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ENTERPRISE-WIDE STRATEGIES FOR MANAGING INFORMATION RESOURCES AND TECHNOLOGY: LEARNING FROM STATE AND LOCAL GOVERNMENTS

HEARING

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY

OF THE

COMMITTEE ON GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

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ENTERPRISE-WIDE STRATEGIES FOR MANAGING INFORMATION RESOURCES AND TECHNOLOGY: LEARNING FROM STATE AND LOCAL GOVERNMENTS

TUESDAY, APRIL 3, 2001

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:03 a.m., in room 2154, Rayburn House Office Building, Hon. Thomas M. Davis III (chairman of the subcommittee) presiding.

Present: Representatives Thomas Davis of Virginia, Turner, Horn, and Jo Ann Davis of Virginia.

Staff present: Melissa Wojciak, staff director; Victoria Proctor, professional staff member; James DeChene, clerk; Trey Henderson, minority counsel; and Jean Gosa, minority assistant clerk.

Mr. DAVIS OF VIRGINIA. Good morning. Welcome to the Subcommittee on Technology and Procurement Policy's legislative hearing exploring the strategies that State and local governments have considered and implemented to centralize the management of their information resources.

Before I continue, I ask unanimous consent that all Members and witnesses' written opening statements be included in the record. Without objection, so ordered.

I also ask unanimous consent that all articles, exhibits, and extraneous or tabular material referred to be included in the record. Without objection, so ordered.

Last year, the then Subcommittee on Government Management, Information, and Technology chaired by Mr. Horn held a hearing that looked at the merits of establishing a Federal CIO after both I and my colleague, Mr. Turner, each introduced separate legislation to accomplish that goal.

That discussion, chaired by our colleague, Mr. Horn, examined the current state of information resources management in the Federal Government including the use of information technology management principles.

There is no question that information is now driving our economy, our workplace, our classrooms, and our culture. The quintessential symbol of the information age, the Internet, has profoundly impacted just about every corner of the globe, and, although computer technology has been around for decades, the

interconnectivity of our information systems and our communications networks has grown exponentially since the early 1990's.

Clearly, this maturing medium that is the Internet is redefining the relationship between citizens, between businesses, between consumers and businesses, and, not the least of which, between governments and citizens and government.

There is a new expectation in the way that businesses operate. It is now almost unimaginable that an enterprise can succeed without establishing an Internet presence and, in many cases, an electronic method of generating revenue.

Unlike government, we have seen the private sector lead the way in seizing the benefits of electronic commerce, new technologies, and, most importantly, the management of these tools to achieve profitable outcomes. In fact, when you talk to citizens today, they think of the private sector, they think of being able to go to an ATM and sticking in a card and getting out cash, or going and buying gasoline by sticking a card in and not even getting a receipt. But when you think of government what do you think of? You think of chads. You think of the old technologies and the old way of doing things.

Today we are examining the question of how you bring the Federal Government truly into the information age as a result of the benefits that information technology has rendered and Government's ability to manage its information resources.

Just 2 weeks ago, the Gartner Group estimated that through 2020 IT will bring a transformation to government and governing more radically than any changes since the administration of President Franklin D. Roosevelt.

Fortunately, State and local governments are working hard to meet the challenges of transforming their governance approach from a paper-based, stovepipe strategy to an integrated, enterprise-wide management system designed to efficiently improve public service delivery to citizens. But those challenges are varied and many. They involve bringing together strong executive leadership and all vested interests to modernize financial, labor, information technology, and capital management systems. While the information technology is one component, it is ubiquitous, and therefore critical to government's ability to achieve efficiencies and deliver services, especially its ability to meet the expectations of electronic government.

That same Gartner Group report also predicted that through 2004 more than 50 percent of e-government projects worldwide will fail to deliver the service levels its citizens and businesses require. Further, it is estimated that by 2005 OECD governments will provide new means for citizens to participate in activities such as rule and regulation-making, the development of legislation, and judicial action that would affect their own governance.

Many of these complex issues have been or are being tackled by State and local governments, and this is our focus during the next few hours.

In releasing its February 2001, States Management Report Card, the Government Performance Project noted that over the 2-year period since it issued its first report card, that a surprising momentum has taken place. Those States that have achieved little in the

way of management modernization in 1999 were now committed to technological innovation. The project found that States were generally moving in the right direction with management systems improvement, and that States that manage well perform well.

Most States have created chief information officers or their functional equivalent, and that position is oftentimes a Cabinet-level post responsible for overseeing and coordinating all information technology and IRM in the State. Some States—like California, Colorado, Massachusetts, New Mexico—have one officer or commission assigned responsibility for carrying out these functions, while others may rely on two or more divisions to perform those duties. Similarly, there are counties and cities across the Nation that have centralized IRM and/or information technology practices in a chief information officer.

It is my concern—and I would like to take the liberty of saying that it is also Mr. Turner's concern—that the Federal Government is failing to effectively manage its information resources, particularly with regard to the use of technology. For government to manage and perform better, it must integrate information resource management as an integral and valuable component to the success of its mission. Good governance is impossible if those resources are simply seen as a support function that can be isolated in their implementation and oversight.

It is for these reasons that Mr. Turner and I have each shown support of creation of a Federal CIO as a separate entity within the Executive Office of the President. Mr. Turner's bill would have created an Office of Information Technology and the CIO would have acted as a special assistant to the President. That office would have been responsible for providing analysis, leadership, and advice to the President and Federal departments and agencies on Government's use of information technology.

My legislation, the Federal Information Policy Act of 2000, would have consolidated and centralized all IRM powers currently held by OMB in a new Office of Information Policy and also created an Office of Information Security and Technical Protection reporting to the CIO.

But today our hearing is an attempt to gather information from our witnesses about what types of management strategies are being utilized, what factors were considered by each entity in establishing a chief information officer or similar office, how do they address the enterprise-wide issues that have traditionally been dealt with agency-by-agency, and what are the challenges they face. In addition, we'll identify the primary differences between a State and local approach and a Federal approach to more-centralized IT management and what lessons learned at the State and local levels may be applied at the Federal level.

The subcommittee will hear testimony from Dave McClure, the Director of Information Technology Management Issues for the General Accounting Office; Aldona Valicenti, NASIRE's executive president, as well as Kentucky's CIO; my good friend, Don Upson, the Secretary of Technology for the Commonwealth of Virginia;

Charles Gerhards, the Deputy Secretary of Technology for the State of Pennsylvania; David Molchany, the CIO of my home county, Fairfax; and Don Evans, the CIO for Public Technology, Inc. and former CIO of Montgomery County, MD.

[The prepared statement of Hon. Thomas M. Davis follows:]

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Chairman Tom Davis
Subcommittee on Technology and Procurement Policy
Legislative Hearing on

"Enterprise-Wide Strategies for Managing Information Resources and Technology: Learning from State and Local Governments"

April 3, 2001

Good morning and welcome to the Subcommittee on Technology and Procurement Policy's legislative hearing exploring the strategies that state and local governments have considered and implemented to centralize the management of their information resources.

Last year, the then-Subcommittee on Government Management, Information, and Technology held a hearing that looked at the merits of establishing a Federal CIO after both I and my colleague, Mr. Turner, each introduced separate legislation to accomplish that goal. That discussion, chaired by our colleague on this Subcommittee, Mr. Horn, examined the current state of information resources management (IRM) in the Federal Government, including the use of information technology (IT) management principles. The hearing highlighted the fact that while individual agencies each have day-to-day responsibilities over their information resources, including IT, it is the Office of Management and Budget (OMB) that has the statutory powers under the Paperwork Reduction Act, the Clinger-Cohen Act, the Computer Security Act, and the Government Paperwork Elimination Act, among others, to develop and maintain a Government-wide strategic plan for information resources management, and to protect the integrity of Federal information systems.

There is no question that information is now driving our economy, our workplace, our classroom, and our culture. The quintessential symbol of the Information Age–the Internet–has profoundly impacted just about every corner of the globe. And although computing technology has been around for decades, the interconnectivity of our information systems and our communication networks has grown exponentially since the early 1990s.

Clearly, this maturing medium that is the Internet is redefining the relationships between citizens, between businesses, between consumers and businesses, and not the least

of which, between governments, and citizens and government. There is a new expectation in the way that businesses operate. It is now almost unimaginable that an enterprise can succeed without establishing an Internet presence and in many cases, an electronic method of generating revenue. Unlike government, we have seen the private sector lead the way in seizing the benefits of electronic commerce, new technologies, and most importantly, the management of those tools, to achieve profitable outcomes.

Today, we are examining the question of how you bring the Federal government truly into the Information Age as a result of the benefits that information technology has rendered on government's ability to manage its information resources. Just two weeks ago, the Gartner Group estimated that "[t]hrough 2020, IT will bring a transformation to government and governing more radical than any changes since the administration of President Franklin D. Roosevelt."

Fortunately, State and local governments are working hard to meet the challenges of transforming their governance approach from a paper-based, stovepipe strategy to an integrated, enterprise-wide management system designed to efficiently improve public service delivery to citizens.

But those challenges are varied and many. They involve bringing together strong executive leadership and all vested interests to modernize financial, labor, information technology, and capital managements systems. While information technology is one component, it is ubiquitous and therefore critical to government's ability to achieve efficiencies and deliver services, especially its ability to meet the expectations of electronic government. That same Gartner Group report also predicted that through 2004, more than 50 percent of e-government projects worldwide will fail to deliver the service levels that citizens and businesses require. Further, it estimated that by 2005, OECD governments will provide new means for citizens to participate in activities such as rule- and regulation-making, the development of legislation, and judicial action that affect their own governance.

Many of these complex issues have been or are being tackled by State and local governments, and this is our focus during the next few hours. In releasing its February 2001 States Management Report Card, the Government Performance Project noted that over the two year period since it issued its first report card, that a surprising momentum had taken place: those states that had achieved little in the way of management modernization in 1999, were now committed to technological innovation. The Project found that states were generally moving in the right direction with management systems improvement, and that states that manage well, perform well.

Most States have created chief information officers or their functional equivalent, and that position is oftentimes a cabinet-level post responsible for overseeing and coordinating all information technology and IRM in the state. Some states like California, Colorado, Massachusetts, and New Mexico have one office or commission assigned responsibility for carrying out these functions, while others may rely on two or more

divisions to perform those duties. Similarly, there are counties and cities across the nation who have centralized IRM and/or information technology practices in a CIO.

It is my concern, and I would take the liberty of saying that it also Mr. Turner's concern, that the Federal Government is failing to effectively manage its information resources, particularly with regards to the use of technology. For government to manage and perform better, it must integrate information resource management as an integral and valuable component to the success of its mission. Good governance is impossible if those resources are simply seen as a support function that can be isolated in their implementation and oversight.

It is for these reasons that Mr. Turner and I each support the creation of a Federal CIO as a separate entity within the Executive Office of the President. Mr. Turner's bill would have created an Office of Information Technology, and the CIO would have acted as a special assistant to the President. That Office would have been responsible for providing analysis, leadership, and advice to the President and Federal departments and agencies on government use of information technology. My legislation, the Federal Information Policy Act of 2000, would have consolidated and centralized all IRM powers currently held by OMB in a new Office of Information Policy and also created an Office of Information Security and Technical Protection reporting to the CIO.

I applaud the President for his gathering of tech leaders last week to appoint a new Co-Chairman of the President's Council of Advisors on Science and Technology, and for his willingness to listen to the high technology industry on issues that affect their competitiveness and as a result, our economy. But I would also encourage the Administration to focus on the internal reorganization that needs to take place for the Federal Government to better manage its own information resources and fully utilize IT in order to better serve American citizens. At a time when electronic government is in its nascent stages of development, government has got to be able to efficiently distribute and protect information to earn citizen confidence in this new mission.

But today, our hearing is intended to gather information from our witnesses about what types of management strategies are being utilized, what factors were considered by each entity in establishing a CIO or similar office, how do they address enterprise-wide issues that have traditionally been dealt with agency by agency, and what are the challenges they have faced. In addition, we will identify the primary differences between a state/local approach and a federal approach to more centralized IT management and what lessons learned at the state and local levels may be applied at the federal level.

The Subcommittee will hear testimony from Dave McClure, the Director of Information Technology Management Issues for the General Accounting Office; Aldona Valicenti, NASIRE's Executive President as well as Kentucky's CIO; my good friend, Don Upson, the Secretary of Technology for the Commonwealth of Virginia; Charles Gerhards, the Deputy Secretary of Technology for the State of Pennsylvania; David Molchany, the CIO of my hometown, Fairfax County, Virginia; and Don Evans, the CIO for Public Technology, Inc. and former CIO of Montgomery County, Maryland.

Mr. DAVIS OF VIRGINIA. I would now yield to Congressman Turner for his opening statement.

Mr. TURNER. Thank you, Mr. Chairman. It's good to see all of our witnesses here today. I know we all respect what the States are doing in the area of information technology. You've made much progress. We always like to say the States are the incubator of ideas, and I think in IT that has clearly been the case.

We all know that information technology is revolutionizing both the private and the public sector's means of providing services to the general public. E-government is making it possible for citizens to access their government in a way they have never been able to do before, in many cases without leaving their homes. And the success of digital applications has rendered the old forms of government and management obsolete.

We now know that the effective and innovative use of IT requires a level of leadership and focus that goes beyond what many of us thought IT to be in the early days when we were worried about what type of computer system to purchase for our various respective governments.

In order to meet the management challenge, both the public and the private sector have created positions called "chief information officers," or the functional equivalent of that. This position has enabled there to be a central authority which is usually charged with coordinating, funding, and managing all digital information policies. Currently, individual Federal agencies have CIOs, but the Federal Government, as a whole, does not.

During the last Congress, the Subcommittee on Government Management, Information, and Technology, chaired by Chairman Horn—Steve Horn of California, who is also on this committee and here today—revealed that, while the role of the CIOs in the Federal Government has greatly expanded due to the year 2000 computer problem, computer security attacks, and other reasons, the success of the agency CIOs has been uneven, at best.

Moreover, because of a lack of central authority and funding, there is little agency coordination in establishing cross-cutting digital government applications. It appears that the Federal Government's IT policy is like a ship without a rudder, moving all over the place with no direction from the top.

In an effort to address these challenges, last session Chairman Davis and I both introduced separate bills that would have created a Federal CIO. Time ran out before we could move forward, but I know that we both share a commitment to that idea and we hope to pursue it.

Despite the Federal Government's failure to institute a Government-wide CIO, many States and localities have done so and have been leaders in the area. While the Congress continues to debate the need for a Federal CIO—where it would be located in the Federal Government, how it would be funded, what degree of authority it should have—I believe we can learn a lot about the CIO position and model IT practices by listening to our State and local governments share their experiences.

We are very fortunate that you have taken the time to meet with us today. We appreciate your being here. And I want to commend

the chairman on his leadership and his foresight in pursuing this very important issue for the Federal Government.

Thank you, Mr. Chairman.

Mr. DAVIS OF VIRGINIA. Mr. Turner, thank you very much.

[The prepared statement of Hon. Jim Turner follows:]

Statement of the Honorable Jim Turner
"Enterprise-wide Strategies for Managing Information Resources and Technology: Learning from State and Local Governments"
Technology and Procurement Policy Subcommittee
April 3, 2001

Information Technology has revolutionized the way both the private and public sector provide services. E-government is now making it possible for citizens to access and connect with their government without ever having to leave their house. The success of digital applications has also rendered old forms of government and management obsolete.

