant updates to commercial-off-the-shelf packages and systems that support organizational missions and goals. Renovation efforts are underway on several systems on which assessments have been completed. For example, renovation of the Department's Consolidated Personnel and Management Information System (CPMIS) was completed in January 1997. Our intention is to meet the goal reported to OMB of December 1998 for this phase.

Validation Phase and Implementation Phase: Once we complete renovation of systems and applications, we will begin the task of testing and validating that corrections are functioning according to design. These two phases will also include ensuring that ties to external customers and systems will not compromise the effectiveness of our Year 2000 compliant systems. As testing and validation activities are completed, the Year 2000 compliant systems and applications will be implemented throughout the organizations for final assurance that they are functioning properly. Our intention is to meet the goal reported to OMB of December 1999.

Taking corrective actions within this framework is the responsibility of our ten operating administrations and other departmental organizations who operate automated systems. Each entity faces different challenges depending upon the complexity of their systems. Consequently, different organizations are at various stages in addressing the problem. Consistent across the Department, however, is; 1) the recognition at the highest levels of management of the need for corrective actions; 2) an active Year 2000 program in each operating administration; and 3) the appropriate management structures to ensure success.

Briefly summarized, major activities within the Department include the following:

Office of the Secretary (OST):

Chief Information Officer (CIO): My office is providing leadership and ensuring that the appropriate urgency is being given to this project. A full-time Year 2000 Project Coordinator is serving as a facilitator and clearinghouse for information across the Department. To date, efforts have included conducting awareness sessions, elevating the visibility of the problem, maintaining and updating an inventory of all DOT systems, tracking the progress of conversion efforts, and alerting budget officials of possible funding requirements.

Departmental Administrative Systems: The Assistant Secretary for Administration and the Chief Financial Officer serve as program sponsors for major departmental business applications. Under their leadership, we are actively working to ensure Year 2000 compliance. Upgrades were completed last year to allow our Integrated Personnel Payroll System (IPPS) to provide forecasts beyond the Year 2000. The conversion of the Departmental Accounting and Financial Information System (DAFIS) is currently underway with a December 1998 target completion date.

OST Applications: There are also several small office applications that reside on desktop platforms that are undergoing assessment. Plans and schedules for these systems and applications are being developed by the program managers and sponsors.

Federal Aviation Administration: The FAA faces the most challenging Year 2000 problems because of the complexities of the Air Traffic Control systems. In recognizing this challenge, FAA formalized its Year 2000 efforts in July 1996 with the establishment of an agency-wide Steering Committee. The committee is composed of representatives from each of seven Lines of Business and is responsible for the development of project plans, documenting Year 2000 progress through systematic reporting and providing a forum for the regular exchange of information. The agency's CIO, a senior executive, is responsible for coordinating the Year 2000 efforts. FAA has completed a number of awareness activities for all levels of the organization. Most importantly, the FAA Air Traffic Control systems development, maintenance and test organizations are now systematically assessing/testing systems in the automation domain which includes en route, terminal, oceanic and non-radar weather programs. Testing is being done at the FAA's William J. Hughes Technical Center in Atlantic City. This "real world" testing will provide the necessary assurance that the Year 2000 problem is appropriately addressed in the Air Traffic Control system. We expect preliminary assessments to be completed by May 31, 1997. Another major portion of the Air Traffic Control systems are in the Communications, Navigation and Surveillance domain. These systems include radar weather systems, voice switching/recording, radio communications, radar systems, Global Positioning System and others. These systems are just beginning assessment. The FAA target for completion of project plans associated with all major Air Traffic Control systems is May 1997 and completion of comprehensive assessments by December 31, 1997.

United States Coast Guard: Responsibility for the Year 2000 effort in the Coast Guard rests with the CIO, who is a flag officer. The USCG has issued service-wide policy and guidance regarding the impact of Year 2000 on information systems and formed a Year 2000 Work Group consisting of representatives from Headquarters and field units. The USCG completed an assessment, in January 1997, of software applications, computer hardware, and equipment with embedded microprocessors. These include major systems associated with marine safety, vessel traffic services, law enforcement, and business systems as well as embedded chips in video cameras that are essential for date-stamping evidence in the Coast Guard law enforcement mission. The USCG is now using this data to determine resource requirements necessary to renovate and test or replace affected applications and systems.

Federal Highway Administration: FHWA has been working for some time to ensure all of its systems will accommodate the Year 2000. Responsibility has been assigned to the Associate Administrator for Administration. FHWA originally developed its Financial Management Information System in April 1989, to accommodate 4-digit date fields, and the Motor Carrier Management Information System will have date fields converted when the current system restructuring is completed this month. FHWA continues to work with the Transportation Administrative Service Center Computer Center to upgrade the mainframe platform that hosts the FHWA grant programs.

Federal Transit Administration: The FTA's Year 2000 assessment process is covering the agency's microcomputer, Local Area Network (LAN) file server, and mainframe/IDMS-based

application platforms. FTA has compiled a comprehensive plan for its mainframe applications (including those involving grants) that will track programming changes, as well as changes made to data base records. The FTA is also examining the effect of "feeder" systems on its critical mainframe applications to ensure that these "feeder" systems will not have any adverse effects on these important applications. The Director of FTA's Office of Information Resource Management has primary responsibility for corrective actions.

National Highway Traffic Safety Administration: NHTSA has reviewed its two major systems: the National Driver Register and the Contracts Control - Acquisition Data Interchange System. Both will require modifications to be Year 2000 compliant. Under the leadership of the Director, Office of Information Resource Management, NHTSA is developing plans to ensure that these systems will be Year 2000 compliant.

Federal Railroad Administration: The FRA has developed a detailed plan of action for assessing the Year 2000 issue on its information systems. FRA completed an inventory of its 16 major and secondary information systems in December 1996. The majority of FRA systems are client/server based and their operating systems, network and applications software are primarily commercial-off-the-shelf products. FRA plans to upgrade this software to ensure compliance in advance of the Year 2000. FRA's Associate Administrator for Administration and Finance is responsible for overseeing these efforts.

Maritime Administration: MARAD has completed the awareness phase in which its executives

were briefed on areas of concern associated with this problem. MARAD has appointed a program manager under the Associate Administrator for Administration to lead its efforts. MARAD has drafted a preliminary action plan.

Saint Lawrence Seaway Development Corporation: The SLSDC staff has eleven critical systems that will require Year 2000 fixes. SLSDC plans to have work completed by the end of calendar year 1998 or earlier. Responsibility for these efforts has been assigned to the Director for Administration.

Research and Special Programs Administration: The RSPA Information Resource Manager is overseeing its Year 2000 program. The major organizations within RSPA are addressing aspects of the Year 2000 problem. RSPA Headquarters, the Office of Pipeline Safety (OPS) and the Office of Hazardous Materials (HMS) have small amounts of coding to review. OPS has recently completed a conversion of its primary database to make it Year 2000 compliant and the HMS systems were determined to be compliant. The Volpe National Transportation Systems Center has recently convened a task force to assess its vulnerability.

Bureau of Transportation Statistics: BTS is a relatively new organization within the Department. With one exception, all of the Bureau's computer systems are less than five years old. The Bureau's Office of Airline Information currently is the only program area that has systems impacted by the Year 2000 problem. Assessment of the extent of the Year 2000 problem has been completed, a plan for fixing the problem has been developed, and renovation activities

are currently underway.

Transportation Administrative Service Center (TASC): The TASC Computer Center has had an active Year 2000 program since late 1995. Under the leadership of the TASC Principal for Information Technology Operations, TASC has identified two critical systems that are not yet Year 2000 compliant. They are the Headquarters Telephone System and the mainframe operating system component of the Enterprise System. Both systems use commercially developed software that is presently installed in major systems internationally. The mainframe operating system's Year 2000 compliant software release is presently being tested and is expected to be in full operation within three months. The telephone system software upgrade will be available in the first quarter of 1998.

In closing, let me emphasize that we at the Department are taking and will continue to take all steps necessary to ensure that our automated systems, especially those that protect the health and safety of the American traveling public are not disrupted by the Year 2000 problem.

Thank you, Mr. Chairman and members of the subcommittee. I would now be happy to respond to your questions.

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Mr. HORN. Thank you very much.

Our last witness on this panel is Mr. Mark D. Catlett, the Chief Information Officer for the Department of Veterans Affairs.

Mr. CATLETT. Good morning, Mr. Chairman and members of the committee. It is my pleasure to testify on behalf of the Department of Veterans Affairs this morning concerning the readiness of our computers for the year 2000.

As VA's Chief Information Officer, I am working closely with VA's administration level CIO's in leading our efforts to become year 2000 compliant; that is, ensuring that our information systems will function correctly with the dates beyond 1999. We are taking numerous steps to ensure that the VA's information systems will provide uninterrupted service supporting benefits delivery and medical care.

We have recently completed a year 2000 readiness assessment of the major VA organizations. Over 80 information systems professionals and managers were interviewed in Washington and various field locations.

We hired a consultant to assess our plans, testing methodologies, contingencies, inventories, and cost estimates. The readiness assessment focused on our Cemetery System, our Austin Automation Center, the Veterans Benefits Administration, and our Veterans Health Administration. Let me summarize quickly in each of those areas.

For our smallest line organization, our National Cemetery System, the information systems supporting our cemetery systems are fully year 2000 compliant. We just recently replaced the last noncompliant systems there in December 1996.

At our Austin Automation Center, we have been addressing the year 2000 problem there since 1991 through planning and the required conversion of software. Almost 70 percent of production applications are year 2000 compliant now. Our automation center plan will have all systems compliant by September 1998.

The Veterans Benefits Administration: they have been developing a comprehensive plan to ensure that their systems will be ready for the year 2000. VBA's goal is to have all systems compliant by November 1998. VBA is taking several tracks to ensure their systems will be ready.

We are maximizing application redesign to solve the year 2000 problem. Our Compensation and Pension Payment System replacement effort and our Education Payment System replacement effort will replatform many of our applications on to current technology and make them year 2000 compliant at the same time.

Additionally, VBA is executing a contingency plan for our compensation, pension, and education systems, which are the systems that are the large payment systems for the veteran beneficiaries in this Nation, to ensure their continued operation past the year 2000 in the event that our above redesigned efforts are delayed—if we are delayed in meeting those delivery dates.

For our Veterans Health Administration, the primary information system supporting our medical facilities is known as the Decentralized Hospital Computer Program. All DHCP, the acronym, applications use MUMPS programming language. ANSI standard MUMPS or M language is year 2000 compliant. However, we must

verify that programmers have followed standard development and programming conventions for this primary software. VHA is developing a plan to analyze the entire DHCP product line portfolio to confirm that DHCP applications are year 2000 ready. VHA's goal is to complete any necessary code conversions by May 1998.

VHA has begun development of a plan that includes schedules and contingencies necessary to mitigate year 2000 impacts, but has not completed an overall comprehensive plan. The plan will address areas beyond information systems, such as biomedical equipment currently in use at VA medical facilities, especially those that input patient data in our DHCP systems. This plan will detail how the VHA Year 2000 Project Office will support and assist our networks throughout the country to achieve compliance throughout the medical facilities in their networks. The plan for our VHA system will be completed by April 1997.

In summary, VA organizations have developed detailed systems inventories, testing methodologies, individual project plans and contingencies. Our inventories and plans include such key elements as estimated lines of code, number of modules, operating systems and commercial off-the-shelf packages. Additionally, the individual system and COTS inventories include assessments of year 2000 compliance.

We are also working with the Year 2000 Interagency Committee chaired by Ms. Kathy Adams. We will be working with the Office of Management and Budget and other appropriate agencies to resolve potential issues with biomedical equipment. We are confident that VA information systems will be well prepared for the coming millennium.

I thank you for the opportunity to appear here today and will be glad to answer any of the questions that you or the committee Members may have.

Mr. HORN. We thank you for your testimony.

[The prepared statement of Mr. Catlett follows:]

STATEMENT BY
THE HONORABLE D. MARK CATLETT
ASSISTANT SECRETARY FOR MANAGEMENT AND
CHIEF INFORMATION OFFICER
DEPARTMENT OF VETERANS AFFAIRS

BEFORE THE
SUBCOMMITTEE ON GOVERNMENT,
MANAGEMENT, INFORMATION AND TECHNOLOGY
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
U.S. HOUSE OF REPRESENTATIVES

FEBRUARY 24, 1997

Introduction

Mr. Chairman and members of the Committee, it is my pleasure to testify on behalf of the Department of Veterans Affairs (VA) concerning the readiness of our computers for the Year 2000.

As VA's Chief Information Officer (CIO), I am working closely with VA's Administration-level CIOs in leading our efforts to become Year 2000 compliant, that is, ensuring that our information systems will function correctly with dates beyond 1999. We are taking numerous steps to ensure that VA's information systems will provide uninterrupted service supporting benefits delivery and medical care.

VA Year 2000 Readiness Review

We have recently completed a Year 2000 Readiness Assessment of the major VA organizations. Over 80 information systems professionals and managers were interviewed in Washington, DC, and various field locations, including the Austin Automation Center, Benefits Delivery Centers, and medical centers.

We hired a consultant to assess our plans, testing methodologies, contingencies, inventories, and cost estimates. The Readiness Assessment focused on the National Cemetery System (NCS), VA's Austin Automation Center (AAC), Veterans Benefits Administration (VBA), and Veterans Health Administration (VHA).

Let me summarize the Review's findings and VA's Year 2000 activities:

National Cemetery System (NCS)

The information systems supporting NCS are fully Year 2000 compliant, in that we recently replaced non-compliant NCS systems in December 1996.

VA's Austin Automation Center (AAC)

The AAC has been addressing the Year 2000 since 1991 through planning and the required conversion of software. Almost 70 percent of production applications are Year 2000 compliant. The AAC plan will have all systems compliant by September 1998.

Veterans Benefits Administration (VBA)

VBA has developed a comprehensive plan to ensure that their systems will be ready for the Year 2000. VBA's goal is to have all systems compliant by November 1998. VBA is taking several tracks to ensure their systems will be ready:

- VBA is maximizing application redesign to solve the Year 2000 problem. The VETSNET Compensation and Pension Payment (C&P) system replacement effort and the Education Payment system replacement effort will replatform many of VBA's applications onto current technology and make them Year 2000 compliant at the same time.

- Additionally, VBA is executing a contingency plan for the Compensation, Pension and Education systems to ensure their continued operation past the Year 2000, in the event the above redesign projects are delayed from meeting their delivery dates.

- All other applications are currently or will be modified to become Year 2000 ready. These include VBA's Insurance application, loan guaranty, and debt management activities. To date, 14% of VBA's applications are Year 2000 compliant.

Veterans Health Administration (VHA)

The primary information system supporting VHA's medical facilities is the Decentralized Hospital Computer Program (DHCP). All national DHCP applications use MUMPS (Massachusetts General Hospital Utility Multi-Programming System) programming language. ANSI (American National Standards Institute) standard MUMPS or M language is Year 2000 compliant. However, we must verify that programmers followed standard development and programming conventions. VHA is developing a plan to analyze the entire DHCP product line portfolio, to confirm that DHCP applications are Year 2000 ready. VHA's goal is to complete any necessary code conversions by May 1998.

VHA has begun development of a plan that includes schedules and contingencies necessary to mitigate VHA's Year 2000 impacts but has not completed an overall, comprehensive plan. The comprehensive plan will address areas beyond information systems, such as biomedical equipment currently in use at VA medical facilities; especially those that input patient data into DHCP systems. This plan will detail how the VHA Year 2000 Project Office will support and assist VHA's 22 Veterans Integrated Services Network (VISN) offices in their efforts to achieve compliance throughout the medical facilities in their networks. The plan will be completed by April 1997.

Summary

VA organizations have developed detailed systems inventories, testing methodologies, individual project plans and contingencies. Our inventories and plans include such key elements as estimated lines-of-code, number of modules, operating systems and commercial-off-the-shelf (COTS) packages. Additionally, the individual system and COTS inventories include assessments of Year 2000 compliance.

We are also working with the Year 2000 Interagency Committee chaired by Ms. Kathy Adams. We will be working with the Office of Management and Budget and other appropriate agencies to resolve potential issues with

biomedical equipment. We are confident that VA information systems will be well prepared for the coming millennium.

I thank you for this opportunity to present our progress in preparing for the Year 2000.

Mr. HORN. I thought I might just go in and ask several questions of one Department here to try to illustrate some points. It is going to be the Department of Transportation, partly because I sit on the authorizing committee as my other full-time job here. I noted that back in 1989, April 1989 to be exact, almost the same time the Social Security Administration got interested in the year 2000 problem and was way ahead of everybody else, a component unit of the Department of Transportation got involved, and that was the Federal Highway Administration, when they began their year 2000 activity.

The obvious question comes to mind, why didn't someone at the Department of Transportation report up the chain of command, "hey, we have got a problem here." Maybe you people in the other administrations, bureaus, divisions by whatever name also have a problem? What happened was that the Department of Transportation, when we sent our survey out, I and the ranking Democrat, asked to join me on this in April 1996, they were one of the two departments that really got an "F" on response, even though I have great respect for the Secretary then, and I have got great respect for the Secretary now. But something was going wrong in the chain of command when you have got one group, the Federal Highway Administration, knows there is a problem, starts dealing with it, and nobody else, including the Secretary, seems to know it is a problem. What happened?

Mr. HUERTA. I can't really explain what happened in 1989, nor when you sent out your initial inquiry of last year. I didn't even know there was such a thing as a year 2000 problem until August when I became the Acting CIO.

I will say that we have identified as the major difficulty the communication of the urgency of the problem as was cited by the representatives of the GAO this morning. We agree with their assessment that the issue is essentially one of management. We must ensure that the Department's top-level managers, both within the operating administrations as well as in the Office of the Secretary, have a full and complete understanding of the urgency of this issue and are doing what they can to resolve it.

What we have put in place is a regular reporting mechanism not only of progress, but also as part of the budget call. We are asking agencies to identify their year 2000 resources, as I mentioned in my testimony. That is an area that we will continue to refine as the assessments are underway.

To talk a little bit about the Federal Highway Administration and some of the progress that they have made, I already mentioned that one of their motor carrier systems is pretty much taken care of. I would also like to point out that they have one system, their financial management information system, that I think is a rarity in the Government. It is a system that when it was originally programmed, was programmed with the 4-digit date field. Someone was clearly thinking ahead at that point.

Some of the complexities we will need to deal within the Federal Highway Administration, however, are the interfaces to the States and the two territories that receive Federal aid funds. The Federal Highway Administration has been working closely with the American Association of State Highway Transportation officials in order

to ensure that this issue is elevated to the highest levels within the State Departments of Transportation with which we need to link, to ensure that our data is not contaminated.

Mr. HORN. That is a very good point. I know the Department of Labor has the same situation. HHS was mentioned, where you have got tremendous partnerships with the States, and we will get to that later.

But let me pursue, one of the main concerns if authors Clinger, former chairman of the full committee, as we all know, now retired, or on the other body side, author Cohen, now Secretary of Defense, were here, one of the reasons they got a law through that said, pick a Chief Information Officer, was to elevate this whole area into the management team of a particular Department. I guess what bothers me a little is you are the Acting Chief Information Officer, but you have got a lot of other responsibilities. Is there a plan to bring in a Chief Information Officer for Transportation?

Mr. HUERTA. Absolutely, Mr. Chairman. You have correctly pointed out that I am acting, and no one more than I is looking forward to the day that this act ends.

Mr. HORN. Good. I am glad you are such an easy sale on this because your colleague right next to you from HHS is also Assistant Secretary for Management, and I think you are also CFO, are you not?

Mr. CALLAHAN. That's correct.

Mr. HORN. Here in Congress, this reminds me of the story when the President said he had created 11 million new jobs, and a woman said, "Gee, I can believe that, I have three of them." Well, I didn't know he was creating them in the administration. You have got three of them.

Mr. CALLAHAN. That is correct.

Mr. HORN. The question is, can we really get focused in this area when the Assistant Secretary for Management is also the Chief Financial Officer, is also the Chief Information Officer. What do you think, Mr. Callahan?

Mr. CALLAHAN. The particular situation in our Department is under discussion with the Office of Management and Budget about the long-term placement of the Chief Information Officer.

I would offer to the subcommittee one insight, though. It is very important for that Chief Information Officer, whoever he or she is, to be really at the top level of the Department. I feel fortunate actually in having some of these responsibilities because we can sort of, quite frankly, apply more muscle to this problem than maybe some of our other counterparts in other agencies. That is, for example, as Assistant Secretary of Management and Budget, I have an extra degree of leverage with regard to making sure that we have the resources for the year 2000 problem. That may not be the case in some of the other agencies.

So I think this is a matter that is under discussion with OMB, but I can assure you that this whole problem will not get done unless it has the full backing of the Secretary, the Deputy Secretary and the other top people.

Mr. HORN. I agree with you on that, but I think the authors' view of this in both the CFO legislation and the Chief Information Officer legislation was that those individuals should be at the high-

est level management team in the Department. I mean, good heavens, 17 years ago in a university I had a Chief Information Officer in my management group, and believe me, nobody else around that table knew what he knew on resource management, computers, so forth, and that is why he was in the room. He participated in every single decision that the university made in the management area.

What bothers me is all you wonderful managers and wonderful CFO's, your time is chewed up, and you cannot focus on the problem because you have got too much to do. While it is great when you have got it all in one hat and you can issue it as Assistant Secretary for Management, you can use any of these hats, I am just wondering if the job is really getting done, at least in the intent of Congress.

Mr. Huerta.

Mr. HUERTA. Mr. Chairman, just to talk some about how we at the Department of Transportation are setting up our CIO's office. I think one of the things that is a major significant point is that we are actually creating the office as a new entity on the core management team of the Secretary. It is for that reason that I initially got involved in it. Then Secretary Peña asked if I could convene a group of all of our operating administrations to look at how best to take this important responsibility given to us by the Information Technology Management Reform Act and make it real within the Department of Transportation. He was quite specific in saying that we do not simply want to take something that we are already doing and call it the Chief Information Officer. We needed to rethink that. We now have created the CIO position, and we are aggressively recruiting for it.

Mr. HORN. Let me pursue some of the things in Transportation. I agree with you, and you agree, apparently, that we had a little communication problem there when one of the agencies is way ahead of everybody else and nobody else knows it, including the Secretary. But the Federal Aviation Administration's air traffic control modernization was certainly one of the most troubled information technology acquisitions we had, and I am not sure where we are on that. Maybe you could educate this committee on where we are.

I remember my freshman year, 1993, going with the then chairman, Mr. Oberstar, chairman of the Aviation Subcommittee, out to look at it, and Mr. Mica, who is a fellow subcommittee chairman in this group, and I went, and you could tell just walking through the situation that they didn't know what they were doing, and several billion was being expended. Now we read in the paper about IRS, $4 billion down the drain. My problem is I don't understand why they don't catch it at the $1 million mark, not the $4 billion mark. Where are we in the FAA on that situation as it relates to the year 2000? Obviously they can solve that problem, they have got the storage capacity now, but go ahead.

Mr. HUERTA. The FAA has been working quite aggressively to fix the problems that they encountered in the modernization of the air traffic control program. Under Dr. George Donohue, who is Associate Administrator for Research and Acquisition, he has set up a very clear set of milestones and regular progress reports all the way up to the Secretary in terms of what is going on.