We now know that the efficient, effective, and innovative use of IT requires a level of leadership and focus that goes far beyond what would be provided in a technical support function. In order to meet this management challenge, both the private and public sector have created position of the Chief Information Officer (CIO) or a functional equivalent. This position establishes a central authority which is usually charged with coordinating, funding, and managing all digital policies. Currently, individual federal agencies have a CIO, but the federal government as a whole does not.

During the 106th Congress, hearings before the Subcommittee on Government Management, Information, and Technology revealed that while the role of CIOs within the federal government has greatly expanded due to the Year 2000 computer problem, computer security attacks, advances in technology, and the growth of digital commerce and

government -- the success of agency CIOs has been uneven at best. Moreover, because of a lack of a central authority and funding, there is little agency coordination in establishing cross-cutting digital government applications. It appears that the federal government's IT policy is like a ship without a rudder -- moving all over the place with no direction from the top. In an effort to address these leadership challenges, last session, Chairman Davis and I introduced separate bills that would have created a federal CIO. However, time ran out on us before we could push forward.

Despite the federal government's failure to institute a government-wide CIO, many states and localities have been leaders in this area. While Congress continues to debate the need for a federal CIO, where it would be located within the federal government, how it would be funded, and the degree of authority it would have, I believe that we can learn a lot about the CIO position and model IT practices by listening to our state and local governments share their experiences. We are very fortunate that they have taken the time to meet with us, and I commend them for their service. I hope we can also learn what Congress can do to facilitate e-government at the state and local levels. I commend the Chairman for his focus on this issue and welcome the witnesses here today.

Mr. DAVIS OF VIRGINIA. Any opening statements? Mrs. Davis. Mr. Horn.

Mr. HORN. I'd just say to the chairman that this is an excellent group of witnesses. I've gone through most of them, and we will get a lot of knowledge from the States, and this time the States are ahead of the Federal Government and we need to catch up.

Mr. DAVIS OF VIRGINIA. Thank you very much.

I now call our panel of witnesses to testify: Dave McClure, Aldona Valicenti, Don Upson, Charles Gerhards, Dave Molchany, and Don Evans.

As you know, it is the policy of this committee that all witnesses be sworn before you testify. Would you please rise and raise your right hands.

[Witnesses sworn.]

Mr. DAVIS OF VIRGINIA. Thank you very much. You may be seated.

To afford sufficient time for questions, please try to limit yourselves to no more than 5 minutes for the statement. We'll have a—there's kind of a colored box down there. When it turns orange, you have a minute left, and when it turns red your 5 minutes are up, and just try to move to summary.

This has been read and pruned by Members and staff, so we kind of know what we want to ask you, but we want you to accent what you want to accent in your 5 minutes.

Mr. McClure, we'll start with you and move straight on down the line. Thank you for being with us.

STATEMENT OF DAVE MCCLURE, DIRECTOR, INFORMATION TECHNOLOGY MANAGEMENT ISSUES, U.S. GENERAL ACCOUNTING OFFICE

Mr. MCCLURE. Thanks, Mr. Chairman. It is a pleasure to be here. Good morning to you and members of the subcommittee. I am pleased to be here to discuss the role of the Federal chief information officer and to also share some of the things we have learned about State and local government and their implementation of best practices in CIO organizations.

As you mentioned in your opening statement, information technology is, indeed, embedded and the electronic government approach is being taken at all levels of government. We have at present over 1,400 e-government initiatives underway in the Federal Government of varying size and type. Unfortunately, as this subcommittee is well aware, the track record in the Federal arena is mixed. While we do see success, we also see too many instances where investments in technology produce questionable results and not clear improvements in agency performance. This is the reason we have been producing our high-risk series—to let the Congress know those specific projects that warrant congressional oversight and certainly attention on the part of the agencies. Also, we have been putting out a performance and accountability series that was just reissued that in January—where we outline seven IT management challenges which are critical, we believe, for the Federal Government's IT performance to improve. They cover such things as information security management, better use of information, dissemination and collection technologies, pursuing investment and capital

planning practices, and developing IT human capital within the agencies.

For these kinds of challenges to be effectively addressed, we have consistently endorsed the idea of a Federal CIO. The Federal IT management framework would be strengthened by having a Federal CIO because increasingly the problems such as those that I just mentioned are multi-dimensional in nature and they cut across numerous departments and agencies. These problems are blurred by our traditional government lines.

We think that these Government-wide issues really need a catalyst to provide substantive leadership, full-time attention, consistent direction, priority setting for a growing arena of issues, and ensuring that IT is being used in the Federal Government to produce the most consistent results and addressing the Government's highest priorities and making sure that these decisions are not made in isolation of those priorities.

There is no consensus, Mr. Chairman, on the need for a Federal CIO. I think we've mentioned in the past, even the Federal CIOs, themselves, have been surveyed about this, and the responses were mixed. What we do see is a growing support for this idea since last fall. Several studies have come out since that time proposing a Federal CIO, including the Council for Excellence in Government, the President's Information Technology Advisory Committee, the Gartner Group, and others, which indicate there is growing support for the need for a Federal CIO position.

However, without a clear understanding of the roles, the responsibility, and the authority that we expect this individual to have, it is difficult to really truly gauge the support or opposition to a Federal CIO, and it is on those issues of authority, role, and responsibility that we should focus our attention.

Today you have several people here from State and local government that are going to provide excellent examples of how State CIO models and local government CIO models have been put in place. There is no golden bullet or silver bullet. Each CIO has been placed into the context of the organization mission, and for that reason CIOs really have to function within different contexts, depending upon the service or the mission that the organization is delivering.

Let me leave you with six prominent fundamental principles that must be in place for a CIO to be used effectively. It is based upon a report that we issued in February called "Maximizing the Success of Chief Information Officers" that is based upon our case study research of prominent private sector and several State CIO organizations. These don't represent the full array nor the best and the brightest among CIOs in the private and public sector world, but the study offers some excellent examples of things that they are actually doing. They all are transferrable to the Federal CIO issue. Let me quickly mention these six things.

The first is that the role of IT in creating value must be embraced by other executives. CIOs don't do solo acts. They must have the support of top-level executives and they must be partners in applying technology to achieve fundamental improvements in operations and mission delivery. Federal CIOs can really help in this

regard by playing a prominent role in setting the agenda and expectations for IT in the Federal Government.

Second, the CIO must be positioned for success. The roles, the responsibility, the accountability for a CIO must be established, and they must be given executive-level authority. Almost half of the State CIOs report to Governors, and that is a very important and growing trend that we are seeing at the State and local level. We would expect the Federal CIO to also have a high reporting relationship to a high official.

Third, CIO organizations must be credible. They must deliver results, and this is an important distinction that we would expect the Federal CIO to be tagged with—accountability for producing better results and moving the governmentwide IT agenda forward.

Fourth, CIOs must measure success and demonstrate results. They have to show the effectiveness of IT with compelling data. And this is something, again, we would expect the Federal CIO to pay attention to. In the performance and accountability framework that we have established in the Federal Government, we want to see investments in the Federal arena producing actual performance improvements in mission delivery.

Fifth, IT must focus on meeting business needs, not just satisfying IT needs, closely aligning itself with the central purpose of the organization.

And, last, we've seen all successful CIOs devote attention to IT human capital. In high-performance organizations we find developed strategies to assess IT skills, recruit, train, and retain workers in this very competitive environment. We would see a Federal CIO playing a very prominent role, working with OMB and OPM in addressing the IT work force management challenges in the Federal Government.

These six critical factors—and I think some of the lessons that we will learn from our discussions with the CIOs this morning—should be the center of discussion about a Federal CIO position.

With that, I'll stop. Thank you for your time this morning, Mr. Chairman. I look forward to answering questions and entering into a dialog.

[The prepared statement of Mr. McClure follows:]

United States General Accounting Office

GAO

Testimony

Before the Subcommittee on Technology and Procurement Policy, Committee on Government Reform, House of Representatives

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INFORMATION AND TECHNOLOGY MANAGEMENT

Achieving Sustained and Focused Governmentwide Leadership

Statement of David L. McClure
Director, Information Technology Management Issues

GAO-01-583T

Mr. Chairman and Members of the Subcommittee:

It is a pleasure to be here to participate in today's hearing on the various information resources management models that state and local governments are using. You have asked us to participate in this hearing to set the federal government context for this hearing as it relates to the issue of the federal Chief Information Officer (CIO).

As you know, the rapid pace of technological change and innovation has offered unprecedented opportunities for both the government and commercial sectors to use information technology (IT) to improve operational performance, reduce costs, and enhance service responsiveness to citizens and consumers. In some cases these opportunities have become reality. For example, as we testified last year, it is increasingly common to find federal, state, and local governments using the Internet for basic transactional services, such as allowing citizens to submit and pay taxes, process renewal fees, and file applications.[1] Governments are also using the Internet to buy the goods and services that support their operations and are establishing "portals" or integrated web sites for targeted citizen information and services. Yet at the same time, a range of issues have emerged about how to best manage and integrate complex information technologies and management processes so that they are aligned with mission goals, strategies, and objectives.

In my remarks today, I will

- briefly summarize the major governmentwide IT challenges,
- describe the federal government's current information resources and technology management framework and discuss how it could be strengthened,
- describe various federal CIO proposals under consideration,
- provide an overview of the structure and responsibilities of existing state CIO models, and
- discuss the keys to maximizing the success of a federal CIO.

[1] *Electronic Government: Federal Initiatives Are Evolving Rapidly But They Face Significant Challenges* (GAO/T-AIMD/GGD-00-179, May 22, 2000).

The Federal Government Faces Significant IT Challenges

Although the American people expect world-class public services and are demanding more of government, the public's confidence in the government's ability to address its demands remains all too low. The government's successful implementation of information technology could improve this confidence. Indeed, according to the Council for Excellence in Government,

"Electronic government can fundamentally recast the connection between people and their government. It can make government far more responsive to the will of the people and greatly improve transactions between them. It can also help all of us to take a much more active part in the democratic process."[2]

Government use of Internet-based services is broadening and becoming more sophisticated. In particular, public sector agencies are increasingly turning to the Internet to conduct paperless acquisitions (electronic malls), provide interactive electronic services to the public, and tailor or personalize information.

However, the government must still overcome several major challenges to its cost-effective use of information technology. At the beginning of this year we issued a series of reports—our *Performance and Accountability Series*—devoted to framing the actions needed to support the transition to a more results-oriented and accountable federal government.[3] To the extent that the billions of dollars in planned IT expenditures can be spent more wisely and the management of such technology improved, federal programs will be better prepared to meet mission goals and support national priorities. However, we identified seven continuing IT challenges that are key to achieving this goal:

- strengthening agency information security,
- improving the collection, use, and dissemination of government information,
- pursuing opportunities for electronic government,

[2] *e-Government: The Next American Revolution* (The Council for Excellence in Government).

[3] *Major Management Challenges and Program Risks: A Governmentwide Perspective* (GAO-01-241, January 2001) provides an overview of this series. The 2001 *Performance and Accountability Series* also contains separate reports on 21 agencies—covering each cabinet department, most major independent agencies, and the U.S. Postal Service.

- constructing sound enterprise architectures,
- fostering mature systems acquisition, development, and operational practices,
- ensuring effective agency IT investment practices, and
- developing IT human capital strategies.

Until these challenges are overcome, agencies are likely to continue to have fundamental weaknesses in their information resources and technology management and practices, which can negatively affect mission performance.

Since 1990, we have also periodically reported on government operations that we have assessed as high risk because of their greater vulnerability to waste, fraud, abuse, or mismanagement. In January of this year, in the information resources and technology management area, we designated information security and three agency IT modernization efforts as high risk.[4] We have reported governmentwide information security as high risk since 1997, and the three major modernization efforts since 1995.

The Federal Information Resources and Technology Management Structure

The federal government's information resources and technology management structure has its foundation in six laws: the Federal Records Act, the Privacy Act of 1974, the Computer Security Act of 1987, the Paperwork Reduction Act of 1995,[5] the Clinger-Cohen Act of 1996, and the Government Paperwork Elimination Act of 1998. Taken together, these laws largely lay out the information resources and technology management responsibilities of the Office of Management and Budget (OMB), federal agencies, and other entities, such as the National Institute of Standards and Technology.

[4] *High-Risk Series: An Overview* (GAO/HR-95-1, February 1995), *High-Risk Series: Information Management and Technology* (GAO/HR-97-9, February, 1997), *High-Risk Series: An Update* (GAO/HR-99-1, January 1999), and *High-Risk Series: An Update* (GAO-01-263, January 2001).

[5] The Paperwork Reduction Act of 1995 revised the information resources management responsibilities established under the Paperwork Reduction Act of 1980, as amended in 1986.

In general, under the government's current legislative framework, OMB has important responsibilities for providing direction on governmentwide information resources and technology management and overseeing agency activities in these areas, including analyzing major agency information technology investments as part of the federal budget process. Among OMB's responsibilities are

- ensuring agency integration of information resources management plans, program plans, and budgets for acquisition and use of information technology and the efficiency and effectiveness of interagency information technology initiatives;
- developing, as part of the budget process, a mechanism for analyzing, tracking, and evaluating the risks and results of all major capital investments made by an executive agency for information systems;[6]
- directing and overseeing implementation of policy, principles, standards, and guidelines for the dissemination of and access to public information;
- encouraging agency heads to develop and use best practices in information technology acquisition;
- reviewing proposed agency information collections to minimize information collection burdens and maximize information utility and benefit; and
- developing and overseeing implementation of privacy and security policies, principles, standards, and guidelines.

Federal departments and agencies, in turn, are accountable for the effective and efficient development, acquisition, and use of information technology in their organizations. For example, the Paperwork Reduction Act of 1995 and the Clinger-Cohen Act of 1996 require agency heads, acting through agency CIOs, to

- better link their information technology planning and investment decisions to program missions and goals;
- develop and implement a sound information technology architecture;

[6]This responsibility is in addition to OMB's role in assisting the President in reviewing agency budget submissions and compiling the President's budget, as discussed in 31 U.S.C. Chapter 11.

- implement and enforce information technology management policies, procedures, standards, and guidelines;
- establish policies and procedures for ensuring that information technology systems provide reliable, consistent, and timely financial or program performance data; and
- implement and enforce applicable policies, procedures, standards, and guidelines on privacy, security, disclosure, and information sharing.

Another important organization in federal information resources and technology management—the CIO Council—was established by the President in July 1996—shortly after the enactment of the Clinger-Cohen Act. Specifically, Executive Order 13011 established the CIO Council as the principal interagency forum for improving agency practices on such matters as the design, modernization, use, sharing, and performance of agency information resources. The Council, chaired by OMB's Deputy Director for Management with a Vice Chair selected from among its members, is tasked with (1) developing recommendations for overall federal information technology management policy, procedures, and standards, (2) sharing experiences, ideas, and promising practices, (3) identifying opportunities, making recommendations for, and sponsoring cooperation in using information resources, (4) assessing and addressing workforce issues, (5) making recommendations and providing advice to appropriate executive agencies and organizations, and (6) seeking the views of various organizations. Because it is essentially an advisory body, the CIO Council must rely on OMB's support to see that its recommendations are implemented through federal information management policies, procedures, and standards. With respect to Council resources, according to its charter, OMB and the General Services Administration are to provide support and assistance, which can be augmented by other Council members as necessary.