I have personally participated in many briefings on the current status of FAA's modernization program, and I have been impressed that some of the old difficulties that we saw in the previous contracts, things like mission creep or requirements being added and so forth, simply are not happening in this instance. The program offices are able to maintain their calendar and maintain their budget estimates as things get refined and implemented. And we have had some success in introducing new equipment in many key FAA facilities around the country.

Having said that, while we feel that the modernization program has turned around and is on track, we recognize that we need to also plan for the contingency that some elements of the older systems may still be operating by the year 2000, and that is what a lot of the ongoing assessment in FAA is looking at. It is clear that in the new systems which are being acquired, we have required that they will be year 2000 compliant. However, we want to make sure that we cover those contingencies.

Mr. HORN. I now yield 8 minutes, since I went over, to the ranking Democrat, Mrs. Maloney.

Mrs. MALONEY. Thank you very much, Mr. Chairman.

I would like to ask all of the panelists the same question and just have you go down the panel from State to Defense to Labor and all the way down. First, have you completed a survey of all of your systems as to the millennium problem, yes or no?

Ms. MCCLENAGHAN. Yes.

Ltg. PAIGE. No, we have not completed the survey. The assessment phase is still ongoing.

Mrs. MALONEY. Is still ongoing. When do you expect to complete the assessment stage?

Ltg. PAIGE. By the first of April.

Mrs. MALONEY. By the first of April.

Ms. LATTIMORE. We have completed our survey and are working on the second phase.

Mr. CALLAHAN. We have just about completed our survey. We will be through by the end of March.

Mrs. MALONEY. By the end of March?

Mr. CALLAHAN. Yes.

Mr. HUERTA. We have conducted one survey and have substantially completed a big chunk of it. The two pieces which are outstanding are air traffic control, which we expect to complete in May, and radar systems, which we expect to complete at the end of the year.

Mr. CATLETT. We have completed our survey at the VA.

Mrs. MALONEY. Second, I would like to ask all panelists, again starting with State, after completing your survey, have you prioritized those systems that absolutely must be fixed, that are the ones that are the most critical, and made a priority list so that they will be addressed first?

Ms. MCCLENAGHAN. Yes, we have.

Mrs. MALONEY. Could we get a copy of that list then?

Ms. MCCLENAGHAN. We will be happy to submit that with the testimony.

Ltg. PAIGE. In the Department of Defense, each of the military departments will prioritize their own systems. Agencies will

prioritize their systems. We will furnish you that information if you would like a copy of it.

Ms. LATTIMORE. Attached to the Department of Labor's submission was a chart that listed our 58 mission-critical sensitive systems that we believe are our priority ones. Those are the systems that deal with benefits, entitlements and the fiduciary systems that interface with the States.

Mr. CALLAHAN. Our operational divisions will have that classification fully complete by the end of March, but we have made considerable progress both in the Health Care Financing Administration and CDC. They have classified their systems as to how critical they are, and we will provide that full information to the committee.

Mr. HUERTA. In our submission to the committee, we identified systems as either being mission-critical or not. We intend to refine that, particularly as we complete the assessment phase.

Mrs. MALONEY. Which will be when?

Mr. HUERTA. As I mentioned a little bit earlier, we will complete the air traffic control components in May and in December.

Mr. CATLETT. We have not prioritized at this point. We will have that completed in the spring.

Mrs. MALONEY. Thank you. And would you, when you complete it, submit it to the committee?

Again, I would like to ask all of the panelists, again beginning with State, do you have a way to test your systems once the fixes have been made?

Ms. MCCLENAGHAN. We are establishing a plan which will be complete in June of this year on how to test those individual systems. It depends upon whether it is the platform that is not compliant or whether it is the application, or the operating system, or the combination there of.

Mrs. MALONEY. Defense.

Ltg. PAIGE. As you know, we have plenty of experience in testing systems, and we do have a way, methodologies, and plans, to test all of our systems.

Ms. LATTIMORE. Our systems will have a detailed plan for testing and implementation by June of this year.

Mr. CALLAHAN. Our systems also will have a detailed plan for testing and improvement, and we will be actually testing some of them, and they should be compliant by, as I mentioned, a number, by 1997.

Mr. HUERTA. We intend to have testing plans, and as we indicated in our submission to the committee, it is our intention to spend the entire last year doing testing and implementation.

Mr. CATLETT. We will use our current testing methodologies, but as noted in terms of the schedule, many of those fixes will be completed in 1998, but all of them will have the year 1999 to finish any testing that will be needed.

Mrs. MALONEY. We look forward to the results from those tests.

Mr. Chairman, I have no further questions.

Mr. HORN. Thank you very much.

The gentleman from Virginia, Mr. Davis.

Mr. DAVIS OF VIRGINIA. Thank you very much.

Let me ask each of you, having seen the administration's budget submissions at this point for what they are asking for this program, are you all confident that in your various agencies and departments that you can deliver on the year 2000 with what has been requested so far, or are you willing to keep an open mind at this point and maybe say you might want to amend the earlier submission? I will take silence as just saying you are happy with where things are at this point.

Mr. CALLAHAN. As also the budget officer for the Department of Health and Human Services, we did request a specific line item in the 1998 budget for the Health Care Financing Administration of $15 million, and we will continue to scrutinize those budget estimates very carefully, and if there is a need for reprogramming or reallocation within existing resources, we will bring that to the attention of the Secretary, and we will also be very vigorous in this regard in terms of putting together the fiscal year 1999 budget.

Mr. CATLETT. Mr. Davis, I would like to make a point here. As GAO noted and from what I understand of it, that report that OMB has prepared is the compilation of our estimates. I think there is a factor there that we need to understand and all come to a common agreement on.

We did not include the cost for replacing systems, instead of recoding. So those systems that we are replacing aren't reflected here, and primarily the reason is that the year 2000 is not the only reason that we are replacing those systems. We need to replace old systems. That work has been underway for some time.

Mr. DAVIS OF VIRGINIA. In fact, originally when we went to two numbers, everybody figured they would be replaced by this time, is that not part of the rationale, and they haven't been done in many cases?

Mr. CATLETT. Yes. So again, working with you and working with OMB, I think we all ought to come to some understanding, if we want to split some of that cost and assign it to year 2000, we may need to do that. But we didn't intentionally leave it out. It's just the fact that there are other reasons, primarily service delivery in our case, that we are replacing those systems.

Mr. DAVIS OF VIRGINIA. Let me ask Ms. Lattimore, when OMB reported 2 weeks ago to this subcommittee on the cost of the year 2000, they indicated that the Department of Labor's costs were only $15 million over several fiscal years. But I also notice in the Department's submission to the subcommittee you have made a $200 million new-needs budget request to cover the Federal Government's share of the cost of year 2000 conversions for State programs such as for unemployment insurance.

I guess my question would be, will the States be ready in time, are they ahead of or further behind the Federal Government in addressing the year 2000 problem? What steps are the States and the Department taking to avoid the consequences of receiving corrupt data from nonyear 2000 compliance systems? What are the consequences of corrupted data slipping through, and didn't the Office of Management and Budget's estimate of $15 million fairly dramatically understate the real budget impact for DOL for the year 2000?

Ms. LATTIMORE. We believe the $15.2 million based on the information we have to date and the assessment we've conducted to date is accurate. The $200 million was in grant money, not appropriation to the Department, to meet what we felt was the Federal share of what we believed to be a $477 million price tag to appropriately handle the conversion for our interface with the unemployment insurance from the States.

Mr. DAVIS OF VIRGINIA. That is not in the administration's budget, to your knowledge, is it?

Ms. LATTIMORE. In fiscal year 1998?

Mr. DAVIS OF VIRGINIA. Yes.

Ms. LATTIMORE. Yes, it is. It is specifically there for that purpose.

Our work with the States, to date—we find them to be, I would say, a little bit behind the Federal Government. We are working with the States, with the State employment security agencies as recently as last week, with all of their representatives, in Florida; and we have some ongoing sessions planned with them to ensure that they are able from the State side to work for the year 2000.

We have the Federal aspects to ensure that we are able to receive the data either through appropriate conversions or we will have bridges built. We will be able to accept their data, transmit data, not allow it to corrupt our data in our systems; and that will be fully ready significantly prior to the 2000 conversion date. We are working with them, though, to be assured that they will also be able with their internal systems to not just give us information and get money, but their systems will be able to disseminate that money within the State.

So it is a two-pronged approach that Federal information technology systems have to work, but, in turn, our systems don't do the States any good if we don't help them get their systems up to speed whereby they can then properly disseminate those benefits and entitlements.

Mr. DAVIS OF VIRGINIA. And you have got 50 States that are all giving us different priorities. I notice Nebraska has done a tobacco tax, a cigarette tax, to pay for that. I don't think that would fly up here. I would support it, but I don't think it is going to fly up here for getting additional money. But I think States are at different levels.

Ms. LATTIMORE. There will be 52 different plans and different approaches, which is why we're working with the State employment security agencies. None of them will be alike or few. If they're alike, it will be by accident.

Mr. DAVIS OF VIRGINIA. But you think the OMB estimate—remember you're going to be back here next year and the year after; their estimate of $15 million fairly dramatically—you think it is a realistic budget impact for DOL for the year 2000 problem?

Ms. LATTIMORE. It's what we've provided OMB. If we find as we move through these step processes that we have underestimated that, we will be back again with hat in hand.

Mr. DAVIS OF VIRGINIA. Just to make sure I give you some room to maneuver there. Does anyone else want to add or supplement?

Ltg. PAIGE. I can assure you that the figures that we presented to OMB, we furnished them reluctantly because we figured that, first, somebody would try to hold us to the figures.

Second, as far as we're concerned, the figures are not very important in terms of getting on with the job because we've tried to emphasize to everyone, not to use the year 2000 expecting that it will provide funds to bank other things. We've tried to emphasize that there are no dollars coming; they will have to prioritize from within their organization.

Ms. MCCLENAGHAN. At the Department of State, as I have mentioned, we are undergoing a modernization effort, so we're going to have to forgo some of those modernization activities in response to year 2000; but our numbers are the best numbers we could have at this time.

Mr. DAVIS OF VIRGINIA. Our concern here is that if we don't get it in the appropriation process, we can't factor it in. And then you are taking away from other projects; sort of robbing Peter to pay Paul and setting different priorities.

I know there are variables in this. I worked for a computer software company for many years before I came here. There are a lot of variables as we go through this. One of them is just getting good people, trying to get good COBOL people at this point. Their price is going up and up and up the longer we delay.

Let me ask Mr. Huerta if he'd want to comment, and also on January 1, 2000, are you going to be flying the first plane out to make sure everything is working straight?

Mr. HUERTA. I will probably be on that plane as a way of ensuring that it does comply.

Mr. DAVIS OF VIRGINIA. I will be after you on the next plane.

Mr. HUERTA. Regarding our estimate, we had estimated $80.4 million to OMB, as I mentioned in my opening remarks this morning. We have since increased that by $10 million, based on the U.S. Coast Guard having completed their assessment. And we have two large assessments that are currently under way with FAA.

Mr. DAVIS OF VIRGINIA. We are not trying to put anybody in a "gotcha" situation. We just want to know what it is so we can make the appropriate judgments from here.

Thank you all very much.

Thank you, Mr. Chairman.

Mr. HORN. I might add, listening to who is going to be in the first and second plane, when it comes to dealing with computers, I learned 20 years ago, don't be the alpha site, don't be the beta site, be the next one. Then I think we're safe.

I now am delighted to yield to the gentleman from Illinois, Mr. Davis.

Mr. DAVIS OF ILLINOIS. Thank you very much, Mr. Chairman.

Ms. McClenaghan, you may have answered part of the question, but I note that during your testimony you indicated that solving the year 2000 problem would require the diversion of scarce resources from new developments. What kind of new developments are you talking about?

Ms. MCCLENAGHAN. Sitting here with my friend from DOD, we're looking at the defense message system as an implementation to replace our aging cable and information e-mail system, and we would have to delay spending funds on that, as an example.

Mr. DAVIS OF ILLINOIS. Thank you very much. That might lead right to my next question.

General Paige, I didn't hear any projections relative to cost from Defense.

Ltg. PAIGE. We submitted, in the response on February 12th, that it was about $970 million. Since that time it has increased to about $1.2 billion. I submit that as we continue the assessments, that figure will continue to rise. However, again, we are not going to come and ask for an additional bank of money to solve this problem.

Mr. DAVIS OF ILLINOIS. So even though the cost may continue to go up——

Ltg. PAIGE. We are concerned with the cost because Congress is concerned and OMB is concerned.

Mr. DAVIS OF ILLINOIS. I would certainly say that everybody around here seems to be concerned a great deal about it.

Mr. Huerta, you indicate that the FAA would complete its assessment phase by the end of December 1997.

Mr. HUERTA. That's correct.

Mr. DAVIS OF ILLINOIS. GAO indicates that that's going to be about 6 months later than we need to be. How would you propose to make up that time?

Mr. HUERTA. The FAA is completing their assessment in phases. They have done their administrative work, which is essentially complete at this point. Their focus on air traffic control, that's a very significant system in and of itself, that we expect will be completed by May.

What is lagging to December are radio navigation systems, which is again one component and an extremely important component, but we're not holding up renovation of the wholesale FAA system pending completion of every last piece of it. Instead, we will immediately jump into renovation of specific systems as we've assessed the components of them.

Mr. DAVIS OF ILLINOIS. And so you would have made enough progress to be comfortable?

Mr. HUERTA. We don't have any choice.

Mr. DAVIS OF ILLINOIS. Thank you.

My last question, Mr. Chairman, is to Mr. Catlett.

I know that the Veterans Administration is currently undergoing some reorganization. How does this impact upon, or does it impact upon, the preparation for corrective action?

Mr. CATLETT. Mr. Davis, I don't believe it will have much of an impact. The reason for that is, the reorganization referred to is in our health administration. As I noted in my testimony, the basic system that supports all of our health care applications is year 2000 compliant. So the work we have to do is at the local level, where they have made interfaces or made adjustments to the software, to make sure that those local applications are made compliant now, if they have done something beyond the capacity of the basic software. So that is, as I described it, in our health care system.

I think our challenge there is broad but shallow. I mean, there's a lot of places where they have to check, but the fixes for those shouldn't be very significant in terms of the cost or the time. So that is an issue that I don't believe has to get raised to the new

organizational level that you're referring to in our health care administration.

Mr. DAVIS OF ILLINOIS. Thank you very much.

I have no further questions, Mr. Chairman.

Mr. HORN. Thank you very much.

Let me pursue a few closing questions; then we'll ask the General Accounting Office to come back briefly.

In the case of the Department of Veterans Affairs' submission to the subcommittee, it stated that the assessment had not been completed on the possible impact of the year 2000 computer problem on biomedical equipment. Is that correct?

Mr. CATLETT. Yes, sir.

Mr. HORN. With HHS, Mr. Callahan, is that the same situation there where HHS, Health and Human Services, has not really looked at the impact on biomedical equipment?

Mr. CALLAHAN. The critical agencies here, Congressman Horn, as we understand it, are FDA and NIH; and we have already met with them, alerted them to this particular problem. I think FDA will be coming back to us with a plan vis-a-vis their laboratory equipment, as will NIH; and we will supply that to the subcommittee.

Mr. HORN. Do we have any sense of what medical diagnostic and laboratory equipment we are talking about that would be affected by this?

Mr. CALLAHAN. They have a wide variety of equipment out there in their labs and testing labs and in their clinics, and we'll provide that for the record.

Mr. HORN. OK. If you would, we would be grateful. We think it is a problem we ought to be sure is handled.

Mr. Callahan, in the subcommittee's prior hearings, which we held jointly with Mr. Shays' committee, on the Health Care Financing Administration and the new Medicare Transaction System for processing claims, a serious problem seemed to be identified, including missed deadlines, poor management.

The original plan had been to roll out this new claims processing system, as I remember, in the fall of 1999. The deadline has now been scrapped, the existing claims processors are now making the year 2000 changes to their software. If the Medicare claims processing contractors encounter even a fraction of the delays that the Department has already experienced developing that Medicare Transaction System, then there is a real risk that after December 31, 1999, Medicare claims will not be processed in a timely manner. I think you alluded to that in your statement.

So I guess what I am interested in, since this has such a major impact on American society, what assurances can you give the public, Medicare beneficiaries, and the Members of Congress, whose caseworkers in the district office will be flooded with requests if it does not work, and to the health care providers that rely on these billions of dollars in payments, that these claims will be paid when they are supposed to be paid after December 31, 1999?

Mr. CALLAHAN. HCFA is approaching this on a two-part, double-track basis. You are correct in the assessment that the Medicare Transaction System is a major system that is being looked at under the Investment Technology Management Review Act. It has been

the subject of prolonged discussions between the Department and the Office of Management and Budget and will be with the Appropriations Committees very, very shortly.

Mr. HORN. What is the nature of the discussion between the Department and the OMB?

Mr. CALLAHAN. On MTS, the basic discussion has been on the overall cost of moving to a Medicare Transaction System and the savings that will result.

Aside from the schedule of putting into effect all the appropriate software, getting dedicated sites for the processing of the Medicare claims, there has also been a concern about how much will we actually save. There will be information provided, I'm sure, to this subcommittee and others about the savings that HCFA estimates can occur from a unified Medicare Transaction System that will prevent duplicate claims, et cetera, and those are being looked at by the Office of the Actuary.

So we're trying to determine all the appropriate savings that can be made. We're trying to determine the appropriate costs over the many years that this thing will be put into effect.

At the same time, HCFA has assured us that there is a double-tracking of their current contractor systems to make sure that they are year 2000 compliant, and we are moving, as a matter of fact, to a claims processing function that is outside of MTS that will have one Part A contractor and one Part B contractor that will be year 2000 compliant.

So we're moving on this on two tracks, but I'm not going to kid you, this is a very, very delicate, complex project, and it is the subject of very intense discussion right now between the Department, the administration, your committee and the Appropriations Committee.

Mr. HORN. I think you are very wise to have a dual-track system. I know every university that changed over, from some wonderful people at the window that did it by hand and suddenly did it by computerization, when the system crashed, they had to figure out how to go back and do it by hand for a while.

Is this debate between OMB and the Department partly over a sort of government-controlled system totally or the role for private contractors on a regional basis?

Mr. CALLAHAN. The final MTS system would be contractor-owned and contractor-operated. It is a question of how many contractors that we have processing claims.

As you and other members of the committee would know, at one time we had a large number of contractors processing our claims. It was determined not only from the Congress, but by OMB, that we wanted to reduce those numbers of contractors. We have been doing that and this is one of the ways we would like to still try to go. But it is a complex project and we have to put together appropriate cost estimates on the spending side to get those savings that we are confident of once we get the system in operation.

Mr. HORN. I yield to the ranking Democrat who has a followup question in this area.

Mrs. MALONEY. It is really a brief question to the State Department, which so far is earning an "A" in their readiness and re-

sponse time and in responding to the "00 crisis" and having our computers ready for the millennium problem.

You stated that you really are thinking ahead, both onshore and offshore, and that our computer system will be working. What about our interaction with foreign computer systems? Have you put any thought into that, which may not be responding adequately to the millennium problem?

Ms. MCCLENAGHAN. The Department of State does not have any interconnection with foreign computer systems.

Mrs. MALONEY. None whatsoever?

Ms. MCCLENAGHAN. None whatsoever.

But we are concerned about our officers receiving reports in paper form or off the Internet or other kinds of publications and whether they can discern whether the data as contained in those reports is from compliant systems.

Mrs. MALONEY. Thank you very much.

Ms. MCCLENAGHAN. You are welcome.

Mr. HORN. Let me go to you, General Paige. As we saw in the Gulf war, modern warfare depends on the interconnection of very sophisticated electronics and linking the weapons with command and control systems, which is your bailiwick in the Department of Defense.

I am curious if weapons systems are at risk of malfunctioning because of bad data coming from command and control systems which are not compliant. What is the worst case you have identified with such a malfunction?

Ltg. PAIGE. I would have to give that some thought, but right offhand, I would say the most significant system today that is not compliant is GPS, that it will have more impact than anything else. Yet I have no doubt that GPS will be ready, along with all the other weapons systems and command and control systems in the Department of Defense.

Mr. HORN. What is the nature of the problem with the GPS system? That seems such a simple thing; I wouldn't see how the year 2000 is connected other than in a maintenance schedule.

Ltg. PAIGE. I have Mr. James from Air Force. Maybe he can explain that.

Mr. JAMES. Sir, the problem as I understand it——

Mr. HORN. Could I just swear you in quickly.

[Witness sworn.]

Mr. HORN. Proceed.

Mr. JAMES. I'm Bill James from the Office of——

Mr. HORN. Why don't you use a microphone, too, if you can get through that phalanx.

Ltg. PAIGE. If you prefer, I will give you a followup, a written answer to the question.

Mr. HORN. OK. But could you respond orally, though, at this point?

Mr. JAMES. Yes, sir.

Quickly, the problem, as I understand it, is that the satellite itself is not at issue; it is the ground station handling of the signals

and that the software and the ground station, all that will be fixed in time.

We'll followup with the specific information for you.

Mr. HORN. Please, if you would.

[The information referred to follows:]

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There are three aspects to the Global Positioning System (GPS) Year 2000 problem, corresponding to the 3 GPS segments: space, control, and user.

Space Segment: The Space segment consists of the 24 operational satellites in six orbital planes plus some associated ground equipment. The Year 2000 problems within the space segment are in the Bus Ground Support Equipment vehicle checkout stations and in the Boeing Mission Operation Support Center (MOSC). The software to correct the Year 2000 problem in the Bus Ground Support Equipment vehicle checkout stations already exists and will be installed during routine system maintenance. The Year 2000 problem in the MOSC lies predominantly in the Commercial Off-the-Shelf products that drive the MOSC. The MOSC will be replaced by the Integrated Mission Operation Support Center (IMOSC). The IMOSC is scheduled to be finished in December 1999 but the Joint Program Office (JPO) is working to advance this scheduled completion date by at least six months, to June 1999.

Control Segment: The Control Segment (or Ground Segment) consists of six monitor stations, four ground antennas, and a master control station. The Year 2000-impacted software in the Control Segment is the software that generates the uplink code to the satellites. It was written in the 1970's and uses only 2-digit years. The original plan was to include Year 2000 compliance in the modernization of the Control Segment (the Architecture Evolutionary Plan, or AEP); however, due to schedule delays, the AEP will not be delivered until late 1999, with operations beginning in the third quarter of FY 2000. As a result, the JPO has decided to renovate the existing legacy code for the Control Segment. This is expected to cost between $3.5M and $7.0M. The task order for detailed code assessment will be awarded soon, and will be complete in late 1997; code renovation will start after that date. In the meantime, the GPS JPO is attempting to incrementally integrate millennium modifications as part of normal software maintenance releases.

User Segment: The User Segment does not have a Year 2000 problem. However, a clock overflow problem, called the "Z-count rollover" is sometimes erroneously labeled as a Year 2000 problem. This clock rollover occurs every 1024 weeks, with the first rollover scheduled to occur in August 1999. The User Segment consists of the antennas and receiver-processors that provide positioning, velocity, and precise timing to the user--examples include handheld receivers and shipboard receivers. Despite the publication of a GPS specification, some receiver manufacturers did not account for the Z-count rollover in the satellite clock. The GPS JPO is currently testing DoD contracted receivers for Z-count rollover problems. Some affected receivers can be manually reset, or if they have flash memory or removable Programmable Read Only Memory (PROM), they can be reset to accommodate the rollover. Those that cannot be reset must be replaced.