Additional Governmentwide IT Leadership Needed to Meet Challenges

The information issues confronting the government in the new Internet-based technology environment rapidly evolve and carry significant impact for future directions. To effectively address these issues, we believe that the government's current information resources and technology management framework could be strengthened by establishing a central focal point, such as a federal CIO. Increasingly, the challenges the government faces are multidimensional problems that cut across numerous programs, agencies, and governmental tools. Clearly, departments and agencies should have the primary responsibility and accountability for decisions related to IT investments and spending

supporting their missions and statutory responsibilities. But governmentwide issues need a strong catalyst to provide substantive leadership, full-time attention, consistent direction, and priority setting for a growing agenda of government issues, such as critical infrastructure protection and security, e-government, and large-scale IT investments. A federal CIO could serve as this catalyst, working in conjunction with other high-level officials, to ensure that information resources and technology management issues are addressed within the context of the government's highest priorities and not in isolation from these priorities.

During the period of the legislative deliberations on the Clinger-Cohen Act, we supported strengthened governmentwide management through the creation of a formal CIO position for the federal government.[7] In September 2000 we also called for the Congress to consider establishing a formal CIO position for the federal government to provide central leadership and support.[8] As we noted, a federal CIO would bring about ways to use IT to better serve the public, facilitate improving access to government services, and help restore confidence in our national government. With respect to specific responsibilities, a federal CIO could be responsible for key functions, such as overseeing federal agency IT activities, managing crosscutting issues, ensuring interagency coordination, serving as the nation's chief IT spokesman internationally, and maintaining appropriate partnerships with state, local, and tribal governments and the private sector. A federal CIO could also particpate in establishing funding priorities, especially for crosscutting e-government initiatives, such as the President's recently proposed e-government fund (estimated to include $100 million over three years), which is expected to support interagency e-government initiatives.

No Consensus Has Been Reached on a Federal CIO

Consensus has not been reached within the federal community on the need for a federal CIO. Department and agency responses to questions developed by the Chairman and Ranking Minority Member of the Senate Committee on Governmental Affairs regarding opinions about the need for a federal CIO found mixed reactions. In addition, at our March 2000 Y2K Lessons Learned Summit, which included a broad range of public and

[7] *Improving Government: Actions Needed to Sustain and Enhance Management Reforms* (GAO/T-OCG-94-1, January 27, 1994), *Government Reform: Using Reengineering and Technology to Improve Government Performance* (GAO/T-OCG-95-2, February 2, 1995), and *Government Reform: Legislation Would Strengthen Federal Management of Information and Technology* (GAO/T-AIMD-95-205, July 25, 1995).

[8] *Year 2000 Computing Challenge: Lessons Learned Can Be Applied to Other Management Challenges* (GAO/AIMD-00-290, September 12, 2000).

private-sector IT managers and policymakers, some participants did not agree or were uncertain about whether a federal CIO was needed.

Even individuals or organizations that support a federal CIO disagree on the structure and authorities of this office. For example, as you know, the last Congress considered two proposals to establish a federal CIO: H.R. 4670, the Chief Information Officer of the United States Act of 2000, introduced by Representative Turner, and H.R. 5024, the Federal Information Policy Act of 2000, which you introduced. These bills shared a common call for central IT leadership from a federal CIO but they differed in how the roles, responsibilities, and authorities of the position would be established.

H.R. 5024 vested in the federal CIO the information resources and technology management responsibilities currently assigned to OMB, as well as oversight of related activities of the General Services Administration and promulgation of information system standards developed by the National Institute of Standards and Technology. On the other hand, H.R 4670 generally did not change the responsibilities of these agencies; instead, it called on the federal CIO to advise agencies and the Director of OMB and to consult with nonfederal entities, such as state governments and the private sector.

Senator Lieberman also plans to introduce an e-government bill, which is expected to include a provision establishing a federal Chief Information Officer.

Different federal CIO approaches have also been suggested by other organizations. For example, in February, the Council for Excellence in Government recommended that the President (1) name an Assistant to the President for Electronic Government with cabinet-equivalent rank, who would chair a Public/Private Council on Electronic Government and (2) designate OMB's Deputy Director for Management as Deputy Director for Management and Technology. The Council also called for the Deputy Director for Management and Technology, in turn, to create an Office of Electronic Government and Information Policy to be headed by a presidentially appointed, senate-confirmed federal CIO.[9]

[9] *e-Government: The Next American Revolution* (The Council for Excellence in Government).

In March, the GartnerGroup—a private research firm—called on the President to appoint a cabinet-level federal CIO within the Executive Office of the President. Some key areas that the GartnerGroup stated that the federal CIO should focus on include (1) advising the President on technology-related public policy, (2) developing and implementing federal e-government plans, (3) managing appropriated "seed money" for cross-agency e-government initiatives, and (4) developing standards for e-government interoperability and other IT-related transformation initiatives.[10]

Statewide CIO Models Exist But Approaches Vary

CIOs or equivalent positions exist at the state level but no single preferred model has emerged. The specific roles, responsibilities, and authorities assigned to the CIO or CIO-type position vary, reflecting the needs and priorities of the particular government. However, some trends are apparent. Namely, according to the National Association of State Information Resource Executives (NASIRE), half the states have a CIO in place who reports directly to the governor. (Only eight states reported such an arrangement in a 1998 survey.) All but one of the remaining CIOs report to a cabinet-level officer or an IT board. In addition, some state CIOs work in conjunction with an advisory board or commission, and many of them serve as chair of a council of agency-level CIOs. As a former president of the National Association of State Information Resource Executives noted in prior testimony, "IT is how business is delivered in government; therefore, the CIO must be a party to the highest level of business decisions . . . [and] needs to inspire the leaders to dedicate political capital to the IT agenda."[11]

With respect to CIOs' responsibilities, according to the NASIRE, the vast majority of states have senior executives with statewide authority for IT. In addition, state CIOs are usually in charge of developing statewide IT plans and approving statewide technical IT standards, budgets, personnel classifications, salaries, and resource acquisitions, although the CIO's authority depends on the specific needs and priorities of the governors. In some cases, the CIO is guided by an IT advisory board.

[10] *Mr. President, Appoint a Federal CIO* (GartnerGroup, TG-12-8984, March 18, 2001) and *Help Wanted: Federal CIO for High-Stress, Rewarding Work* (GartnerGroup, COM-13-0387, March 14, 2001).

[11] Testimony of Otto Doll, President, National Association of State Information Resource Executives before the U.S. House of Representatives, Committee on Government Reform, Subcommittee on Government Management, Information and Technology, March 24, 2000.

Examples of the diversity in CIO structures that states reported in 2000 to the Government Performance Project—administered by the Maxwell School of Citizenship and Public Affairs of Syracuse University in partnership with Governing Magazine—are as follows.[12]

- A model in which the CIO has a strong link to the state's highest official is Missouri's Chief Information Officer who reports to the Governor's office. Missouri's CIO is responsible for, among other things, IT strategic planning and policy, IT procurement, e-government, and facilitating IT resource sharing across agencies. The CIO is also the liaison representing Missouri on national issues affecting IT functions of the state.

- Kansas uses a model in which the CIO has multiple reporting responsibilities, including reporting to an IT council and the Governor. The Kansas Chief Information Officer serves as the Executive Branch Chief Information Technology Officer reporting to the Information Technology Executive Council, Governor and the Secretary of Administration. The Kansas CIO (1) establishes project management standards, (2) approves bid specifications, (3) approves IT projects over $250,000, (4) reports project status, and (5) manages the Strategic Information Management 3-year plan. Kansas also has Chief Information Technology Officers for its legislative and judicial branches that also report to the Information Technology Executive Council, as well as to the Legislative Coordinating Council and Office of Judicial Administration, respectively.

- Finally, in the model used by Michigan, the CIO reports to the head of an executive agency—the Department of Management and Budget. The duties of the Michigan CIO include developing a statewide information technology architecture and standards, developing and managing a statewide telecommunications network, and coordinating and reengineering business processes throughout the state government.

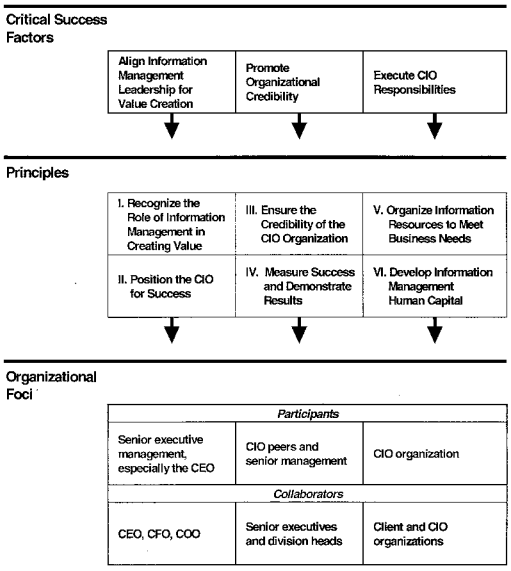
[12]Since 1996, the Maxwell School of Citizenship and Public Affairs of Syracuse University has rated the management capacity of state governments, based in part on state responses to a survey. The project, called the Government Performance Project, conducts criteria-based assessments in five areas of government management, including information technology management. Summaries of these assessments can be found at *http://governing.com/gpp/gp.1intro.htm.*

Keys to Maximizing the Success of a Federal CIO

Certain key principles and success factors can provide insight into the establishment of a successful CIO organization—including at the federal level. In February we issued an executive guide[13] that includes a framework of critical success factors and leading principles (see figure 1). We developed this framework based on interviews with prominent private-sector and state CIOs, as well as other research. Mr. Chairman, what may be of particular interest to this Subcommittee is that CIOs of leading organizations we interviewed described a consistent set of key principles of information management that they believed contributed to the successful execution of their responsibilities. These principles touch on specific aspects of their organizational management, such as formal and informal relationships among the CIO and others, business practices and processes, and critical CIO functions and leadership activities. While focused on the use of CIOs within organizations, many of the principles of the framework are applicable to a federal CIO position.

[13] *Executive Guide: Maximizing the Success of Chief Information Officers, Learning from Leading Organizations* (GAO-01-376G, February 2001).

Figure 1: CIO Critical Success Factors, Principles and Organizational Relationships



CEO - Chief Executive Officer; CFO - Chief Financial Officer; COO - Chief Operating Officer

Let me explain some of the key characteristics of the six fundamental principles described by CIOs we interviewed and important parallels that can be made to the establishment of a federal CIO.

Recognize the Role of Information Management in Creating Value

Recognizing the business transformation potential of IT, executives of leading organizations position their CIOs as change agents with responsibility for applying technology to achieve major improvements in fundamental business processes and operations. With CEO support, the CIOs are in a good position to significantly affect not only IT, but the entire business enterprise. Similarly, it is important that a federal CIO be assigned a prominent role in the government's decisionmaking to create and set a clear agenda and expectations for how information management and information technologies can be effectively used to help improve government operations and performance.

Position the CIO for Success

Diversities in corporate missions, structures, cultures, and capabilities prohibit a prescriptive approach to information management leadership. Instead, executives in leading organizations ensure that their CIO models are consistent with the business, technical, and cultural contexts of their enterprises. In conjunction with determining their CIO models, senior executives of leading organizations clearly define up front the roles, responsibilities, and accountability of their CIOs for enterprisewide information management, better enabling their CIOs to operate effectively within the parameters of their positions vis-à-vis those of their senior management counterparts (i.e., CFO, COO). These senior executives also provide their CIOs with the authority they need to effectively carry out their diverse responsibilities.

The federal government is large, complex, and diverse. Indeed, many federal departments and agencies easily rival in size and complexity some of our nation's largest corporations. In addition, virtually all the results that the federal government strives to achieve require the concerted and coordinated efforts of two or more agencies. These are the types of issues that are important to consider when establishing a federal CIO. For example, while it may not be realistic for a federal CIO to have explicit responsibility for agency IT investments, a federal CIO could be an important broker of solutions that require cross-agency cooperation and coordination.

Ensure the Credibility of the CIO Organization

CIOs in leading organizations recognize that providing effective information management leadership and vision is a principal means of building credibility for their CIO positions. In addition, CIOs often outline plans of attack or roadmaps to help guide them in effectively implementing short- and long-term strategies. Further, CIOs participate on executive committees and boards that provide forums for promoting and building consensus for IT strategies and solutions. These types of responsibilities can effectively translate to a federal CIO as well. A federal CIO can help set and prioritize governmentwide IT goals, provide leadership for the governmentwide CIO Council, and actively participate in other advisory organizations, such as the CFO Council, the Procurement Executives Council, and the President's Information Technology Advisory Committee.

Measure Success and Demonstrate Results

While there is no standardized approach to performance measurement, leading organizations strive to understand and measure what drives and affects their businesses and how to best evaluate results. Leading organizations use performance measures that focus on business outcomes such as customer satisfaction levels, service levels, and, in some instances, total requests satisfied. In addition, to properly collect and analyze information, leading organizations develop measurement systems that provide insight into their IT service delivery and business processes. Establishing an information feedback system allows organizations to link activities and functions to business initiatives and management goals.

The Government Performance and Results Act is results-oriented legislation that is intended to shift the focus of government decisionmaking, management, and accountability from activities and processes to the results and outcomes achieved by federal programs. A key role for a federal CIO could be to help formulate consensus and direction on performance and accountability measures pertinent to information management in the federal government. Moreover, a federal CIO could help establish goals and measures for major governmentwide efforts, including for the CIO Council, and create a mechanism to report on the government's progress in meeting these goals. This is a particularly important role since managers at the organizations we studied cautioned that IT performance measurement is in its infancy and measurement techniques are still evolving, partly due to changes in technology.

Organize Information Resources to Meet Business Needs

In lieu of establishing either completely centralized or decentralized CIO organizations, leading organizations manage their information resources through a combination of such structures. In this hybrid, the CEO assigns central control to a corporate CIO and supporting CIO organization, while delegating specific authority to each business unit for managing its own unique information management requirements. This model is particularly appropriate for the federal government since the Clinger-Cohen Act of 1996 requires executive agencies to appoint CIOs to carry out the IT management provisions of the act and the broader information resources management requirements of the Paperwork Reduction Act. Accordingly, a federal CIO could help ensure overall IT policy direction and oversight for the government, and agency CIOs would be responsible for carrying out these policies, as appropriate for their agencies. In addition, a federal CIO could play a role in suggesting, through formal and informal means, how the government information resources and technology management structure should be organized, with particular emphasis on how such a structure can achieve cross-cutting functionally oriented government services.

Develop Information Management Human Capital

High-performance organizations have long understood the relationship between effective "people management" and organizational success. Accordingly, we found that leading organizations develop human capital strategies to assess their skill bases and recruit and retain staff who can effectively implement technology to meet business needs. Such strategies are particularly important since studies forecast an ever-increasing shortage of IT professionals, presenting a great challenge for both industry and the federal government. Complicating the issue further, serious concerns are emerging about the aging of the federal workforce, the rise in retirement eligibility, and the effect of selected downsizing and hiring freeze initiatives. Since human capital concerns are a governmentwide concern, this is one area in which a federal CIO could have a tremendous impact. Working with the Office of Personnel Management and OMB, the CIO could explore and champion initiatives that would aid agencies in putting in place solid IT workforce management and development strategies.

In conclusion, Mr. Chairman, while information technology can help the government provide services more efficiently and at lower costs, many

challenges must be overcome to increase the government's ability to use the information resources at its disposal effectively, securely, and with the best service to the American people. A central focal point such as a federal CIO can serve in the essential role of ensuring that attention to information technology issues is sustained and improves the likelihood that progress is charted and achieved. Although our research has found that there is no one right way to establish a CIO position, critical success factors we found in leading organizations, such as aligning the position for value creation, are extremely important considerations.

Finally, the experiences of statewide CIOs offer a rich set of experiences to draw on for ideas and innovation. As a result, it is critical that a federal CIO, as well as agency-level CIOs, develop effective working relationships with state CIOs to discuss and resolve policy, funding, and common systems and technical infrastructure issues. Such relationships are of growing importance as public entities work to establish effective e-government initiatives.

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

Contacts and Acknowledgments

For information about this testimony, please contact me at (202) 512-6240 or by e-mail at *mcclured@gao.gov*. Individuals making key contributions to this testimony include Felipe Colon, Jr., and Linda Lambert.

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Mr. DAVIS OF VIRGINIA. Ms. Valicenti, go ahead. Thank you very much for being with us.

STATEMENT OF ALDONA K. VALICENTI, PRESIDENT, NATIONAL ASSOCIATION OF STATE INFORMATION RESOURCE EXECUTIVES [NASIRE], AND CHIEF INFORMATION OFFICER, GOVERNOR'S OFFICE FOR TECHNOLOGY, COMMONWEALTH OF KENTUCKY

Ms. VALICENTI. Good morning, Mr. Chairman and committee. It is a real pleasure to be here to speak on behalf of some of the issues that have been addressed in the Commonwealth of Kentucky, and also some of the issues that we are addressing now from NASIRE, the national organization of the States.

I'll tell you a very brief story. I was specifically recruited into the Commonwealth of Kentucky to establish a cabinet-level CIO position—no "but's," "and's," or anything else. That was the mission.

I had never worked in State government before. I had never worked in government before. The primary objective was to really establish that position, as we have already heard this morning, at a very high level, to give it the visibility, to give it the ability to operate at a very high level to achieve the business goals of the Commonwealth.

And Governor Patton did that for a couple of reasons. He did that because he had started a major re-engineering effort to re-engineer processes across State government. It became clear that many of those processes needed to be enabled with new systems, new information systems, and a new way of doing business. The only way to achieve that was to put someone in place who had the ability to look across the enterprise, not from an individual cabinet or agency perspective, but to look at what was good for the Commonwealth, and that was the main reason to create a cabinet-level position—someone who would sit at the table, who would have the objective of the enterprise in mind, and then put a structure in place of support from a systems perspective.

What we did is, over that period of time—and I have been there 3 years now—we actually have identified, I think, some critical learnings, and I would like to share them with you because they will echo what you have already heard.

First of all, executive leadership and commitment is absolutely necessary, not only the commitment to establish the position, but also to allow it to present the leadership that is necessary to put the systems in place that will serve the citizens long-term.

The will to invest in information technology, not only from an effectiveness perspective, but also from an efficiency perspective. Most States today, as you have already seen by the headlines, are probably going to have some issues with revenue generation. It is no different than a private sector business. We have to look at efficiencies on how to drive that across the State.

The focus on applications—that's where the true value is, not just on the purchase of the hardware and the infrastructure, but on applications that deliver true services to the State.

The willingness and the will to explore multiple organizational models—I will tell you, Mr. Chairman and the committee, having lived through multiple centralization/decentralization efforts in the

private sector, neither one of them works for a very long time—they tend to swing the pendulum back and forth—but to look for organizational models that can sustain the investment and the focus to business objectives.

And probably the last one and maybe the most important one, to provide true metrics on what is delivered from an information system perspective, to measure what we do, and that is why it is so important, some of the issues that are coming forward in terms how the States are rated—extremely important to the effort.

Let me now focus on NASIRE and what the States are doing. I am its current president. And what you see up on the wall there is the graphic, which I think is very, very clear that most of the States are investing in creating a CIO position either reporting directly to the Governor or reporting through some other department or a board. In fact, there's only one State up there which is sort of under construction or under development, and that is Hawaii.

From the conversations that we have at the CIO round table, it is very clear that all the CIOs are committed to deliver on the Governor's objectives, and to do that in such a way that long-term the investment dollars really makes sense. That has been driven by the Internet today more than anything else, because what governments are doing—and State governments are doing very specifically—is taking a very citizen-centric view on how to deliver customer service. That will continue. The Internet has basically driven that as an objective for us. Consequently, we need to take a very citizen-centric view. The only way to do that is to make someone in charge of the systems that support that.

Thank you.

Mr. DAVIS OF VIRGINIA. Thank you very much.

[The prepared statement of Ms. Valicenti follows:]

STATEMENT OF ALDONA VALICENTI
CIO, COMMONWEALTH OF KENTUCKY
PRESIDENT, NASIRE

COMMITTEE ON GOVERNMENT REFORM
SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY
UNITED STATES HOUSE OF REPRESENTATIVES

APRIL 3, 2001

I. Valicenti Testimony

II. Attachments

A. NASIRE Issue Focus Report (March 2001): The Role of the State CIO
B. Map Identifying State CIO Authority

STATEMENT OF ALDONA VALICENTI
PRESIDENT, NASIRE – REPRESENTING
CHIEF INFORMATION OFFICERS OF THE STATES
BEFORE THE
COMMITTEE ON GOVERNMENT REFORM -
SUBCOMMITTEE ON
TECHNOLOGY AND PROCUREMENT POLICY
UNITED STATES HOUSE OF REPRESENTATIVES

APRIL 3, 2001

Mr. Chairman, and Members of the Committee:

As the Congress considers how to organize the Federal Government to efficiently utilize information technology in the provision of service to our citizens, it is clear to me that the federal government is facing has a great opportunity. It is the same opportunity now that I had a few years ago as the first chief information officer for the Commonwealth of Kentucky, which I came to with extensive private sector experience. The opportunity I speak of is two fold - first, to draw upon the growing amount of state and local experiences with enterprise-wide information technology management, including the establishment of state and local CIOs. Second, drawing upon the experience of the states, you have an opportunity to innovate - avoiding some of the pitfalls of our experiences, and attempting new approaches to idea of a Federal CIO and the management of the federal government information technology (IT) function. The states, as laboratories of democracy, do offer many examples of how enterprise CIOs add real value to government use of IT. While it is difficult to derive a single, ideal organizational model, a group of coherent, critical elements of an effective model has emerged. These critical elements are true for Kentucky, other state and local models, and will be necessary for any federal CIO approach. They are:

- executive leadership and commitment
- will to invest in IT to achieve cost savings
- focus on application/solution delivery rather than hardware/infrastructure
- will to explore various management models rather than focusing only on centralized/decentralized environments
- establish performance metrics that measure true outputs/outcomes and hold people/agencies accountable to those metrics.

In the first element above, one can see the genesis of NASIRE's conclusion, as the national association of state chief information officers, that the Federal Government needs a Federal CIO. A commitment by the Administration at the highest levels to a government-wide approach to information technology is the truly indispensable element of a successful IT management approach.

The need for Executive branch support is clear, and I would like to underscore that by sharing with you part of what my state has learned as the role of the CIO in Kentucky has evolved, in

what I have learned of state CIO models nationwide, and how that may relate to the establishment of a federal CIO or equivalent role in the federal government.

The Kentucky Experience
In 1996, Governor Patton's "EMPOWER Kentucky" initiative was designed to re-engineer how state government worked. Out of the re-engineering effort and process redesign, it became clear that information technology would become a key enabler of how services would be delivered. Among the recommendations was the establishment of a cabinet-level CIO, who reports directly to the governor, and the creation a comprehensive information technology organization. This re-engineering effort was similar to what large corporations have been doing for the last several years. For that reason Gov. Patton expanded his search for a CIO from traditional government models to the private sector. Valuable lessons on efficiencies, infrastructure, and leadership models may be learned from each community.

Enterprise-Wide Issues and Identifying Enterprise-Wide Systems
In 1998, Legislation (KRS 11.501-11.517) was passed that created my office, the Governor's Office of Technology, giving me the responsibility for reviewing and overseeing large and integrated IT projects and systems for compliance with statewide strategies, policies, and standards, including alignment with the Commonwealth's business goals, investment and other risk management policies. Critical elements of the legislation gave my office the authority to grant or withhold approval of IT projects, and oversight for IT services and procurement. My staff and I also approve and prioritize capital planning information technology items across the Commonwealth.

As part of the design behind our new federated leadership model, I led a redesign project that created cabinet-level CIOs, who have report both to me and to the cabinet secretaries in charge of their portion of state business. I also chair a governance team, comprised of CIOs from all branches of state government, who discuss IT issues, policies, directions, and investments.

Process improvement teams continually look at services provided across the Commonwealth to determine where efficiencies can be obtained by providing a shared service or enterprise-wide solution. In addition, I chair an Enterprise Architecture and Standards Committee to ensure that IT systems can be integrated and compatible.

Electronic Government: Centralization, Successes and Obstacles
Through Kentucky's redesign effort, a Strategic Information Technology Business Plan was developed that identified five key principles:

- technology must be viewed from an enterprise-wide perspective
- the plan must support the business objectives of the Commonwealth
- the Commonwealth's must establish the goal of conducting business electronically
- information must be treated as a strategic resource
- electronic access to information and services must be ensured, while maintaining privacy for citizens

One of the key principles listed is moving aggressively toward conducting the business of the Commonwealth electronically. Our citizens expect reliable and easy access to government information, while government wants to provide efficiencies and lower the cost of transactions for government information and services.

As part of this effort, Kentucky has developed a KyDirect portal to provide government services and the ability to purchase goods and services on-line. KyDirect allows the citizens of Kentucky to:

- access KyCARES, an online services/information directory and guide for Federal, State and Community Providers
- purchase birth, death, marriage and divorce certificates.
- file business reports online.
- purchase of school books from an online bookstore for educators, parents and others.
- purchase unique Kentucky arts and crafts, publications from the Historical Society
- request Kentucky driver history records
- make a pledge on-line to Kentucky Educational Television
- purchase hunting and fishing licenses from the Department of Fish and Wildlife

With an initial $173 million investment in the EMPOWER Kentucky initiative, we expect to return a cumulative benefit of $550 million in savings to the state's general fund by 2004. As we implemented these e-government services, however, we encountered several obstacles in our drive to put the state's business on-line, including a lack of customer confidence and trust relating to privacy and security, cultural issues, the "stove-piping" of customer data in disparate systems, and the ever-present struggle for funding.

Initial Challenges, Solutions, and Ongoing Issues

Prior to assuming the role of Commonwealth CIO, the majority of my prior experience was in the private sector. My greatest challenge in moving to government was cultural -- and having individuals and organizations view technology from an enterprise-wide perspective, particularly in the areas of purchasing, and delivery of services and systems. Another challenge was that state government had a tendency to believe that it was so different from the private sector that it required custom-built systems. We now know that we simply can't afford to custom-build and maintain systems, particularly in an environment of increasingly intense competition for the state's financial resources. As the national economy slows and tax revenues decrease, funding will continue to be one of the major challenges of all states as the move to implement e-government solutions.

Lessons

Under EMPOWER Kentucky, the Commonwealth reorganized the way the state served its citizens, and through KyDirect, worked to put more and more of its services on-line in an accessible yet secure avenue. The lessons we learned in this effort, as I stated in my introduction, are common to most state experiences in establishing a CIO office, and have direct implications for the federal government as it strives for its own solution to the challenge of implementing a government-wide to managing information technology.

The effort must have strong executive leadership and commitment. As you will see in NASIRE's recently updated *Issue Focus Report* on the role of the state CIO, most state CIOs feel that their power to affect change within the enterprise is dependent upon the commitment of their governors. As has often been said, that commitment is crucial if the CIO is to implement innovative applications of information technology across agencies.

Leadership must be willing to invest in IT to result in cost savings. I've cited Kentucky's expectations to post a significant return on our investment in information technology. Further, as IBM's Institute for Electronic Government has estimated, governments are saving up to 70% by moving services online compared to providing these services over the counter. However, this initial investment must be found as state, and even federal, budgets move into an era of decreasing surpluses or even deficits.

There must be a first be a focus on application/solution delivery rather than hardware/infrastructure. This approach moves the focus away from information systems to system-wide approaches to providing solutions to citizens. State CIOs have learned they need the authority for managing IT policy across state agencies to implement solutions across stovepipes. The larger the enterprise view and responsibility of the CIO, the better IT solutions a government achieves.

Leaders must be willing to explore other management models rather than focusing only on centralized/decentralized environments. As can be seen in the accompanying Issue Report, most state CIOs do not work alone - many of the state CIOs have a state information resource management commission, advisory or governing board, that might be comprised of agency CIOs and other representative from across the enterprise. Levels of authority and accountability should be the focus, as they work within the context of government functions.

Performance metrics that measure true outputs/outcomes must be put into place and followed. State CIO scope of approval authority is usually over the setting of statewide IT plans and policies and approving statewide technical IT standards, rate schedules (for shared IT services), budgets, salaries and resource acquisitions. Within this scope must be included the ability to set performance metrics and then the authority to hold people and agencies accountable to those metrics. Improved access and service, as well as cost savings or efficiencies are paramount here.

Additionally, let me offer an insight into the current debate over where an enterprise chief information officer should sit in the federal government. While NASIRE favors the establishment of a strong federal CIO position, where the CIO sits is not as important as what authorities the office has in the execution of federal IT policy. For state CIOs, charged with implementing the Governor's IT vision, interaction with the Governor is critical to the success of that implementation. Not all state CIOs are cabinet-level officials. In the many cases the state CIO resides within the state's department of administration, but this arrangement is not akin to position of the Deputy Director for Management within OMB. It is formal authority combined with high-level access to the chief executive that empowers the CIO. In the states, officials with CIO responsibilities operate under a variety of titles, including director, commissioner, chief technology officer, and chief information technology officer among others. More important than

titles is their ability to set standards, review procurement, hold projects accountable, provide funding incentives, and be recognized as the policy leader across the enterprise.

Finally, I'll close with a few comments on why NASIRE and state CIOs are so critically interested in an office with the necessary invested authority of a federal CIO. Just as state CIOs provide a single point of contact, a consensus-builder and, in some cases, common standard bearer for the myriad of state agencies and local governments, so too would a federal CIO provide a single point of contact for state CIOs to coordinate with across the various federal agencies that interact with the states. Having a key authority figure in a federal CIO will allow for the stronger coordination of IT policy across local, state and federal agencies for the complex information systems required to provide solutions to the governance problems of today. On behalf of the nation's state CIOs, I am looking forward to the day when such an office, with the requisite authority, is established to help the states move forward in completing our own IT service goals.

Attachment A

Representing Chief Information Officers of the States
Revised March 2001

Issue Focus Report: The Role of the State Chief Information Officer

Introduction

For the purposes of membership within its organization, NASIRE defines the "state CIO" as being the highest level information technology (IT) manager with statewide authority. While each branch of government might have a CIO, NASIRE has focused on the executive branch CIO who works under the state's chief executive officer, the governor. Thus, nearly every state has an executive branch CIO who oversees the state's technology infrastructure. CIOs operate under a variety of titles, including director, commissioner, chief technology officer (CTO), and chief information technology officer among others. However, the recent trend continues toward designating some executive IT manager as the titular chief information officer. Some CIOs, who work under cabinet-level officials, also hold departmental titles such as deputy or assistant secretary of administration or commerce.