Committee on Government Reform and Oversight
Hearing on Will Federal Government Computers be Ready for the Year 2000
Held February 24, 1997
Insert of Mr. Emmett Paige, Department of Defense

Mr. HORN. In fact, to all of you, there will be questions, if you don't mind, that we will send down to you. We would appreciate your usual cooperation in giving us an answer. We will put them in the record at this point or where the relevant testimony is on that problem.

Does any member of the committee have any further questions? If not, I thank you very much.

[The information referred to follows:]

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Secretary

Washington, D.C. 20201

APR - 3 1997

The Honorable Stephen Horn
Chairman
Subcommittee on Government Management,
Information and Technology
Committee on Government Reform and Oversight
United States House of Representatives
Washington, D.C. 20515-6143

Dear Mr. Chairman:

We appreciate the opportunity to present the activities undertaken by the Department of Health and Human Services (HHS) to ensure Year 2000 (Y2K) data compliance. In response to questions posed during my testimony on February 24, 1997, I am enclosing a report on the critical systems of the Health Care Financing Administration (HCFA) and the Center for Disease Control (CDC), and the activities of the Food and Drug Administration (FDA) and the National Institutes of Health (NIH) related to biological equipment.

If you would like to discuss any of these issues or the Department's progress since my testimony, please contact the Deputy CIO, Deputy Assistant Secretary for Information Resources Management, Dr. Neil J. Stillman, at 202-690-6162.

Please be advised that I am sending a letter similar to this one to Mrs. Maloney.

Sincerely,

John J. Callahan
Assistant Secretary for
Management and Budget

Enclosure

Response to Questions Posed by Subcommittee on Government Management, Information and Technology Concerning the HHS Y2K Activities

PRIORITIZATION OF CRITICAL SYSTEMS

On page 80 of the testimony of February 24, 1997, Mrs. Maloney asked about the prioritization of information technology systems. Mr. Callahan informed the Subcommittee that all of the HHS Operating Divisions (OPDIVs) would have their systems prioritized by the end of March, 1997 and that HHS would provide the prioritized listings for the two most progressive OPDIVs, HCFA and CDC (see attachments A and B).

As part of the Y2K Assessment Phase, all the HHS OPDIVs have prioritized their major systems based on high, medium, and low criticality, and determined their course of action, such as renovate, replace, or discard. The exceptions are the Agency for Health Care Policy and Research (AHCPR), and the Office of the Secretary (OS), including the Office of the Inspector General (OIG), which have no highly critical systems that must be converted. In total, 36% of the Department's systems are of high criticality, 27% are of medium criticality, and 36% are of low criticality. Of the highly critical systems, 14% are already compliant. For the remainder, 64% will be reengineered/modified, 18% will be replaced, 3% will be new (and therefore compliant), and 1% will be retired.

Those OPDIVs having the most highly critical systems are the National Institutes of Health (NIH), the Centers for Disease Control (CDC), the Food and Drug Administration (FDA), the Administration for Children and Families (ACF), the Health Care Financing Administration (HCFA), and the Indian Health Service (IHS). Pursuant to your question concerning the prioritization of systems for HCFA and CDC, a synopsis of their systems follows.

- **The Health Care Financing Administration**

  HCFA has evaluated each of its internal application systems in the following terms: risk to the business based on how soon the Year 2000 problems will appear (e.g., in years prior to, during, or after the millennium); how mission-critical the application system is to the business; and how complicated and time consuming the application will be to fix.

  Based on an overall score, HCFA has rated each of the 69 systems needing conversion into high (16), medium (29), or low (24) criticality and prioritized them accordingly. Each system has also been evaluated to determine the appropriate conversion strategy. Among those systems having the highest criticality are the following: Group Health Plan Automated Plan Payment,

Clinical Laboratory Improvement Act, Financial Accounting Control, Group Health Plan, HCFA Employee Information Resources, the Medicare Actuary Data, Medicaid Drug Rebate Initiative, Medicaid Statistical Information, Plan Information Control, Provider Overpayment Recovery, PPS Pricing Software for Inpatient Stays, Provider Statistical and Reimbursement, Custom Systems Routines, and the Supplemental Medical Insurance Premium Accounting, Collection, and Enrollment.

A comprehensive systems listing for HCFA may be found at Attachment A.

- **The Centers for Disease Control**

The Centers for Disease Control (CDC) has prioritized its 230 systems by high (61), medium (124), and low (45) criticality; chronology (year in which action to be accomplished takes place); compliance (whether compliant or date of anticipated compliance); type (administrative/management or mission/science); and size (lines of code). Over a dozen of those systems identified as highly critical are already compliant, including CDC's Wide-ranging On-line Data for Epidemiologic Research (WONDER), the National Health Care Survey, and the Public Health Laboratory Information System. Among the others to be made compliant are the National Vital Statistics Program, the HIV/AIDS Reporting System, the Tuberculosis Information Management System, the Financial Accounting System, and others.

A comprehensive systems listing for CDC may be found at Attachment B.

REGULATION OF BIOMEDICAL EQUIPMENT USED BY THE PUBLIC PLANS FOR AN INVENTORY OF MEDICAL/LABORATORY EQUIPMENT

On page 93 of the testimony of February 24, Mr. Horn asked about the impact of the Y2K problem on biological equipment.

Mr. Callahan informed Mr. Horn that the critical HHS agencies, FDA and NIH, have plans vis-a-vis their laboratory equipment, which would be provided to the Subcommittee. He also advised Mr. Horn that HHS would provide an inventory of the equipment in the labs and clinics.

- **The Food and Drug Administration**

FDA's Chief Information Officer (CIO) is responsibile for the planning, management, and oversight of the Agency's Y2K conversion effort. This effort includes the development, management, and evaluation of an FDA-wide action plan for dealing with devices owned and/or managed by FDA that are not normally considered information technology, but do have an identifiable computer software or hardware component, such as biological equipment (see Appendix C for a listing of such equipment), and elevators. In that capacity, the FDA CIO views his role in the issue of biomedical devices as lead technical consultant, working in close collaboration with Agency leads from programmatic, regulatory, compliance and legislative areas in developing the appropriate strategy and response by the Agency. The Center/Office Directors maintain direct responsibility for implementing any necessary corrective action.

Action Plan. FDA has developed the following high level plan for dealing with the Y2K impact on the biological equipment FDA owns and regulates. The Action Plan has two steps. Step 1 concentrates on bringing together all responsible parties to ensure all aspects of the issue are addressed. Step 2 is the actual development and execution of an implementation plan. The Implementation Plan has two phases, with Phase 1 focusing on the internal aspect of the issue and Phase 2 focusing on the impact on industry and the public.

Step 1 - Convene the appropriate stakeholders (e.g., technical, legislative, programmatic, regulatory interests, private sector) for a meeting to discuss strategy, responsibility and resources in the April/May time frame.

Step 2 - Initiate process to develop appropriate implementation plans.

Phase 1 - How does FDA plan to address the impact of the Y2K date change on its medical diagnostic and laboratory equipment?	Phase 2 - How does FDA plan to address the impact of the Y2K date change on the medical diagnostic and laboratory equipment it regulates to ensure the public is not vulnerable?
Develop a detailed inventory of medical diagnostic and laboratory equipment owned and/or managed by the Agency within 30 days of Step 1	Within 30 days after Step 1 is completed, develop an appropriate action plan, including initial schedule/cost estimates. Issue: Until FDA determines the nature of its response, (i.e., regulatory or advisory), detailing Phase 2 will be difficult. (For example, a regulatory response would require following the normal process and time frame for establishing a regulation.) Step 1 will be key in making this determination.
Assess inventoried equipment for Year 2000 impact within 60 days of Step 1	
Develop Implementation Plan to convert or replace non-compliant equipment, including cost and schedule estimates, within 90 days of Step 1	
Implement plan within 120 days of Step 1	

Regulations and Standards. The Action Plan also focuses on addressing the regulatory facet of the Year 2000 date change issue. The key part to addressing this aspect will be bringing together the necessary organizational components, such as regulatory, programmatic, legal and technical, in order to arrive at a consistent Agency-wide approach. Examples of efforts already underway are listed below.

- The Center for Biologics Evaluation and Research (CBER) regulation of software used by Blood Banks. CBER's current Good Management Practices (GMP) review already includes asking firms how they plan to accommodate the date change issue.

- CBER participation on the International Society for Blood Transfusion Technical Committee whose goal is to assure that its bar code standard is Year 2000 compliant.

- The Center for Drug Evaluation and Research (CDRH) scheduled discussions within its organization to address this issue and the best possible way to communicate to Industry about it. The Center's intent is to have Industry certify compliance, with the provisions of the Medical Device Amendments to the Food, Drug and Cosmetics Act and CDRH's own GMP regulations providing the mechanisms for certification.

FDA Inventory and Assessment. The FDA maintains an agency-wide property inventory data base that includes medical diagnostic and laboratory equipment. Since this data base is quite broad in scope, each Center/Office was requested to submit an inventory consisting of only medical diagnostic and laboratory equipment. They were also asked to indicate whether they had performed an assessment and, if so, state the outcome of that assessment. However, not every Center had sufficient resources to do this in the time allotted. Consequently, the first step in Phase 1 of the Implementation Plan will be the completion of this requirement.

FDA has performed a partial inventory of its laboratory and medical equipment, which is included in Attachment C.

- **The National Institutes of Health**

NIH is taking a comprehensive approach to addressing Y2K issues. The CIO has initiated efforts in the information technology arena, including developing an action plan to ensure that medical and laboratory equipment are Y2K compliant. This planning effort will be coordinated with the Joint Commission on Accreditation of Healthcare Organizations in the fourth quarter of FY 1997.

The action plan consists of the following components:

- establishing a subcommittee of the NIH Year 2000 Work Group, composed of members from the affected Institutes/Centers/Divisions (ICDs);

- developing a detailed inventory of medical diagnostic and laboratory equipment; and

- assessing inventoried equipment for Year 2000 impact.

The inventory will include:

  -- coordinating with the FDA, other agencies, and manufacturers to identify Year 2000 compliance status of equipment, and sharing this information;

  -- using advisory or regulatory information from FDA on equipment it regulates;

  -- using vendor information from other agencies such as the Department of Defense (DOD) and Veterans Administration (VA), if available, that use equipment similar to NIH's equipment; and

- developing an implementation plan to convert or replace non-compliant equipment, if necessary.