Generally, with the title "CIO" comes some advisory responsibility for statewide IT policy, not just management. Many, if not all, CIOs report to the governor in some capacities, formal and informal. CIOs can be called upon to advise the governor on IT matters, deliver agency IT budgets, and draft proposed legislation. While some state CIOs report solely to their governors on technology issues, many are also responsible to cabinet-level officials, such as the secretary of administration, commerce, or revenue. According to a review conducted by NASIRE in March 2001, 25 states have a CIO in place which reports directly to the governor. (Only eight states reported that arrangement in a 1998 NASIRE survey.) Twenty-four state CIOs report to a staff, legislative, or cabinet level officer. One is moving toward a CIO type structure. In addition, many, if not all, CIOs are called to testify before state legislative IT committees on the costs and benefits of IT investment options. The number of states in which CIOs report directly to the governor is on the increase.

CIO roles and responsibilities can include: general legislative advocacy; IT project-management oversight; authority to enter into outsourcing arrangements; and responsibility for enforcement of privacy and security guidelines. CIOs are being given more authority for managing IT contracts; IT procurement; web site/portal development; providing reimbursable IT services (e.g., data storage, communications bandwidth, network management, IT project management etc.) to state agencies; information architecture development, responsibility for statewide business process re-engineering (BPR); and the responsibility for leveraging state IT infrastructure to promote economic development and equal access to IT resources for the state's citizens.

A recent trend shows states creating IT resource pools, which include funds earned by the CIO through competitive service provision to state agencies. These funds can be supplemented by direct allocations and bonding authority for the CIO who uses the money to provide loans and/or grants to state agencies for timely and collaborative projects. These funding incentives

combined with procurement review and project management review give CIOs powerful tools to keep agency projects in line with standards and meeting benchmarks for progress and return on investment (ROI).

However, the CIO's position in the hierarchy of state government does not necessarily indicate the breadth of authority. Some states grant their CIO authority across the state enterprise, including telecommunications networks, K-12 school systems, community and technical colleges, and public universities. Moreover, most state CIOs do not work alone. The purpose of many of the bodies is to provide opportunities for standards development. More than half of the states (28) responding to a 2000 survey have a state information resource management commission, advisory, or governing board. It might be comprised of the agency CIOs and other representatives from across the enterprise. The body can be supplemented with other IT stakeholders appointed by the governor and/or the legislature. The CIO might serve as a member or even the chair of the body, reporting on progress in IT initiatives. The CIO is often empowered to enforce standards adopted by the body.

A universally accepted definition of the qualities of a state CIO does not exist, and, given the diversity of state governmental cultures, no uniform CIO "model" is likely to emerge in the near future. The legislated and *ad hoc* roles of the CIOs are evolving as quickly as the technology they oversee, which makes it difficult, if not impossible, to get even a complete snapshot of the present order of CIOs. Therefore, in order to elaborate on the concepts mentioned above, some anecdotal commentary will follow regarding the general trends in CIO authority among the states.

The Role of the CIO Today

In his recent testimony before the House Subcommittee on Government Management, Information and Technology, Otto Doll, NASIRE President and Commissioner, South Dakota Bureau of Information and Telecommunications, explained the importance of the office of the chief information officer. As information technology becomes an essential part of government services, he said, strong CIOs are needed to implement the vision of their governors. Such a CIO has authority over IT on many levels. The CIO can approve changes in IT policy, practices, and standards, including establishing statewide computer system standards. The CIO can be the final authority on statewide IT procurement, working with vendors on essential upgrades and determining uniform computer specifications to ensure compatibility. Such far-reaching, centralized authority can allow CIOs to better work with governors on the complex task of reinventing government services through information technology.

Doll's testimony was echoed by a number of CIOs and others who participated in a roundtable discussion at NASIRE's 2000 Mid-Year Conference in Asheville, North Carolina. The discussion centered on determining what is "real CIO authority" as it was put by Thom Rubel, Director, Center for Best Practices, National Governors' Association (NGA). Rick Webb, Chief Information Officer and Assistant Secretary for Information Technology, North Carolina Department of Commerce, said that his state has moved IT management into the forefront. The state's Senate Bill 222 dramatically reconfigured state management of IT, including budgeting, planning, and procurement, and established the position of CIO. The goal is to break down silos and make the enterprise the central concern. Laura Larimer, Director, Data Processing Oversight Commission, Indiana Department of Administration, added that IT management involves more than establishing a position of CIO. That role must be made central to the IT management process and be reinvented over time.

Wendy Rayner, Chief Information Officer, Office of the Governor of the State of New Jersey, added that an effective CIO will have a clear mandate from the governor and access to the governor's office. That access should represent a "constant dialogue" between the CIO and the governor on IT issues. For a governor to be truly supportive, the CIO must have open access to the governor's office. Al Sherwood, State Electronic Commerce Coordinator, Office of the Governor of the State of Utah, commented that the formal title of "CIO" is not as important as "statutory, enterprise-wide authority" invested in a CIO-like position. Steve Kolodney, Director, Washington Department of Information Services, added that the CIO must have tangible "resources to bring to the party," which come from having resources to invest in ideas and a reputation for delivering results. He believes that some CIOs have enjoyed intangible benefits that CIOs cannot necessarily control, such as coming from technology-rich regions.

Webb stated that CIOs must have the ability to balance operation and innovation. Change management and the authority to reorient the business culture are integral to the job. Doll commented that CIO should be a peer to the other agency chiefs, including control of IT operating funds, which can relieve some of the need to rely on gubernatorial access. Moore said that the CIO should have authority over the process, including policy and standards development. The CIO should be part of the "governor's team" with a formal role of leadership, not just IT management.

George Boersma, Chief Information Officer and Deputy Director, Michigan Department of Management and Budget, stated that he is invested with executive authority to oversee all IT projects, while he does not formally report to the governor. He said, "A CIO must have vision, then the governor will see you." The CIO must be willing to make tough decisions when enforcing standards and be able to go with a decision once it's made. Charles Gerhards, Deputy Secretary for Information Technology, Pennsylvania Office of Administration, agreed, saying that a CIO must be empowered to "push back and push back hard" when defending decisions. The agencies must know that "the governor wants it done." Don Hutchinson, Deputy Commissioner for Technology, Economic Development, and Capital Outlay, Louisiana Division of Administration, added that the CIO must have the respect of peer cabinet secretaries and support from the governor. IT affects economic development and education, which are key goods for the citizens.

Elias Cortez, Chief Information Officer, California Department of Information Technology, remarked that California has 81 functional CIOs, which makes it important for the state CIO to remain engaged in "mission-critical decision making." Randy Von Liski, Deputy Technology Officer, Illinois State Technology Office, added that Illinois is considering providing its Chief Technology Officer, with the necessary authority to oversee policy and vision development, procurement, as well as centralized operations and budgeting. David Litchliter, Executive Director, Mississippi Department of Information Technology Services, said that budgeting in Mississippi is a challenge as his office is a fully reimbursable agency that must fund itself, which makes it difficult for him to get the necessary funds "to get out front on innovation."

Aldona Valicenti, Chief Information Officer, Governor's Office for Technology, Commonwealth of Kentucky, asked for the essential characteristics for a CIO. Rayner said the CIO must sit on the governor's cabinet. Larimer offered that the CIO should have access to the governor's key staff and be a part of the weekly meeting of the governor's advisors. Doll reiterated that the CIO should be on a peer level with cabinet officers. Alisoun Moore, Chief Information Officer, Maryland Department of Budget and Fiscal Planning, commented that many state CIOs will have to live with multiple bosses as they sit under cabinet secretaries.

Webb concurred that directly reporting to the governor would be nice, but, being under a cabinet officer, he must manage six to eight bosses at all times, which leads to more time spent "keeping everyone on board."

Moore said that economic development and education are priority concerns for improving the standard of living for citizens. Valicenti said that her job is about aligning government with the business needs of the citizens. The CTO handles the operational and telecommunications concerns. Larimer added that she is involved with high-tech commercial development, saying, "You can't attract high-tech businesses without a high-tech state to support them."

Boersma stated that his roles are to (1) put governance in place to fulfill the executive order for enterprise control, (2) oversee methods and standards through the project management office, (3) oversee strategy through the office of IT solutions, (4) provide centralized computer services for state agencies, and (5) assess agency IT through benchmarking, which will move the infrastructure toward the state's e-commerce vision.

Kolodney commented that, as a cabinet level department, his office oversees telecommunications (voice and data) and providing discretionary services to other agencies on a competitive basis. His agency receives no appropriation. His Information Services Board is chaired by the governor's chief of staff. The board includes higher education and the courts among others. He believes that being self-funded keeps the agency disciplined. Webb agreed with Washington's approach, saying that IT services must have "mass-market appeal." North Carolina works with a management commission and an association of state IT industries. He finds that metrics keep the pressure on the agency to perform.

Valicenti asked which one change would the CIOs most like to make to their jobs. Gerhards answered that he would eliminate the agency concept—declare one, unified state government that works for the citizens. It would be functional and responsive. He said that this arrangement is the only choice or more problems for government will lie ahead. Sherwood said he would have the federal government interact with the states on a functional basis, much like the block grant arrangements. Webb said he would institute incentives for performance. Government presently offers high risk with low rewards. He would reward employees for decision-making and pay for performance.

Boersma asserted that removing cultural barriers would be his choice. Moore agreed with Webb's desire to revise personnel compensation to make it more performance-based. VonLiski would implement faster procurement processes to align with the technology cycle and allow decisions to be based on state-vendor relationships. Litchliter said he would establish a technology innovation fund to provide incentives to agencies. Kolodney asserted that these are the best of times for CIOs. "All the doors are open. We have a profound opportunity to fundamentally change government. It's ours to win or lose."

The Future of the State CIO

As digital government evolves from the brick and mortar era of the industrial age, pressure will build to enable electronic service provision and business process reengineering. The first phase of government-to-business electronic interaction is already well underway. Government-to-citizen and government-to-government electronic interaction is rapidly increasing. As digital government reaches more people, elected officials will have more interest in pulling policy development and enforcement out of the bureaus and into the executive offices and legislative chambers. Citizens do not yet notice digital government like they do road-paving

projects. But, the day will soon arrive when they notice potholes in their on-line services, and they'll want their government to fill them.

Already, governor's offices around the nation are establishing adjunct bodies to assist with the move toward digital government. Michigan Governor John Engler recently established by executive order the temporary (two years) E-Michigan Office to coordinate the state's enterprise electronic government rollout. The office will have a director and a five-member advisory council appointed by the governor. Focusing on business services, citizen services, and outdoor recreation, the office will work closely with the state's CIO.[1]

On July 1, 2000 Georgia will establish the Georgia Technology Authority, consolidating IT management and incorporating the existing IT Policy Council and the GeorgiaNet Division. This legislation pays particular attention to telemedicine, distance learning, and IT portfolio management. The permanent body will consist of eleven members appointed by the governor (seven), lieutenant governor (two), and the speaker of the house (two) with the state CIO serving as executive director.[2] The appointees are expected to come entirely from the private sector.[3]

Montana is currently establishing an Internet Technologies Services Bureau to lead the state into web-enabled government. Kentucky recently abolished its Department of Information Systems, the Kentucky Information Resource Management Commission, and the Communications Advisory Council in favor of a new Governor's Office for Technology (GOT) headed by the state CIO. The office enjoys authority over geographic information systems, mobile radio emergency telecommunications, and architecture (e.g., standards, directions, privacy, and confidentiality).[4]

In addition, a number of CIOs are working with bodies formed by public-private partnerships overseeing state portal web sites and fee-based volume data transactions. One such partnership is embodied in Indiana's 16-member Intelenet Commission, which oversees the state's partnership with the Access Indiana Information Network (AIIN), a subsidiary of the National Information Consortium. The AIIN includes operation of the state's portal web site, premium fee-based transactions services, and a public telecommunications network. AIIN is governed by the Enhanced Data Access Review Committee (EDARC), comprised of up to eleven voting members, including the state CIO (i.e., the director of the state Data Processing Oversight Commission).[5]

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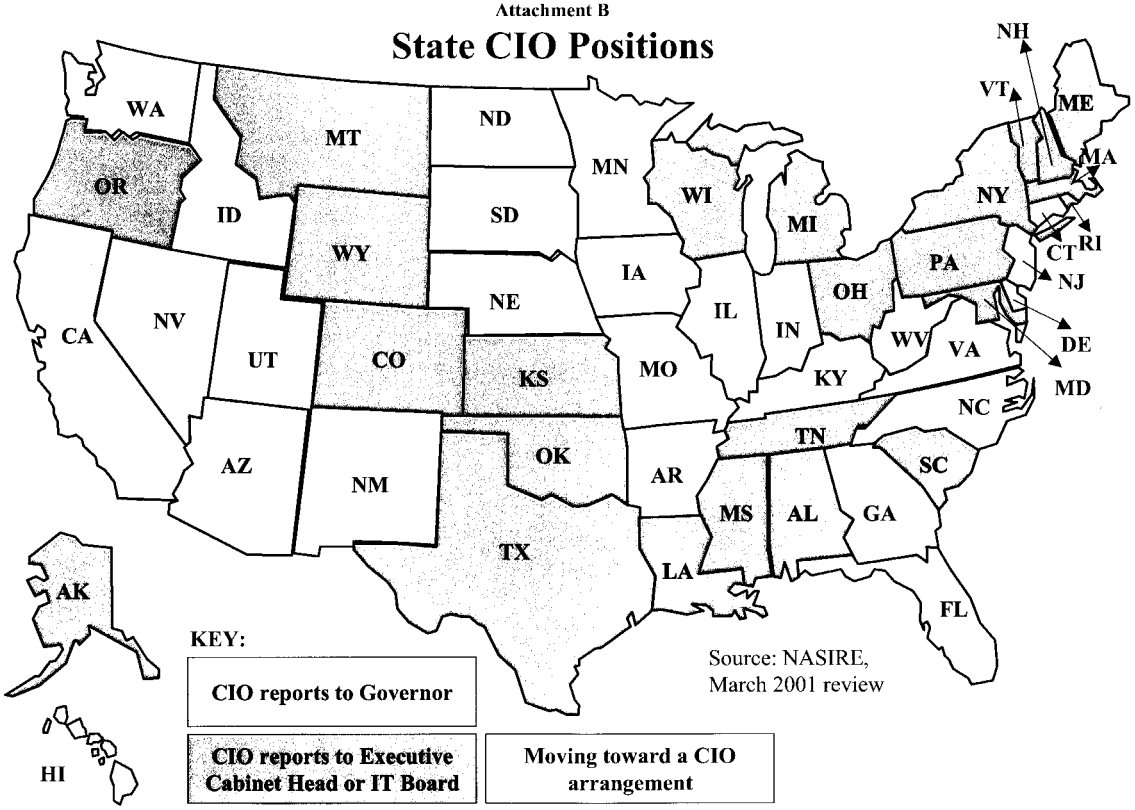
[1] Engler, Gov. John, "Executive Order No. 2000-6," April 5, 2000, <http://www.state.mi.us/cio/emichigan_eo.shtml> (May 19, 2000).
[2] Georgia Senate, "SB 465" March 22, 2000 <http://www.state.ga.us/services/leg/ShowBillPre.cgi?year=1999&filename=1999/SB465> (June 22, 2000).
[3] GT News, "Georgia Technology Authority To Launch This Summer," Government Technology, June 2000, 11.
[4] Kentucky House of Representatives, "HB 842" April 21, 2000 <http://www.lrc.state.ky.us/record/00rs/hb842.htm> (June 23, 2000).
[5] [Anonymous], "About the Access Indiana Information Network," <http://www.state.in.us/intel/> (June 23, 2000).

Attachment B

State CIO Positions



Mr. DAVIS OF VIRGINIA. Secretary Upson, thanks for being here.

Mr. UPSON. Thank you, Mr. Chairman.

Mr. DAVIS OF VIRGINIA. Mr. Upson is a former staffer on the full committee here before he went into private sector and then into State government, so welcome back.

STATEMENT OF DONALD W. UPSON, SECRETARY OF TECHNOLOGY, COMMONWEALTH OF VIRGINIA

Mr. UPSON. Thank you, Mr. Chairman. It is a special privilege to be before this committee, and also before you. As you know, I'm a great fan of the work you've done on this committee, and you know exactly what technology can mean to government from your background.

Congresswoman Davis, we missed you on the Science and Technology Committee this year in Richmond, but we're awfully glad you are on this subcommittee and in the Congress, as well. It is a pleasure to be here.

I'd like to explore the issue a bit, Mr. Chairman, why are States putting in place cabinet-level CIOs, and I would suggest that it's not just about government services or on line or any of those things; that it's really I think governments today feel a sense of competition, to a degree unprecedented in history, one with another, and somehow believe—correctly, I think—that technology is critically linked to the economic viability of their communities, their citizens, and certainly their States.

I would like to quote Cisco president, John Chambers, who says, "The future does not belong to the big over the small, but the fast over the slow."

And I would also suggest that whether a CIO gets established at the Federal level is a question of time and not whether it occurs. again, I would commend that fast over the slow analogy.

But why did we create one in Virginia and what did we do that's different? As you said, Mr. Chairman, I worked on this committee on three or four laws that attempted to elevate technology in government, and none of them worked that well, and it's because it was very difficult for people like you, or cabinet secretaries, or certainly the President just didn't seem to care much about how fast the computers were or how broad the bands were. They were concerned about what those things were connected to.

So what we attempted in Virginia was to build a law that focused as much on management as it did on technology. What do we do with the computers and the networks? What do they connect to, and what are we trying to accomplish?

We first tried to define "electronic government," and we recognized very quickly that it wasn't just about what the State did, but it was, more importantly, about what counties and local government did. And so we built an office that I'm privileged to hold, Governor Gilmore put in place and has supported throughout its tenure. My office has direct management control over procurement and everything else, approval over major systems at the State level, but also comes with a statutory council of technology executives from every major department, all three branches of our State government, but critically three key representatives from local government. I'm very pleased that my colleague, David Molchany, is

here because he sits on that council. We meet, by statute, monthly and we explore issues together and we learn things. In fact, I would emphasize that—that we're all learning. We haven't—none of us had computers on our desks 20 years ago, and less than 10 years ago there was no electronic government.

But we talk about citizen access begins at the local level, and that's where transactions need to occur and that's where the empowerment needs to occur, in our vision, in terms of the State. We have a statutory structure in place that feeds to that.

States, we do a mix of systemic things. We do some citizen services and we have systemic relationships with education, transportation, but really we're sort of passing down the implementation of that to a more local level.

Now, the Federal Government, I would suggest, works on two levels—a little bit of citizen interaction, but not much. It is really interdepartmental process where agencies and departments will tend to protect their turf, and intergovernmental processes, which together we spend $94 billion on technology to somehow manage those processes.

Unless there is a senior executive that can bring together senior executives in other departments, you're never going to get through and break through the bureaucracy and the processes that need to break through to create a competitive economy and to empower our citizens. That's why we think it is critical to have a State executive in our government, and at the questions we can go into a host of things that I think we've tried—that we've accomplished.

But I'd like to just leave you with that thought. It's about interdepartmental and intergovernmental relationships, and as you build a statute you might want to think about that council of executives not just from the Federal level, but maybe include one or two from State government and local government, and perhaps private sector interests, perhaps, where it is appropriate. But recognize that electronic government, if it is really going to be successful, has to cross all levels of government.

Virginia is participating with—actually, leading a pilot project with the Federal Government on something called "government without boundaries," and we have interest at the Federal level now to port its applications to the most local environment, our community.

That would conclude my remarks.

Mr. DAVIS OF VIRGINIA. Thank you.

[The prepared statement of Mr. Upson follows:]

Remarks by Donald W. Upson
Secretary of Technology
Commonwealth of Virginia
Before the
Subcommittee on Technology and Procurement
Committee on Government Reform
US House of Representatives
April 3, 2001

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to speak before you today. It is a special privilege to appear before my friend and former colleague, Chairman Tom Davis. He and I worked together at the same company in the private sector, a company that worked in the Federal government's $40 billion information technology market. I would also like to recognize and congratulate Congresswoman Jo Ann Davis. I had the privilege of working with Representative Davis in Richmond while she was a member of the Science and Technology Committee in the Virginia House of Delegates. I know that the three of us, and I am sure many of you, share similar and strong views about what technology can do, not just to improve government's operation, but to better position our economy and our citizens for this incredible Age of Information that is upon us.

Simply stated, the Federal government especially can do a better job at managing technology and the positive opportunities it presents to break down bureaucracy at all levels. While, as I stated, we spend nearly $40 billion in information technology at the Federal level, and some $54 billion across state governments, we have yet to agree on even a definition of

electronic government. We have not defined databases that need protecting, costly and burdensome intergovernmental processes that can be improved, interdepartmental processes that can be coordinated, and the list could go on. And while we recognize that there is plenty of room for improvement, the truth is that we all have been learning. It has been less than 20 years since the first computers reached desktops at Federal agencies. But they are here now. And the urgency of change dictates leadership and organization, for, as Cisco Chairman John Chambers likes to say, the future belongs not to the big over the small, but to the fast over the slow.

Before I speak to the wisdom of a Federal CIO, let me first try to put some definition around electronic government. Since the privilege of my appointment by Governor Gilmore as Virginia and the country's first Secretary of Technology, we have put together a comprehensive and aggressive technology strategy for the Commonwealth. It is one that has electronic government as a significant component. There are component parts to our e-government program, and I am proud that for two years running we are one of just a few states to be graded "A" by Governing magazine for our management of technology resources. We believe, first and foremost, that a critical appreciation of what electronic government is, at three important levels of government, is essential.

At the Federal level, electronic government is not about "service to the citizen," which for years has been the mantra in Washington. I know few citizens who wake up in the morning looking to do electronic or any transactions at the Federal level. At the Federal level, the focus of electronic government might best be aimed at interdepartmental and intergovernmental

First, we have placed great emphasis on creating committed stakeholders. Virginia's Constitution awards its Governor perhaps more executive power than any state in the nation, and our General Assembly has given my position substantial oversight regarding IT expenditures and major IT projects. What we've emphasized over the last three years, however, is not authority but collaboration. My 24-member Council on Technology Services includes representatives from agencies in every Cabinet Secretariat, from all three branches of state government, and from local government. This body is deeply involved in the development of, and provides critical advice to me on, every policy, standard, and program initiative we undertake.

Let us remember, too, that electronic government at the state level is a little different from what I would recommend as a federal focus. At the state level, we have a combination of both systemic and citizen services. For example, we might set state standards for education, employ formula-based allocations to local governments on a host of programs, but we also grant and renew driver licenses, register vehicles, register voters online.

Moreover, we're reaching out to local communities and their business people as well as local elected officials. These are the people who make up such energetic bodies as the Governor's e-Communities Task Force. Just last month, this group published the first set of guiding principles for use of the Internet and communications technologies to improve both the quality of life for their citizens and the economic vitality of their communities and regions. Governor Gilmore challenged every community in Virginia to formally adopt these principles and put in motion a program to bring not just

government services, but also a spectrum of community-centric business, education and community services as well. That not only is what citizens want, but that is what makes sense. And it is from the community level of government that we believe all levels of government should focus as the point through which all government services are accessed.

As Governor Gilmore has shown, vision at the highest levels is essential to this effort. When such vision is used to energize, mobilize and bring together those who will ultimately be the beneficiaries of technology with those who have the technical know-how, the results can be more immediate and far-reaching than any set of regulations we could possibly put on the books.

Second, in Virginia we try to focus all participants on their value-added opportunities. Value-added is no less valid a concept in government than it is in the private sector. Each agency needs to take a hard look at why it is in business—not just from the inside but also from its customers' perspective. What we've found in Virginia is that when we get together and discuss where the value is in our respective activities, a certain compelling logic usually emerges. That approach has led us to developing a central authority for issuing electronic signatures where they are needed to do business with state and local agencies. Our tax, employment security, and corporate registration agencies are collaborating on Web-based applications for serving Virginia's businesses. We also decided we needed central electronic purchasing, and we needed it now, not two or three years down the road. Last month, Virginia's total electronic purchasing solution, e-VA, came on-line, a self-financed, outsourced solution that went from concept to reality in less than 10 months.

At all levels of government, similar value-added opportunities exist. Resources will always be an issue, but it does not have to take years of planning and huge appropriations to figure out how to take advantage of many of them and determine who logically needs to do them.

Third, we constantly seek to understand the roles government *can* play and the roles it *shouldn't* play. Having now worked in government at both the federal and state levels, I recognize that we sometimes get too wrapped up in ourselves and the importance of our positions. Perhaps nowhere is that better illustrated than in the emphasis we place on "brand-name identification" for our Web sites. I'm proud that "My Virginia" was the first personally-customizable state homepage in the nation. However, when we sat down to figure out where we wanted to go with our state Web portal, we decided that in the long run it did not make sense for Virginia to try to compete as a personal homepage with the multi-functional, content-rich AOL's and Yahoo's of the Internet world. What makes more sense, at least to us, is for Virginia to be the state and local content provider on these well-established commercial homepages. We are currently in discussions with the major portal providers to do just that.

It is equally important that we candidly recognize the appropriate role for each level of government in the evolving Internet environment. You may have noticed in my remarks thus far that when I mention Virginia state government I consistently add "and local government". This is not a casual aside. Our extensive stakeholder involvement has brought home to us that local government is where citizens directly get most public services and the level with which they most closely identify. If we are truly to take advantage of the potential of seamless service delivery that the Internet

offers us, then we must adopt our customers' perspective in implementing e-government.

As I alluded to earlier, I would once again respectfully suggest the federal government learn this lesson as well. With relatively few exceptions, federal agencies are not direct service providers to individual citizens. Federal programs are predominantly implemented through local and/or state intermediaries. And yet we find that the current federal Web emphasis appears to be on federal portals and federal Web kiosks—a focus on "branding", if you will, that appears inconsistent with how our mutual customers, as I already have stated, actually view government.

Creating committed stakeholders, focusing on true value-added, and understanding government's appropriate role—these are three principles that have served Virginia well thus far in implementing electronic government. While the specific outcomes may differ, I would suggest that these same principles could be of great value in managing federal IT initiatives in support of effective and robust electronic government. I would emphasize three other underlying themes of electronic government, at all levels: collaboration, cooperation and coordination.

Who at the Federal level has the authority and statutory framework to move forward with such a critically important vision? You know the answer. That is why you are holding this hearing. That is why I am here. Governor Gilmore and I believe passionately in the ability of government, through a 21st century model of technology and management, to bring people together and (1) build the best business environment possible, and (2) ensure that all citizens have access to the opportunities this exciting new age offers. A strong technology position in government can work. In Virginia, it does work. It works because a position with authority was established,

and also established with that position was a statutory framework that ensured all parties had a seat at the table.

That, Mr. Chairman, is the intent of your legislation. Your effort is timely, and I hope it leads to action. Your effort, the efforts of your colleagues here on this subcommittee, and indeed in the Congress, are being watched with anticipation, not just by those in or who work with the Federal government, but by many thousands of us at state and local government levels who are affected by technology policies at the Federal level. I wish you every success. Thank you.

Mr. DAVIS OF VIRGINIA. Mr. Gerhards, thank you.

STATEMENT OF CHARLES F. GERHARDS, DEPUTY SECRETARY FOR INFORMATION TECHNOLOGY, GOVERNOR'S OFFICE OF ADMINISTRATION, COMMONWEALTH OF PENNSYLVANIA

Mr. GERHARDS. Chairman Davis and distinguished members of the subcommittee, I am the chief information officer for the Commonwealth of Pennsylvania. Thank you for the opportunity to share some of our experience managing enterprise-wide technology projects in Pennsylvania.

Let me begin by explaining that the management of technology initiatives in Pennsylvania has changed dramatically during the past 6 years. Before Governor Tom Ridge took office in 1995, few State agencies worked together to coordinate technology projects. Many of our technology investments were duplicated across organizations, and, unfortunately, opportunities to leverage the Commonwealth's considerable buying power many times went unrealized.

That all changed in 1995. Governor Ridge has made technology a centerpiece of his administration. He appointed the Commonwealth's first chief information officer in 1995. He also established the Office for Information Technology, which is managed by the CIO.

As CIO, I report to the Secretary of Administration. The Secretary reports directly to Governor Ridge, and is also a member of the Governor's senior staff.

During the past 6 years, under Governor Ridge's leadership, Pennsylvania has gained a national reputation as an emerging high-tech leader. We have dramatically changed people's perceptions of Pennsylvania, which formerly had been viewed as a lumbering rust-belt State, and we've also accomplished major technology deployments within State government that simply were not possible during previous administrations.

Our success springs in great part from the Governor's vision to establish a centralized Office for Information Technology led by a CIO with the authority and empowerment to effectively lead enterprise-wide technology initiatives.

Let me give you a few real-world examples. Pennsylvania has been the first State to consolidate and out-source all of our agency data centers on an enterprise scale. Previously, we had 16 separate data centers that existed, all within a few miles radius of the State capital. Today those data centers have been consolidated and are being operated by a private sector vendor.

Another example is a project known as "Commonwealth Connect." The Governor recognized that our agencies were using multiple e-mail systems and desktop software, from word processing to spreadsheets. This resulted in significant loss of employee productivity. So at the Governor's direction we now are moving all of our 40,000 personal computers—and it is growing—to one single e-mail system and a single suite of desktop software, and we've done a number of studies that will show that this standardization will save millions of dollars annually.

Finally, let me mention our nationally recognized Justice Network. When Governor Ridge came to office, our criminal justice agencies could not easily share electronic files on criminals and

criminal suspects. Today, our new Justice Network provides a secure system for criminal justice professionals to share data files, and by taking this enterprise approach this system has helped to identify major felons, including murderers and rapists. In fact, the FBI recently used our system in order to identify some felons, some bank robbers.

Having worked in State government for more than 30 years, I can tell you that efforts had been made under previous administrations to accomplish enterprise initiatives, and, frankly, very few of those succeeded. And the big question is why? And the major reason is that we lacked a central organization that had authority and empowerment to properly manage many of these strategic and enterprise-wide projects. The organizational changes that Governor Ridge introduced have made a significant difference.

Over a period of 6 years we've had opportunities to refine our approach in managing these enterprise technology initiatives. I'd like to briefly share some of the lessons learned, and perhaps the foremost of those lessons is the first—our firsthand experience in seeing the value of strong executive leadership, and I believe many of the panelists have stressed that. Without the leadership, you don't have the empowerment, and without the empowerment there is little chance that you're going to have an enterprise approach to government.

We've seen great advantages and benefits of rewarding and recognizing those State agencies that seize opportunities to work together. Likewise, we recognize that occasionally we need to introduce disincentives for those agencies that don't care to work or they want to work independently.