Year 2000 Conversion - Internal Application System Ranked Listing

Active Acronym	Name	Business Cycle	Business Importance	Technical Complexity	Overall Risk	Conversion Strategy
AAPCC	Average Adjusted Per Capita Cost System	High	High	High	**High**	Modify
APPS	GHP Automated Plan Payment System	High	High	Medium	**High**	Replace
CQAS	Carrier Quality Assurance System	High	Low	High	**High**	Modify
FACS	Financial Accounting Control System	High	High	Medium	**High**	Modify
GHP	Group Health Plan System	High	High	Medium	**High**	Replace
HEIRS	HCFA Employee Information Resources System	High	Medium	Medium	**High**	Modify
MADS	Medicare Actuarial Data System	High	Medium	Medium	**High**	Modify
MBES	Medicaid Budget and Expenditure System	High	High	Medium	**High**	Modify
MDRI	Medicaid Drug Rebate Initiative System	High	Medium	Low	**High**	Modify
MSIS	Medicaid Statistical Info System	High	Low	Medium	**High**	Modify
OSCAR	Online Survey Certification and Reporting System	High	High	Low	**High**	Modify
PICS	Plan Information Control System	High	High	Medium	**High**	Replace
PORS	Provider Overpayment Recovery System	High	Medium	Medium	**High**	Replace
PRICER	PPS Pricing Software for Inpatient Stays System	Medium	Medium	Medium	**High**	Modify
SPACE	SMI Premium Accounting, Collection and Enrollment System	High	High	Medium	**High**	Replace
SYSTEM	Custom System Routines	High	High	High	**High**	Modify
ATARS	Audits Tracking and Reporting System	High	Low	Low	**Medium**	Modify
BAAADS	Budget's Apportions Allotments Allowances Database System	Medium	Low	Medium	**Medium**	Modify
BITS	Beneficiary Inquiry Tracking System	High	Low	Medium	**Medium**	Replace
CATCS	Correspondence and Assignment Tracking Control System	High	Low	Medium	**Medium**	Replace
CROWD	Contractor Reporting of Operational and Workload Data System	High	Low	High	**Medium**	Modify
CWFMQA	Common Working File Medicare Quality Assurance System	High	High	Medium	**Medium**	Replace
DNMNTR	Denominator System	Medium	Low	High	**Medium**	Modify
DSAF	Decision Support Access Facility System	Low	High	High	**Medium**	Compliant
ESTS	Enrollment Statistical Tabulation System	Medium	Low	High	**Medium**	Modify
HCRIS	Health Care Provider Cost Report Information System	High	Low	Medium	**Medium**	Modify
MBPRP	Monthly Bill and Payment Records Processing System	Medium	Low	Medium	**Medium**	Modify
MEDB	Manage Enrollment Database System	Low	High	Medium	**Medium**	Modify
MEDPAR	Medicare Provider Analysis and Review System	Medium	Medium	Medium	**Medium**	Modify
PARTS	Mistaken Payment Recovery Tracking System	High	Low	Medium	**Medium**	Modify
OSA	FDA Mammography Database	Medium	Medium	Low	**Medium**	Modify
RS	Medical Review System	Medium	Low	Low	**Medium**	Replace

MVPS	Medicare Volume Performance	Medium	Medium	Low	Medium	Modify
NCHBPL	National Claims History Beneficiary Program Liability File System	Medium	Low	High	Medium	Modify
NCHSUM	NCH Summary Process	Medium	Low	Medium	Medium	Modify
NEARLINE	NCH Nearline Update and Maintenance System	Low	Medium	Medium	Medium	Modify
POCI	Physician Ownership/Compensation Interest System	Low	Low	High	Medium	Replace
PPS	Propsective Payment System	Low	Medium	Medium	Medium	Modify
PPSM	Printing and Paper Stock Management System	High	Low	High	Medium	Replace
PSOR	Physician and Supplier Overpayment Recovery System	High	Medium	Medium	Medium	Replace
PSRS	Provider Statistical and Reimbursement System	Medium	Low	Low	Medium	Replace
RECONS	Reconsideration System	Medium	Low	Medium	Medium	Replace
RMS	Record Management System	High	Low	Medium	Medium	Modify
RTC	Reports to Congress	High	Low	Medium	Medium	Modify
SMRF	State Medicaid Research Files System	Medium	Low	Medium	Medium	Modify
WI	Wage Index System	Medium	Medium	High	Medium	Modify
APS	Annual Person Summary System	Low	Low	Medium	Low	Modify
BESS	Part B Medicare Extract and Summary System	Low	Medium	Medium	Low	Modify
CAFM	Contractor Administrative Budget and Financial Management System	Low	Low	High	Low	Modify
CASR	Contractor Audit and Settlement Reporting System	Low	Low	Medium	Low	Modify
CAST_BEST	Carrier Beneficiary Alpha/State System	Low	Low	Low	Low	Compliant
CDS	Chain Directory System	Low	Medium	Medium	Low	Replace
CHDS	National Charge Distribution System	Low	Low	Medium	Low	Compliant
CLFS	Clinical Laboratory Fee Schedule	Low	Medium	High	Low	Modify
CMHS	Continuous Medicare History Sample System	Medium	Low	Medium	Low	Modify
CRTS	Cuff Records Tracking System	Low	Low	Low	Low	Replace
DB	Enrollment Direct Billing System (EDBS)	Low	High	Medium	Low	Modify
DMEFS	Durable Medical Equipment Fee Schedule	Low	Medium	Medium	Low	Modify
DRAFT	Dictionary/Repository Access Facility and Tools System	Low	Low	High	Low	Compliant
EDBO	Online Functions of the Enrollment Database	Low	High	Medium	Low	Compliant
ESRDBF	End Stage Renal Disease Beneficiary File System	Low	High	Medium	Low	Compliant
FARA	Federal Acquisitions Regulation Automated System	Low	Low	Low	Low	Compliant
FID	Fraud Investigation Database System	Low	Low	Medium	Low	Compliant
FTAPE	Foreign Tape System	Low	Medium	Medium	Low	Compliant
FULS	Federal Upper Limits System	Low	Medium	Medium	Low	Modify
GMATS	Grants Management and Tracking System	Low	Low	Medium	Low	Modify
GROUPER	GROUPER	Low	Medium	Medium	Low	Compliant
HCIS	HCFA Customer Information System	Low	Medium	Medium	Low	Compliant

HISKEW	Health Insurance Skeleton Write-off System	Low	Low	Medium	Low	Compliant
HOPS	HCFA On-line Property System	Low	Low	Medium	Low	Compliant
IDE	Investigational Device Exemptions System	Low	Low	Medium	Low	Compliant
IPP	Integrated Planning Process System	Low	Low	High	Low	Compliant
IRIS	Interns and Residents Information System	Low	Low	Low	Low	Modify
MADRS	Medicare Automated Data Retrieval System	Low	Low	Medium	Low	Compliant
MADS2	Medicare Actuarial Data System	Low	Low	Medium	Low	Modify
MANRLINE	Menu-Driven Access to the 100% Near-Line Claims File System	Low	Low	Medium	Low	Modify
MFSR	Medicare Focused Medical Review System	Low	Low	Medium	Low	Compliant
NCHPR	National Claims History Processing Reports System	Low	Low	Medium	Low	Replace
NCHSTS	National Claims History Statistical Tabulation System	Low	Low	Medium	Low	Replace
PACEMKR	Pacemaker System	Low	Low	Medium	Low	Compliant
PARKING	HCFA Parking System	Low	Low	Medium	Low	Compliant
PPRMS	Physician Payment Review Monitoring System	Low	Low	High	Low	Modify
PRI	Procurement Request Information System	Low	Low	Medium	Low	Compliant
PSPRICE	Physician Fee Schedule System	Low	High	Medium	Low	Modify
RCCS	Revenue Center Code System	Low	Low	Medium	Low	Compliant
REGTRK	Regulation Tracking System	Low	Low	High	Low	Replace
SADMERC	Statistical Analysis DME Regional Carrier Reports System	Low	Low	Medium	Low	Compliant
SPDATA	State Profile Data System	Low	Low	Low	Low	Replace
SRMS	Statistical Report (HCFA-2082) on Medicaid Services System	Low	Low	Medium	Low	Modify
TAIMS	Time and Attendance Information Management System	Low	Medium	Medium	Low	Compliant
UPIN	Unique Physician Identification Number System	Low	Low	Low	Low	Compliant
VLTS	Voluntary Leave Transfer System	Low	Low	Medium	Low	Compliant
WFE	Weekly Front-end Bill and Payment Records Processing System	Low	Low	Medium	Low	Modify
WIS	Warehouse Inventory System	Low	Low	Low	Low	Modify
WORKGP	Work Group Membership Tracking System	Low	Low	Medium	Low	Compliant
In Development						
Acronym	**Name**	**Business Cycle**	**Business Importance**	**Technical Complexity**	**Overall Risk**	**Conversion Strategy**
BUCS	Budget	Low	Medium	Medium	Low	Compliant
CMPTS	Civil Monetary Penalty Tracking System	Low	Low	Medium	Low	Compliant
HTS	HCFA Travel System	Low	Low	High	Low	Compliant

MANRLITE	Access to the 100% Near-Line Claims File System by HICAN	Low	Low	Low	Low	Compliant
MPRS	Medical Policy Retrieval System	Low	Low	Low	Low	Compliant
MSPLS	Medicare Secondary Payer Litigation Support System	Low	Low	Low	Low	Compliant
NPS	National Provider System	Low	High	Low	Low	Compliant
PID	Payer ID System	Low	Low	Medium	Low	Compliant
RCP	Reasonable Charge Pricing	Low	Medium	Medium	Low	Compliant
WKFL	Workflow (Customer Inquiry System)	Low	Low	Medium	Low	Compliant
Obsolete						
Acronym	**Name**	**Business Cycle**	**Business Importance**	**Technical Complexity**	**Overall Risk**	**Conversion Strategy**
ACMP	Automated Civil Monetary Penalty System					Retire
ACSA	Automated Cost/Staff Allocation System					Retire
BDMSS	Bureau of Data Management and Strategy Staffing System					Retire
BPRS	Budget Pressures Reporting System					Retire
CARPHONE	Telephone Locator and Parking System					Retire
CSTP	Carrier System Testing Project System					Retire
EPMS	Employee Performance Management System					Retire
ESRDFF	End Stage Renal Disease Beneficiary Facility File					Retire
FIS	Furniture Inventory System					Retire
GNA	Grants Notice of Agreement System					Retire
IFMR	Intermediary Focused Medical Review System					Retire
LSS	Litigation Support System					Retire
PSST	Person Summary Statistical Tabulation System					Retire
PTS	Peer Review Organization Tracking System					Retire
REBUNDLE	PartB Billing Rebundle System					Retire
SOBER	Separate Operation for Billing, Entitlement and Remittance System					Retire
SOBOMS	SOBER Operations Monitoring System					Retire
TAS	Time and Attendance System					Retire
TRS	Teleconference Reservation System					Retire
VLS	Voucher Log System					Retire

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CDC/ATSDR Inventory of Major Information Systems
Sorted alphabetically by CIO
31-Jan-97
UD = New system under development, Y2K compliant when implemented