I believe our success in Pennsylvania demonstrates the importance of having a CIO in place to seize the many opportunities to make government at all levels operate more effectively.

That concludes my statement. Again, I appreciate the opportunity to be here and share some of our experience, and I would be happy to answer questions at the appropriate time.

Mr. DAVIS OF VIRGINIA. Thank you.

[The prepared statement of Mr. Gerhards follows:]

Statement by
CHARLES F. GERHARDS
DEPUTY SECRETARY FOR INFORMATION TECHNOLOGY
& CHIEF INFORMATION OFFICER (CIO)
GOVERNOR'S OFFICE OF ADMINISTRATION
COMMONWEALTH OF PENNSYLVANIA

before the
SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY

of the
COMMITTEE ON GOVERNMENT REFORM

U.S. HOUSE OF REPRESENTATIVES

April 3, 2001

Introduction
Chairman Davis and distinguished members of the subcommittee, I am Charles Gerhards, chief information officer for the Commonwealth of Pennsylvania. Thank you for this opportunity to share some of our experience managing enterprise-wide technology projects in Pennsylvania. I hope that some of the information we share will be useful in guiding the work of this subcommittee.

I am proud to say that I am a career public servant, having worked for over 30 years with the Commonwealth of Pennsylvania. During that time, I have been privileged to work on many pioneering information technology initiatives with various state agencies. For the past six years, I've had the opportunity to help manage some of Pennsylvania Governor Tom Ridge's leading technology projects. These enterprise-wide projects are aimed at improving our delivery of public services through the effective use of information technology. Two years ago, I was named as the Commonwealth's chief information officer, or CIO, and I am the second person to have held this office.

Overview of the CIO Position in Pennsylvania
Before the Ridge Administration came to office, there was little coordination between Pennsylvania's state agencies on technology projects. As a result, there was much duplication of our technology resources. Governor Ridge appointed the Commonwealth's first CIO six years ago, during his first months in office. At that time, he also established the Office for Information Technology, which I head. Governor Ridge clearly recognized the value of technology to help

improve state government operations. He also decided that he needed one official – a state CIO – responsible for overseeing our technology strategy and investments.

In my position, I report to the Secretary of Administration, who, in turn, reports directly to the Governor and is a member of the Governor's senior staff. Routinely, the Governor receives briefings on our many high-tech projects. I believe the Governor's leadership in establishing the CIO's Office for Information Technology early in his Administration, combined with his strong interest in technology issues, illustrates an important lesson for organizations looking to centralize management of their technology initiatives: that is, the value of strong executive leadership. My office is empowered to direct enterprise-wide technology initiatives, in great part, because of the clear authority granted to me by Governor Ridge.

As Pennsylvania's CIO, I directly manage a staff of over 200 information technology professionals who work on a number of large-scale, enterprise technology projects. In addition to my Office for Information Technology staff, state agencies employ another 1,500 technology professionals.

Real-World Examples Illustrate Pennsylvania's Success

In establishing the CIO's Office for Information Technology, one of Governor Ridge's primary objectives was to begin addressing business process issues from the enterprise level. He realized that some of our technology investments were inefficient because similar technology resources that could have been consolidated had, instead, been duplicated in several agencies. The Governor saw that these lost opportunities could best be reclaimed through a centralized technology office headed by an empowered CIO.

Let me give you some examples. Pennsylvania has been the first state to consolidate and outsource our agency data centers on an enterprise scale. Previously, 16 agency data centers existed – all within an eight-mile radius of the state Capitol. Today, those data centers have been consolidated and are being operated by a private sector vendor. Participating state agencies now have access to specialized services that few of them could have afforded on their own. That's one example of the benefits we're seeing from taking an enterprise approach to our technology investments.

Another example is our Commonwealth Connect project. Governor Ridge recognized that our agencies were using multiple e-mail systems and desktop software, for things like word processing and spreadsheets. We all know the frustration that can occur when you receive electronic documents that you simply cannot open on your PC. At the Governor's direction, we are moving all state agencies to a single e-mail system and a single suite of core desktop software. By taking this action, Pennsylvania state government is saving $9 million dollars over the three-year life of our contract with Microsoft. Just as important, our employees have been given the tools to help them be more productive. No more frustration over lost e-mails or incompatible files.

Another of our enterprise projects, called "Imagine PA," is just getting underway. This project involves a migration from our current computerized business systems to new software supplied by SAP, a global leader in enterprise resource planning. The new software we will be

implementing will be used to better manage our accounting, budgeting, payroll, personnel and purchasing functions across all state agencies. The software employs best business practices that will help us to streamline our business operations. A key benefit is that our agency business managers and executives now will have access to real-time business data for guiding their daily decision making – something that has not been available in the past.

Finally, let me mention our pioneering Justice Network. When Governor Ridge came to office, our criminal justice agencies could not easily share electronic files on criminals and criminal suspects. This not only increased our operating costs, but it represented a lost opportunity for using information as a powerful tool to fight crime. Today, our Justice Network provides a secure system for criminal justice professionals to share data files and to receive timely notices any time a case file changes. By taking an enterprise approach, our public safety professionals now are better prepared to keep our communities safe.

The Challenge of Undertaking Enterprise Technology Initiatives

Before we in Pennsylvania could start any of these projects I've just mentioned, we had to begin by identifying those functions that are shared across agencies. While some functions are unique within agencies, clearly there are some that are common to most. The challenge has been to properly identify those shared functions and then use the best approach for addressing those functions jointly. In some instances, this has involved the centralization of a function within a single facility. In others, we have been able to support these shared functions by implementing web-based applications that allow agencies to freely share data from disparate information systems.

For instance, we recognized in 1999 that eight of our agencies played a major role in registering and regulating new companies wanting to do business in Pennsylvania. This presented a burden for entrepreneurs, who would have to contact each of these agencies individually before they could open their doors to do business in the Commonwealth. What did we do? We brought these agencies together to jointly develop a website offering the forms and services needed by these new firms to start a business. This website presents a "single face of government," and the information collected there is properly channeled to the appropriate agencies. We call the site "PA Open for Business," and the public response to this 24-hour service has been extremely positive. Today, we have registered users of the website from all 67 Pennsylvania counties and all 50 states. We even have visitors from all six inhabited continents, excluding only Antarctica. That's the power of taking an enterprise approach.

As we've gained more experience in leading enterprise technology projects, we've become more adept at identifying programs best suited for enterprise solutions. One tool that's been especially helpful is the annual budget process. The Office for Information Technology now works in partnership with the Governor's Budget Office to review requests for technology project funding. Both offices look for similar projects at different agencies that can be consolidated to make better use of state funding and improve customer service to our citizens. After having used this process for a number of years, agencies actually are coming to us now with ideas on how they can partner on different initiatives. They recognize the Governor's emphasis on teamwork. Plus, they are praised during public functions for taking the initiative to work jointly on projects.

And, perhaps most importantly, their teamwork improves their chances of receiving funding for their proposed projects.

Early Successes Instill Greater Cooperation

One of the greatest challenges facing our enterprise technology projects has not been the technology itself but the cultural changes needed to support these changes. State agencies had been used to working independently. In the past, they rarely considered how their technology decisions and standards would mesh with those at other agencies. But, by achieving some early technology successes working as a team, the Commonwealth has been able to instill greater cooperation across agencies. Many now see the value of having a focused strategy and working together for its success.

That success is important for sustaining momentum and agency support. The CIO shoulders significant responsibility to ensure that that both the enterprise and its agencies are successful. For instance, some of our earliest inter-agency projects included Y2K and a data center consolidation project. By achieving our goals on those efforts, we've opened new lines of communications across agencies, and we've built some pride in what can be accomplished by working together. As a result, our current technology projects face far fewer cultural hurdles.

Our electronic government projects, for example, have demonstrated the growing cooperation that exists across agencies. For instance, the PA Open for Business website I mentioned earlier was up and running in a month. Credit for that achievement must go to the first eight participating agencies and their "can-do" attitude. They now are unveiling enhancements to the site every four months. And, as more agencies join this project, they enthusiastically are suggesting ways to make this e-government project even better.

My message is that success breeds success. And, as a result, we've been able to instill even greater cooperation on our enterprise projects.

The Impact of Electronic Government Initiatives

A major impetus to our enterprise approach has been the growth of electronic government initiatives. Governor Ridge has directed the CIO's office to ensure that our e-government projects present a "single face of government" for our customers. By that, I mean that citizens should not have to know which agency to approach for a particular public service. When they come to our state government website, the burden is on the Commonwealth to simplify the process so that web visitors can easily find the information and services they need.

We are delivering that single face of government through our "PA PowerPort" - one of the first state government Internet portals in the nation. The PA PowerPort was designed to take visitors to the services they seek with the fewest number of "mouse clicks." Also, the information available through our portal is arranged functionally, so our customers don't need to know which agencies run which programs. Other tools are made available, too, such as our "PA PowerSearch," that can take users to the information they need after they enter a few keywords.

As with our other enterprise initiatives, the public response has been gratifying. Last August, we announced that the PA PowerPort had reached 2 billion cumulative hits since its launch in

October 1995. It's significant to note that we are doubling the number of hits on the PA PowerPort every six months. So far, public response is on a steady trend upward, and we don't see it abating anytime soon.

Our PA PowerPort was crafted to serve as the gateway to our growing list of e-government programs, including such services as the availability of job applications and tax filing online. Many of these e-government projects cross agency lines. For instance, our separate Game Commission and Fish & Boat Commission worked together to develop a single "Outdoor Shop" on the Internet. Hunting and fishing licenses now are conveniently available at the same website. Since my office is managing the funding for all e-government projects, we look carefully for commonality between projects and then work to partner agencies working on similar efforts. Again, the public response has been tremendous.

As we move ahead on our various e-government initiatives, security and privacy concerns loom large as issues demanding constant attention. We recognize that we need to ensure the security of the e-government data we collect, or else our customers will not feel comfortable using these services. Users also need to be reassured that the data we collect for one business process is not used beyond that purpose. We have taken a consistent enterprise approach in managing these issues. My Office for Information Technology has issued a privacy policy to be followed on all state agency websites. We also have invested considerable time and resources to safeguard our computer equipment and informational databases from viruses and other threats.

Lessons Learned in Pennsylvania

Over a period of six years, we've had significant opportunities to refine our approach in managing enterprise technology initiatives. I would like briefly to share some of our lessons learned. Perhaps foremost, we've experienced firsthand the value of strong executive leadership, and legislative support, for promoting an enterprise approach to technology investments. Additionally, we've seen the benefit of rewarding and recognizing those state agencies that seize opportunities to work together. Likewise, we recognize that disincentives must exist for those agencies that continue to emphasize working independently and refuse to partner on enterprise projects.

Our success in Pennsylvania demonstrates the importance of having a CIO in place for spotting opportunities for enterprise solutions and for encouraging agency cooperation on team projects. It's been our experience, as well, that control over funding can be a powerful tool for leveraging agency participation on enterprise initiatives. While certainly some technology funding still must be allocated to agencies directly, there are clear benefits in having funding for enterprise projects managed by a CIO.

State and Federal Differences

Under Governor Ridge's leadership, the Commonwealth has gained significant benefits from taking an enterprise approach to new technology initiatives. We've seen improvements in public service delivery and higher levels of customer satisfaction. We've been able to achieve millions of dollars in cost savings. In many instances, those cost savings are being use to propel our leadership on other high-tech projects, such as electronic government services and increased PC availability for employees.

These benefits are not unique to Pennsylvania or even the public sector. Every quarter, we meet with CIOs in leading Pennsylvania corporations. Many of them tell us that they have gained competitive advantages by using this same enterprise approach. Additionally, other states and local governments are using this same model with great success.

The main difference for the federal government is the challenge of scaling this model to fit the needs of a much larger organization. However, large corporations have demonstrated that this can be done. While size does present major challenges, it also means that the potential benefits to be gained by centralizing key technology projects would be that much more significant. Just as in Pennsylvania, cultural challenges will abound. But with the right management, an enterprise approach could yield major advantages, justifying the changes you are considering.

Conclusion

Every organization has unique problems that will demand special consideration as it moves to more broadly support enterprise-wide technology projects. We are fortunate in Pennsylvania to have a Governor that understands the critical importance of information technology in today's knowledge-based economy. We also are fortunate that Governor Ridge provided my Office for Information Technology with the authority and the management tools to forge strong cooperation across our various state agencies. Additionally, we have been aided by our General Assembly, which has shared the Governor's vision for technology and has provided the ongoing funding we need to meet our technology opportunities. There also has been a shift in attitude under the Ridge Administration so that technology funding now is seen as an investment and not simply as an expense. This enlightened approach has helped to guide all of the successful projects that I've described for you today.

That concludes my statement. I hope the Pennsylvania model can be of some value as this subcommittee debates changes to ways in which the federal government manages its enterprise technology projects. I appreciate this opportunity to share Pennsylvania's successes with you, and I would be happy to answer any questions you might have.

Mr. DAVIS OF VIRGINIA. David, thank you for being with us.

STATEMENT OF DAVID J. MOLCHANY, CHIEF INFORMATION OFFICER, FAIRFAX COUNTY, VA

Mr. MOLCHANY. Thank you. Good morning, Chairman Davis and members of the subcommittee. Thank you for this opportunity to speak this morning and represent local government.

In fiscal year 1994, Fairfax County's Board of Supervisors created a private sector Information Technology Advisory Group [ITAG], to work with county staff to study the use and management of information technology in the Fairfax County government. The ITAG recommendations created the Department of Information Technology [DIT], from five separate IT-related departments; created the chief information officer to oversee DIT and technology county-wide and made the CIO responsible for IT planning county-wide and the expenditure of major IT project funds; made the chief information officer a direct report of the county executive, our CEO; ensured that IT is treated as an investment, with consistent funding; created a funding mechanism to train IT workers and ensure skills were refreshed; and created an annual IT plan written to highlight IT directions, projects, and budgets.

ITAG also recognized that larger county departments would still need to retain some IT staff. DIT would serve as a consultant, mentor, or project partner for these departments. Department IT standards, planning, and budgeting would follow the direction of the CIO.

The role of the CIO has broadened since it was created. In addition to county-wide IT responsibilities, the CIO is now directly responsible for nearly 1,200 information-related employees in DIT, in the Fairfax County Library, cable television, consumer protection, and document services.

To assist the CIO, two groups have been created, which serve as his boards of directors. The Senior IT Steering Committee is an internal group which provides the CIO connection to departmental IT viewpoints. The IT Policy Advisory Committee [ITPAC], includes 15 private sector members appointed by the Board of Supervisors and provides the CIO an external, unbiased viewpoint.

As part of annual budgeting, the county has a formal process for agencies to submit projects to be funded as part of the overall county IT investment plan, which is administered by the CIO. The county has a formal project manager certification program, which ensures both business and technology project managers are properly trained to manage our IT investments consistently county-wide.

The elements that created a successful CIO position in Fairfax County include: the CIO reports directly to the county executive, our CEO, which empowers the position; input is obtained from the CIO's private sector and internal boards of directors, which is key; planning and review of technology investment is done county-wide. There's a focus on standards, cooperation, collaboration, and integration, and formal project management principles have been adopted county-wide.

Challenges in creating the CIO position included the merging of five separate IT departments, gaining buy-in for a CIO responsible

for county IT across all departments. The solution was team-building, collaboration, cooperation, and outreach by the CIO, himself.