	Criticality			System Chronology				Year 2000 Compliance		System Type		System Size
System Name	High	Moderate	Low	YR to be Replaced	YR to be Reengineered	YR to be Modified	YR to be Retired	Currently Y2K Compliant	When Y2K Compliant	Admin/ Mgmt	Mission/ Science	Lines of Code
	83	102	45	57	29	38	3	57	121	90	140	11,940,098
Personnel Reporting System	1			1996				1	Dec-96	1		20,000
FTE Tracking System	1			1996				1	Oct-96	1		1,000
Personnel Reporting Systems	1			1996				1	Oct-96	1		20,000
Automated Resource Management System	1			1996				1	Oct-96	1		30,000
Management Tracking System	1			1996				1		1		25,000
CDC Wide-ranging ON-Line Data for Epidemiologic Research	1					1998		1	Jun-98		1	600,000
Large Link Database Project	1					1996		1			1	500,000
Time and Attendance	1							1	Apr-96	1		129,322
National Health Care Survey	1							1			1	25,000
Survey of Childbearing Women	1							1			1	3,000
HIV/AIDS Collaboration, Bangkok, Thailand	1							1			1	60,000
Public Health Laboratory Information System	1							1			1	67,000
National Traumatic Occupational Fatalities Surveillance System	1							1			1	800
Contracts Tracking System	1			UD					UD	1		6,000
1994 National Employer Health Insurance Survey	1			UD					UD		1	35,000
Automated Specimen Tracking and Retrieval Operations	1			UD					UD		1	35,000
National Health and Nutrition Examination Survey Integrated Survey Information	1			UD					Jun-98		1	95,000
Federalized Human Resources for the 21st century	1			UD					Oct-97	1		95,000
Tuberculosis Information Management System	1			UD					Jan-97		1	114,000
Managing/Accounting Credit Card System	1			UD					Oct-96	1		2,000
Biologic Reference Reagent Inventory & Ordering System	1			1999					Jan-99	1		5,000
Cell Culture & Media Inventory	1			1998					Dec-98		1	4,000
National Immunization Survey (State and Local Area Immunization Coverage)	1			1998					Jan-98		1	292,500
Dengue Laboratory Sample Data Base	1			1998					Jan-98		1	10,000
CDC Financial Reporting System	1			1997					Dec-97	1		365,906
National Health Interview Survey	1			1997					Nov-97		1	40,000
Improved Management of Personnel Administration through Computer Technology	1			1997					Oct-97	1		95,000
Personnel Action Tracking System	1			1997					Oct-97	1		16,300
Epi Info	1			1997					Sep-97		1	300,000
Executive Controlled Correspondence	1			1997					Aug-97	1		35,000
Metropolitan Atlanta Congenital Defects Program	1			1997					Mar-97		1	20,000
CRADA System Biological Material Transfer	1			1997					Jan-97	1		6,606
HIV/AIDS Reporting System	1				1998				Dec-98		1	120,000
Financial Accounting System	1				1998				Jun-98	1		745,000
NCHS Automated Tracking System	1				1998				Jan-98		1	10,000
National Electronic Telecommunications System for Surveillance	1				1997				Dec-97		1	73,847
NATIONAL VITAL STATISTICS SYSTEM	1				1997				Dec-97		1	20,000
NCHS Management Information System	1				1997				Dec-97	1		250,000
CDC WWW / FTP server	1				1997				Dec-97		1	35,000
Administrative Budgeting System	1				1997				Oct-97	1		15,000
STD Management Information System	1				1997				May-97		1	50,000
Hospital Case Investigation	1					1998			Dec-98		1	6,000
National Coal Workers' Xray Surveillance Program	1					1998			Dec-98		1	30,000
CDC Training Request System	1					1997			Dec-98	1		51,799

HIV Counseling and Testing System	1					1997				Dec-97		1	25,000
AUTOMATED RECEIVING SYSTEM	1					1997				Dec-97	1		46,979
WAREHOUSE ORDERING	1					1997				Dec-97	1		49,200
TRANSFER ADJUSTMENT VOUCHER	1					1997				Dec-97	1		7,420
ESO AUTOCAD DRAWING SYSTEM	1					1997				Feb-97	1		10,000
VACCINES FOR CHILDREN DATA SYSTEM	1					1996				Dec-98		1	82,000
Laboratory Information Tracking System	1					1998				Oct-97		1	87,000
Metropolitan Atlanta Developmental Disabilities Surveillance Program	1									Jan-99		1	10,000
Alien Information System	1						1998			Oct-98		1	40,000
CDC Directory	1									Dec-97	1		82,067
CDC TRAVEL System	1									Dec-97	1		320,000
MAIL STOP Activity	1									Dec-97	1		5,550
ADMINISTRATIVE CODES ACTIVITY	1									Dec-97	1		4,012
CDC PRIVATE FTP SERVER	1				1996							1	35,000
NCID/Drug Service inventory, safety and efficacy response database	1					1998						1	6,000
Diagnostic sample database	1					1996						1	95,000
Freedom of Information Act Tracking System	1					1996					1		5,000
International Travel Database	1										1		6,000
Behavioral Risk Factor Surveillance System	1											1	35,000
CARETRAC	1						1998					1	20,000
Treatment of lead exposed Children	1											1	1,000
Vital Statistics Cooperative Program File Management System	1						1997					1	22,000
National Survey of Family Growth	1											1	16,000
Project RETRO-CI Laboratory System	1											1	30,000
Inventory System	1										1		6,000
Laboratory Operations Information System	1											1	25,000
National Nosocomial Infections Surveillance System	1											1	20,000
Export Tracking and Document System	1										1		35,000
CDC Pathology Report Information	1											1	6,000
Biotechnology Core Facility Molecular Modeling Facility	1											1	95,000
Biotechnology Core Facility Biological Sequence Analysis Facility	1											1	95,000
CELL CULTURE INVENTORY SYSTEM	1											1	6,000
Glassware ordering system	1										1		3,000
AIDS Inventory	1											1	38,512
EXPORT LICENSE SYSTEM	1										1		35,000
NIOSH Certification Data Bases	1											1	1,500
Document Information Directory System	1										1		30,000
Polio surveillance	1											1	100
Visiting Fellows/EIS Officers Payroll System	1										1		5,855
Women's Health Inventory System		1		UD				1		Jun-96		1	10,000
Wang Integrated Imaging System		1		1997				1		Jan-97		1	35,000
CDC Drug Service		1		1997				1		Jan-97		1	3,000
Inventory Tracking System		1		1996				1		Dec-96	1		15,000
121 Cities Mortality Reporting System		1			1998			1		Dec-98		1	13,071
HIV Family of Surveys		1			1998			1				1	75,000
HAZDAT		1			1997			1		Jan-97		1	500,000
Cost Recovery System		1			1997			1		Jan-97	1		160,000
Injury Mortality Atlas, U.S. 1984 - 1992		1			0			1				1	35,000
Project Management Information System		1				1997		1		Jun-97	1		50,000
National Death Index		1				1997		1		Jan-97		1	10,000
FEDERAL FACILITIES INFORMATION MANAGEMENT SYSTEM		1				1997		1				1	410,000
NHANES I Epidemiologic Followup Study		1				1997		1				1	10,000
Standard Occupational and Industry Coding Software		1				1997		1				1	25,000
Manuscript Tracking System		1				1998		1		Dec-98	1		10,000
Geographic Information System		1						1		Jun-98		1	95,000

Tuskegee Health Benefits Program		1								1	May-96		1			35,000
Mortality Studies Database System		1								1	Apr-96			1		35,000
CDC Request		1								1	Feb-96			1		6,000
Labor Distribution System		1								1	Oct-95		1			95,000
CDC Quest		1								1	Sep-95			1		95,000
National Mortality Followback Survey		1								1	Sep-93			1		6,000
Model Performance Evaluation Program TLI- HIV- HTLV- RETRO VIRAL- TB		1								1	May-89			1		250,000
National Exposure Registry		1								1				1		20,000
Hazardous Waste Worker Surveillance System		1								1				1		27,948
Hazardous Substances Emergency Event Surveillance		1								1				1		17,000
EDITS System		1								1				1		80,000
Eosinophilia-myalgia surveillance system		1								1				1		6,000
Seroincidence Studies / Seroincidence Transfer Program		1								1				1		50,000
Sentinel Hospitals Study		1								1				1		2,000
AIDS Immunology Laboratory Data System		1								1				1		1,000
WHO Collaborating Laboratories - United States		1								1				1		5,000
National Surveillance of Dialysis-Associated Diseases		1								1				1		600
Spinal Cord Injuries		1								1				1		6,000
GRANTS MANAGEMENT INFORMATION SYSTEM		1								1			1			70,000
Research Animal Tracking Systems		1		UD		1997					UD			1		98,000
Front-end Access Method		1		UD		1997					Jun-97		1			35,000
Suspense Tracking System		1		UD							UD		1			31,752
Office of Health & Safety Information System		1		UD							UD			1		35,000
Employee Appraisal System		1		1998							Dec-97		1			80,917
SMALL PURCHASE PROCESSING SYSTEM		1		1997							Dec-98		1			91,785
Personnel Tracking System		1		1997							Dec-97		1			4,000
STD SURVEILLANCE/MORBIDITY DATASETS		1		1997							Dec-97			1		150,000
LIFE TABLE ANALYSIS SYSTEM		1		1997							Dec-97			1		10,000
Document Routing		1		1997							Dec-97		1			35,616
Netwatch		1		1997							Dec-97		1			95,000
Inventor		1		1997							Dec-97		1			35,000
Field Services Personnel System		1		1997							Oct-97		1			35,000
CONTRACTS INFORMATION SYSTEM		1		1997							Sep-97		1			90,000
Extramural Funds Tracking System		1		1997							May-97		1			15,000
Mailing List System		1			1999						Dec-99		1			95,000
Perinatal Aids Collaborative Transmission Study		1			1998						Dec-98			1		100,000
Adult Spectrum of Disease		1			1998						Dec-98			1		50,000
Pediatric Spectrum of Disease		1			1998						Dec-98			1		50,000
Supplement to HIV/AIDS Surveillance		1			1998						Dec-98			1		35,000
Epi Map		1			1997						Dec-97			1		100,000
CDC Usenet News server		1			1997						Dec-97			1		35,000
CDC Public Usenet News server		1			1997						Dec-97			1		35,000
Grants Tracking Management System		1			1997						May-97		1			36,000
Leading Cause of Death Reports		1			1997						Feb-97			1		3,000
OEEO Tracking System		1				1998					Mar-98		1			8,000
FORMOHST (modified commercial system)		1				1997					May-97			1		6,000
Regional Information System		1				1997					Mar-97			1		20,000
OMB Tracking System		1									Aug-98		1			9,675
Injury Mortality Reports		1									Dec-97			1		1,000
User Registration System		1									Dec-97		1			8,000
DOOR KEY ACCOUNTING SYSTEM		1									Dec-97		1			9,955
CDC FTE TRACKING		1									Dec-97		1			4,201
CDC List server		1									Dec-97			1		35,000
Software for Expanded Tuberculosis Surveillance		1		1997										1		100,000
Commitment Register System		1			1996								1			1,500

CDC Voice/fax Information Service		1			1996								1	95,000
Life Table Analysis System PC		1				1997							1	25,000
VACCINE ADVERSE EVENT REPORTING SYSTEM		1				1996							1	35,000
Automated Immunization & Medical Surveillance System		1				1996							1	23,000
Statistical Software for Public Health Surveillance		1											1	100,000
International Visitors Database		1										1		6,000
Pregnancy Risk Assessment Monitoring System Tracking software		1											1	60,000
Extramural Programs Management Information System		1										1		35,000
Vessel Sanitation Program & Vessel Diarrheal Illness Log		1											1	200,000
Medical Examiner/Coroner Information Sharing Program		1											1	35,000
National Maternal and Infant Health Survey		1											1	6,000
No identified Risk / Transmission Validation Data System		1											1	20,000
LAN Support Tracking System		1										1		4,000
Software for Surveillance of Tuberculosis Infection in Health Care Workers		1											1	30,000
Publication Inventory System		1										1		10,000
Hepatitis Primate Information System		1											1	50,000
Hepatitis Reference Laboratory Data Management System		1											1	70,000
Animal Resource Management		1											1	158,000
National Occupational Health Survey of Mining		1											1	35,000
Trade name ingredient clarification (1)		1											1	10,000
TRADENAME INGREDIENT CLARIFICATION (2)		1											1	30,000
National Computer Exposure Surgery		1											1	5,000
Fatality Assessment and Control Evaluation		1											1	2,000
NIOSH Technical Information Center		1											1	50,000
Tetanus Surveillance		1											1	100
The National Congenital Rubella Syndrome Registry		1											1	6,000
Identification Badge System		1										1		2,500
Myers-Briggs Tracking System		1										1		5,000
FEDERAL EXPRESS / EDI INTERFACE		1												390
Property Management System		1												8,517
AUTOCAD Telecommunications Data		1										1		5,700
Adult blood Lead Epidemiology and Surveillance Program			1	UD					1				1	6,000
Perinatal Hepatitis B Prevention Program			1	1997					1				1	35,000
Perinatal Hepatitis B Prevention Program			1	1997					1				1	35,000
NCCDPHP Intranet			1						1	Jun-98			1	6,000
National Occupational Health Information System			1						1	Feb-98			1	95,000
National Association of County and City Health Officials 1992/93 National Profile			1						1	May-94				6,000
U.S. Influenza Sentinel Physician Surveillance Network			1						1				1	5,000
Enhanced Surveillance - Perinatal Hepatitis B Prevention Program			1						1				1	35,000
Administrative Systems Knowledge			1						1			1		665
EXTRAMURAL SYSTEM			1	UD						UD		1		33,000
NIOSH Financial Reporting			1	1998						Dec-98		1		7,000
NIOSH Staffing			1	1998						Dec-98		1		7,500
Cost Recovery Tracking System			1	1998						Jan-98		1		500
Grant Application and Reporting System			1	1997						Jun-97		1		35,000
NCCDPHP Clearance Management System			1	1997						May-97		1		10,000
Crime Reporting System			1	1995						Feb-97		1		25,000
National Coal Workers' Autopsy Program			1			1998				Dec-96			1	500
Smoking Attributable Mortality, Morbidity, and Economic Costs			1			1997				Dec-97			1	44,948
Childhood blood lead surveillance system			1			1997				Feb-97		1		38,350
Evaluation Tracking System			1			1996				Mar-98		1		23,000
ATSDR Awards Tracking System			1							UD		1		8,000
Auto Decals			1							Dec-97		1		15,540
Change Control			1							Dec-97		1		9,675
Job Accounting and Reporting System			1							Dec-97		1		23,952

Resource Index			1							Dec-97	1		15,000
Tuberculosis Database System			1	1997								1	50,000
Safety Director (modified commercial system)			1	1997								1	6,000
Printing Requisition Tracking System			1	1996							1		6,000
Private Well Water Survey			1		1996							1	2,000
Biotechnology Core Facility Job Tracking Database			1		1996							1	5,500
Training And Human Resources Management System.			1			1996					1		35,000
Health information Retrieval System			1			1996						1	6,000
Health Impact Surveillance System for Diasters American Red Cross-CDC			1			1996						1	35,000
Arthropod Pooling System			1			1996						1	6,000
DSNEFS DOCUMENT TRACKING SYSTEM			1			1996					1		7,000
FREEDOM OF INFORMATION ACT TRACKING			1								1		9,000
1996 Adult Use of Tobacco Survey			1									1	6,000
National Medical Care Utilization and Expenditure Survey			1									1	95,000
AIDS Public Information Data Set			1									1	8,000
Laboratory Information Management System			1									1	35,000
National Occupational Mortality Surveillance Systems			1									1	10,000
National Occupational Hazard Survey			1									1	50,000
The Registry of Toxic Effects of Chemical Substances			1									1	12,965
Computer Hardware Inventory System			1								1		25,000
Publications Management System			1								1		165,500

Medical Diagnostic & Laboratory Equipment Inventory

TYPE	QUANTITY	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below:			
CDER			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
HPLC High Pressure Liquid Chromatograph	70	L	70			
Mass Spectrometers	3	L	3			
NMR Nuclear Magnetic Resonance	1	L	1			
CE Capillary Electrophoresis	3	L	3			
AAS Atomic Absorption Spectrometer	1	L	1			
GC Gas Chromatograph	4	L	4			
GC/MSD Gas Chromatograph/Mass Spectrometer Detector	5	L	5			
ACAS Adherent Cell Analysis Station	1	L	1			
DNA Sequencer	2	L	2			
Cell Sorter	2	L	2			
Oxford Relaxometer	1	L	1			

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

TYPE	QUANTITY	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below:			
CDER			**Still to be Assessed**	**Year 2000 Compliant**	**Non-Compliant, Requiring Conversion**	**Non-Compliant, To Be Replaced**
FACScan	1	L	1			
Silicon Graphics Molecular Modeling System	1	L	1			
Robotics Station	2	L	2			
RNA Quantification System	2	L	2			
Thermocycler	1	L	1			
Liquid Scintillation Counter	2	L	2			
Gamma Counter	1	L	1			
DNA Synthesizer	1	L	1			
Plate Reader	1	L	1			

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
CFSAN			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
FTNMR	1	L		1		
FTIR	1	L		1		
Mass Spectrometers	3	L		3		
Clinical Analytical	2	L		2		
Spectrophotometers	27	L		27		
HPLC	51	L		51		
GLC	79	L		79		

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
CVM			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
Plate Reader	3	L		3		
Spectrophotometers	2	L		2		
Liquid Chromatographs/ data system	7	L		7		
Chromatography data System	5	L		5		
Photodocumentation Unit	1	L		1		
Mass Spectrometers	4	L		4		
Radiochemical Data System	2	L		2		

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
[redacted]			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
PERKIN ELMER (PE) TURBOCHROM HPLC SYSTEM	3	L		3		
METTLER DL70ES TITRATOR - H1507	1	L		1		
HEWLETT PACKARD (HP) 1090 HPLC, CHEMSTATION	2	L		2		
HP 5890 GC	1	L		1		
PE LAMBDA 2 UV/VIS SPECTOMETER	1	L		1		

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
[redacted]			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
HP8452 UV-Vis	1	L		1		
PE LAMBADA 19	1	L		1		
PE TGA/DSC	1	L		1		
WATERS MILLENIUM 2010	1	L		1		
NICOLET 410 NIR	1	L		1		
HP1050 HPLC	1	L		1		
BRINKMAN PACE SYSTEM	1	L		1		
TSP PC-1000 HPLC SYSTEM	1	L		1		

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
[redacted]			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
NICOLET 510 INFRARED SPECTROPHT OMETER	1	L	1			

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
FORA Baltimore Display Laboratory			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
PE 3100 AA SYSTEM	1	L		1		
PE LAMBDA 6 UV-VIS	1	L		1		
HP 8452A DIODE ARRAY UV-VS	1	L		1		
MATTSON GALAXY SERIES FITR 5000	1	L		1		
SHIMADZU RF 5000 SPECTOFLUROPHOTOMETER	1	L		1		
HP 1050 HPLC	1	L		1		
HP 1100 HPLC	1	L		1		

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
ORA Baltimore District Laboratory			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
HP 6980C	1	L		1		
HP 5890	1	L		1		
1-WATERS QUANTA 4000E	1	L		1		
1-VIDAS	1	L		1		
1-VITEK AUTOMICRO BIC SYSTEM	1	L		1		
1-ATB	1	L		1		

Attachment B

Medical Diagnostic & Laboratory Equipment Inventory

Type	Quantity	Medical Diagnostic or Laboratory? (M or L)	Indicate below the quantity of equipment that matches the appropriate category below			
[redacted]			Still to be Assessed	Year 2000 Compliant	Non-Compliant, Requiring Conversion	Non-Compliant, To Be Replaced
TURBO CHROM 34.2	1	L		1		
HP CHEM STATIONS	2	L				2
UV/VIS SOFTWARE	4	L		4		

Attachment B

Mr. HORN. I am going to ask the General Accounting Office to come back and take your seats, and we will round out this hearing.

Let us know if you have got any problems and we can be of help in prodding a few people in OMB and other places. But my basic understanding with the Director is that it is reprogram money, not new money, so save those pennies at the year spend-out period.

Mr. Willemssen, let me ask if, in listening to the testimony of the Chief Information Officers, do you have some concerns you have gathered from some of that testimony; and, if so, what are they? And is GAO planning any followup efforts that might be affected by that testimony?

Mr. WILLEMSSEN. I think my overriding reaction is the wide degree of variability you see on a readiness scale among the six Departments. Some are way ahead of the game; others are clearly not. And in some cases where they are clearly not, we are talking about a very critical agency. So there is clearly a wide degree of variability.

As I mentioned up front, our approach is going to be, and already has been, to go into those agencies where an impact of a failure on the year 2000 would most affect the general public and evaluate how well the agencies are implementing their programs; and to the extent they are not doing what we think they should, we are going to be reporting that.

We will be reporting out this spring and summer on Veterans Administration, and the Department of Defense. We will probably have some preliminary things to say about the Social Security Administration and possibly the Federal Aviation Administration; and we will also be reporting on an agency you brought up just a few minutes ago, the Health Care Financing Administration and the Medicare Transaction System. We will definitely have a report on that in a few months, and we will be prepared to talk about that in more detail at that time.

Mr. HORN. I suspect there are some agencies perhaps we should have invited today. Based on GAO's analysis of at-risk programs within those agencies, the question would be, do they relate to the year 2000 problem?

Mr. WILLEMSSEN. I guess one other critical one that comes to mind is, obviously, the Internal Revenue Service. The impact on the public could be fairly traumatic with a year 2000 failure there. But, other than that, you have a pretty good cross-section here.

One thing to maybe consider down the road is also bringing in some of the component agencies, who are really closer, hands-on, to what may be actually going on.

Mr. HORN. To what degree will you review the State activities with some of these Federal-State partnerships, HHS, Labor, other agencies that have those relationships that go back 50, 60, 70 years? Should we be looking at that?

Mr. WILLEMSSEN. That is an area of concern.

The major assignment we have recently initiated that will be looking at that is at the Social Security Administration. As you are aware, SSA is considered to be further out front than any other agency; and one of the reasons we wanted to go in there was to see if we could find any lessons learned that could be applied to other agencies.

But there is a critical interface issue there with some of the State systems that we will be closely evaluating, and to the extent we can identify some improvements and corrective actions we will point those out.

Mr. HORN. Does any member of the minority, the ranking member, have any additional questions?

Mrs. MALONEY. Yes, thank you, Mr. Chairman.

First of all, from the testimony we heard earlier from the previous panel, some were well along the road to completing the task and others had quite a long way to go. What incentives can you recommend that we could use to give these agencies to get them moving quicker and more accurately on this problem, those that need to?

Mr. WILLEMSSEN. The best incentive that you can have is to continue having hearings such as these and continually asking the departments and agencies where they are at. In doing that, bring up to them what they said they were going to do several months ago and where are they at today.

Mrs. MALONEY. Earlier I was handing out a grade to one of the agencies. Based on the testimony that you heard, would you grade the agencies on where you think they are?

Mr. WILLEMSSEN. I would be reluctant to do that.

Mr. HORN. Are you a product of the sixties or what? No grades; everybody's at the top of the class?

Mr. WILLEMSSEN. Once we have completed evaluations at specific agencies, I will be more than happy to answer that question.

Mr. HORN. Good. We will bring you in, and you and I can flip if there's a tie. We might have incompletes next time, not just A, B, C, D and F.

Mrs. MALONEY. We will certainly need an early warning system for those that are in a critical situation. How soon do you think you will have before us a developed early warning system?

Mr. WILLEMSSEN. Late this spring and early this summer, we should be in a position to begin sounding warnings on specific agencies. We do not have anything in place and planned yet that is government-wide in nature.

We are a bit reluctant to do that, in view of the fact that OMB is now planning a quarterly reporting system. So we are a bit reluctant to overload too many of the departments and agencies with additional reporting requirements.

We did consider that early on. We are standing pat right now and trying to work with OMB.

Mrs. MALONEY. Mr. Chairman, I think we should get OMB here for their early warning system, then.

I have no further questions. Thank you.

Mr. HORN. Mr. Davis.

Mr. DAVIS OF ILLINOIS. Nothing, thank you.

Mr. HORN. Thank you very much.

And now I would like to conclude the hearing by thanking the staff that helped in the preparation.

Our staff director for the Subcommittee of Government Management, Information, and Technology is J. Russell George, who is right behind me; and to my left, the counsel assigned for this particular area, so you will be hearing from him, and he is safe for

employment for the next 4 years on this problem, is Mark Uncapher, who is counsel to the subcommittee; and Andrea Miller, our clerk, who helped put the hearing together.

And for the minority professional staff, Mark Stephenson; David McMillen; and my own office, David Bartel, the chief of staff; and Matt Phillips, who has handled the communications and press aspects.

We thank, too, our official reporters, Pam Garland and Bill Odom; and, with that, this hearing is adjourned.

[Whereupon, at 12:05 p.m., the subcommittee was adjourned.]