The Fairfax County e-government program has brought DIT and county departments a new way to reach our customers, and it has brought DIT and the departments closer together. Our e-government program has benefited from the county-wide viewpoint of the CIO. We work together to present a single county image and message, as directed by the board of supervisors and ensured by the CIO.

E-government in Fairfax means providing 24-hour citizen-centered government. The county's award-winning e-government program offers multi-channel service delivery through the use of interactive voice response, 24 multimedia kiosks, the county Website, our libraries, and cable TV. We provide payments and other interactive services, as well as access to information through our multiple e-government technologies.

Although the first focus of e-government in Fairfax is the citizens or businesses, we also employ technology to create an efficient and effective internal government.

Some of our internal investments have included: new e-mail technology, an internal Intranet for employee access to county services, customer relationship management software, and systems investments for many of our departments.

Our IT investments also include cooperative ventures. We have done cooperative projects with the Commonwealth of Virginia, and also participate in the GSA's government without boundaries project, which has a goal of seamless access across all levels of government to information and services via the Web.

In conclusion, the CIO model in Fairfax can be adapted to a Federal model. The Fairfax CIO's role is to work across the enterprise. The CIO provides vision, goals, and a rallying point for achieving goals. The CIO is also a marketer and a motivator who shows what benefits are possible through IT.

The Federal CIO will need to be at the right level in the Government to be empowered and to empower agency CIOs. The Federal CIO will also have a board of directors, the Federal CIO Council. The Federal CIO and the CIO Council will need to create a process for oversight of enterprise-wide IT. The Federal CIO will need to reach out beyond the Federal Government to hear the needs of constituents, businesses, States, and local governments. And I echo Don Upson's call for a council that includes local, State, and Federal Government to advise the CIO.

Creating a strong CIO that can empower and foster collaboration between all levels of government can create a government without boundaries and IT programs and e-government that makes sense to everyone.

Mr. DAVIS OF VIRGINIA. Thank you very much.

[The prepared statement of Mr. Molchany follows:]

A Strategic Approach to Technology In Local Government

The Role of the Chief Information Officer, Technology Planning and E-Government in Fairfax County, Virginia

David J. Molchany, CIO

Fairfax County

April 2001

A Strategic Approach to Technology In Fairfax County

- Good morning Chairman Davis and members of the subcommittee. Thank you for the opportunity to represent local government today.
- In Fiscal Year 1994 Fairfax County's Board Of Supervisors created a private sector Information Technology Advisory Group, ITAG, to work with County staff, to study the use and management of Information Technology (IT) in the Fairfax County Government

A Strategic Approach to Technology In Fairfax County

- The ITAG Recommendations,
  - Created the Department of Information Technology, DIT, from 5 separate IT related departments
  - Created the Chief Information Officer to oversee DIT and technology County-wide
  - Made the CIO responsible for IT planning County-wide and the expenditure of major IT project funds
  - Made the Chief Information Officer a direct report of the County Executive

A Strategic Approach to Technology In Fairfax County

- continued:
  - Ensured that IT is treated as an investment with consistent funding
  - Created a funding mechanism to train IT workers and ensure skills are refreshed
  - Created an annual IT plan written to highlight IT directions, projects and budgets

A Strategic Approach to Technology In Fairfax County

- ITAG also recognized that larger County departments would still need to retain some IT staff
  - DIT would serve as a consultant, mentor or project partner for these departments
  - Departmental IT standards, planning and budgeting would follow the direction of the CIO

A Strategic Approach to Technology In Fairfax County

- The role of the CIO has broadened since it was created
  - In addition to County-wide IT responsibilities, the CIO is now directly responsible for nearly 1200 information related employees in
    - DIT
    - The Fairfax County Library
    - Cable Television
    - Consumer Protection, and
    - Document Services

A Strategic Approach to Technology In Fairfax County

- To Assist the CIO two groups have been created, which serve as his Boards of Directors
  - The Senior IT Steering Committee, is an internal group which provides the CIO a connection to departmental IT viewpoints
  - The IT Policy Advisory Committee, ITPAC, includes 15 Private Sector members appointed by the BOS and provides the CIO an external unbiased viewpoint

A Strategic Approach to Technology In Fairfax County

- As part of annual budgeting, the County has a formal process for agencies to submit projects to be funded as part of the overall County IT investment plan, which is administered by the CIO.

- The County has a formal Project Manager Certification Program which ensures that both business and technical project managers are properly trained to manage our IT investments consistently County-wide.

A Strategic Approach to Technology In Fairfax County

- The elements that created a successful CIO position at Fairfax County include:
  - The CIO reports directly to the County Executive, which empowers the position
  - Input is obtained from the CIO's private sector and internal Boards of Directors, which is key
  - Planning and review of technology investments is done County-wide
  - There is a focus on standards, cooperation, collaboration and integration, and
  - Formal project management principles have been adopted County-wide

A Strategic Approach to Technology In Fairfax County

- Challenges in Creating the CIO Position included:
  - The Merging of five separate IT Departments
  - Gaining Buy-in for a CIO responsible for County IT across all departments

- The solution was team building, collaboration, cooperation and outreach by the CIO himself

A Strategic Approach to Technology In Fairfax County

- Fairfax County E-Government Program
  - E-Government has brought DIT and County Departments a new way to reach our customers and has brought DIT and the Departments closer together,
  - Our E-Government program has benefited from the County-wide viewpoint of the CIO
  - We work together to present a single County image and message, as directed by the BOS and ensured by the CIO

A Strategic Approach to Technology In Fairfax County

- E-Government -
  - E-Government in Fairfax first means providing 24-hr, citizen-centric government.
  - The County's award winning E-Government program offers multi-channel service delivery through the use of
    - Interactive Voice Response
    - 24 multi-media Kiosks
    - The County WEB Site
    - Our Libraries, and
    - Cable TV

A Strategic Approach to Technology In Fairfax County

- E-Government -
  - We provide payments and other interactive services as well as access to information through our multiple E-Government technologies
  - Although the first focus of E-Government at Fairfax is the citizen or businesses, we also employ technology to create an efficient and effective internal government

A Strategic Approach to Technology In Fairfax County

- Some of our internal investments have included
  - New email technology
  - An internal intranet for employee access to County services
  - Customer Relationship Management (CRM) software, and
  - Systems investments for many of our departments

A Strategic Approach to Technology In Fairfax County

- Our IT investments also include cooperative ventures
  - We have done cooperative projects with the Commonwealth of Virginia
  - And also participate in the GSA's Government without Boundaries project
    - Which has a goal of seamless access across all levels of government to information and services via the WEB

A Strategic Approach to Technology In Fairfax County

- Conclusion
  - The CIO model in Fairfax can be adapted to a federal model
  - The Fairfax CIO's role is to work across the enterprise
  - The CIO provides vision, goals and a rallying point for achieving goals
  - The CIO is also a marketer and motivator who shows what benefits are possible through IT.

A Strategic Approach to Technology In Fairfax County

- Conclusion, continued:
  - The federal CIO will need to be at the right level in the government to be empowered and to empower the agency CIOs.
  - The federal CIO also will have a Board of Directors the federal CIO council.
  - The federal CIO and CIO council will need to create a process for oversight of enterprise-wide IT.

A Strategic Approach to Technology In Fairfax County

- Conclusion, continued:
  - The federal CIO will need to reach out beyond the federal government to hear the needs of constituents, businesses, states and local governments.
  - Creating a strong CIO that can empower and foster collaboration between all levels of government can create a government without boundaries and IT programs and E-Government that makes sense to everyone.

The Role of the Chief Information Officer, Technology Planning and E-Government in Fairfax County, Virginia

David J. Molchany
Chief Information Officer
Fairfax County, Virginia

April 3, 2001

Fairfax County Government

Creating the CIO Organization

In FY1994 the Fairfax County Board of Supervisors created a citizens Information Technology Advisory Group (ITAG) to study the use and management of Information Technology (IT) by the County government. The ITAG was composed of eight private sector executives from Fairfax County based companies. Two committees supported the ITAG, one made up of staff from their own corporate organizations and the other comprised of County Staff.

The work of the ITAG resulted in the creation of the Department of Information Technology (DIT). The department was created by combining separate County organizations that dealt with programming, infrastructure, operations, telecommunications, Geographic Information Systems (GIS), mapping and technical training. The new DIT also included centralized resources for system security, standards, technology planning and administration.

The ITAG further recommended that:

- The County create a Chief Information Officer (CIO) position to oversee DIT and technology Countywide
- The CIO be a direct report to the County Executive as a Deputy County Executive level position.
- IT be treated as an investment and given consistent funding annually
- The CIO be responsible for IT planning County-wide and the expenditure of major IT project funds
- The County create a funding mechanism to ensure IT employees are trained properly and their skills are kept up to date
- An annual IT plan be written to detail IT direction, projects and budgets.

The Fairfax County IT Plan can be accessed at:

- **http://www.co.fairfax.va.us/gov/dit/itplan.htm**

ITAG also recognized that larger County departments would still need to retain some IT staff in addition to utilizing central DIT and that some projects would be the better handled by the department rather than DIT. For these departments DIT would serve as a consultant, mentor or project partner. But departmental IT standards, planning and budgeting would still follow the direction of the CIO to ensure consistency and investment value.

The initial ITAG recommendations have resulted over time in:

- centralization of the major IT functions for the County (FY1995)
- creation of a CIO function (FY1995)
- creation of a permanent private sector advisory group (FY1998)
- creation of an internal senior management IT steering committee (FY1999)
- standardization of technology investments across the County (FY1995)
- creation of a technology modernization fund (FY1996)
- annual technology project review as part of the budget process (FY1995)
- funding for technology training (FY1996)
- project steering committees, formal project reporting and governance (FY1996)
- project manager certification (FY1999)

The Role of the CIO

The Board of Supervisors has broadened the role of the CIO since the position was created in FY1995. Not only is the CIO responsible for the Department of Information Technology, the CIO is now responsible for a broad range of information related departments. The Fairfax County Library System, Cable Television Franchise Management, Cable Television Productions, Consumer Protection and Document Services groups report directly to the CIO. The CIO's direct responsibility for information spans books, television, technology, consumer protection and the management of documents. Nearly 1200 staff report to the CIO at Fairfax County, the CIO group budget is over $100 million dollars.

To assist the CIO the Board of Supervisors in FY1998 created a permanent private sector group called the Information Technology Policy Advisory Committee (ITPAC). The group is made up of 10 members appointed directly by the Board of Supervisors and five members that are recommended to the Board by the Federation of Civic Associations, School Board, Northern Virginia Technology Council, League of Women Voters and the Chamber of Commerce respectively.

The ITPAC meets monthly to review the County's technology projects, plans and direction and endorses the annual technology spending plan to the Board of Supervisors during budget review and deliberations. The ITPAC serves as the board of directors to the CIO, providing advice, experience and support for the IT program.

In FY1999 an internal County group, the Senior IT Steering Committee was added to assist and advise the CIO. This group includes the County Executive, Chief Financial Officer, Deputy County Executives and representatives from the largest County Departments. This group meets monthly to look at specific IT initiatives, opportunities and issues, sets the County's IT strategy based on the Board of Supervisors' direction, and approves the annual IT investment plan which is delivered by the CIO to the ITPAC for its endorsement.

Project Prioritization and Execution

The Senior IT Steering Committee sets the funding priorities for technology projects. These priorities state that projects must provide one or more of the following benefits:

- Convenient access to information and services
- A high level of responsiveness to customer requirements
- Management of County information assets
- Management of County technology assets
- Management of County human resource assets

The Senior IT Steering Committee also ensures that the CIO hears the opinions of the individual departments concerning IT plans, issues and decisions.

When ITAG recommended the technology modernization fund, it recommended funding of approximately $20 million per year. This fund provides money for the software, hardware and services included in the County's major IT projects. The modernization fund represents the County's enterprise wide projects, which are closely tied to its strategic goals.

The initial project recommendations come from the County's departments as part of the annual budget process. County staff implemented a two-phase approach to assist in the evaluation of information technology project proposals submitted for FY2002 funding and to support the following objectives:

- minimize the rejection of projects that may be beneficial to County business conceptually, however lack substantive information in critical project areas such as staffing plans, technical architecture, project deliverables and benefits
- ensure that proposed project timeframes, areas of responsibility and funding accurately reflect County procurement, budget and existing IT project commitments, as well as to clearly identify the impact of the project on agency business and technical staff, and agency operations
- identify potential savings by utilizing exiting County-owned technologies or by jointly reviewing similar individual project requests to minimize IT software and hardware duplication and leverage technology investments already made
- ensure that proposed project schedules are feasible, and/or that ongoing projects are within scope and budget, and are on schedule

Early in the process, agencies are requested to submit both a business and technical viability analysis for each proposed project. The business analysis, reviewed by staff from the Department of Management and Budget (DMB), includes such factors as business objectives, return on investment (including cost savings, cost avoidance, enhanced revenue, non-quantifiable service benefits, staff savings and staffing efficiencies), indicators to be used to measure success, estimated costs, business related risks and alternatives to the proposed project.

The technical analysis, reviewed by staff from the Department of Information Technology (DIT), includes such factors as proposed system architecture and its compatibility with County's Technical Architecture Standards, impact on existing systems, data conversion and electronic interface requirements, and staffing requirements for development, enhancement and maintenance of the project.

After review by DMB and DIT, recommendations and suggestions for improvement are made to the project sponsors. The projects are then resubmitted for final review by Senior DIT and DMB managers. Once reviewed, funding consideration is guided by the five information technology priorities established by the IT Senior Steering Committee.

From this interview process, a recommendation for project funding is created. The Senior IT Steering Committee and ITPAC review the recommendation, any revisions are made and the ITPAC writes a letter endorsing the proposed projects and funding to the Board of Supervisors. The Board makes the final decision on funding based on this endorsement.

As stated previously IT funding in the modernization budget represents the strategic and enterprise-wide initiatives for the County. If during the project review process a project is identified that is not strategic, does not have enterprise wide benefits, but does benefit a single department or County function, funding is placed into departmental budgets. The department can then use these funds to do the project internally if they have staff or contract if they need assistance. They can even request that DIT do the project if that is the best solution. Departmental projects must still follow the CIO's standards, methodology and architecture requirements and DIT is usually involved as an advisor at a minimum to ensure compliance.

Once projects are approved for funding, a steering committee is created for each project. This committee can vary in size, based on the dollar value and the strategic importance of the project. A project manager is selected from the department sponsoring the project and a technical project manager is selected from DIT and/or the user agency's technical group if one exists.

Project managers are required to hold regular meetings and report progress and issues. All projects need to follow the County's standards and project methodology as defined by the CIO. The County is now working to also establish a formal architecture standards document to provide further guidance to the project managers.

The County departments must also formally certify project managers. DIT has created a project manager certification course, which certifies project managers to lead projects at different dollar thresholds. Once certified and leading a project, the project manager's salary is adjusted to reflect the level of project responsibility and dollars that is involved. The certification focuses on project reporting and administration, contract negotiation and management, task planning and other topics. Certification is also required for technical project managers.

All of these elements:

- CIO position at the Deputy County Executive level reporting to the County Executive
- private sector and internal County board of directors for the CIO
- planning and review of technology investments county-wide
- focus on standards, training and certification

work together to create an enterprise wide process and focus for IT in Fairfax County. The process is inclusive of all departments, it ensures that there is a high level champion for IT and that as solutions are chosen they match the goals of the enterprise as a whole.

Challenges in Creating the CIO Position

The creation of the CIO position was a major change for Fairfax County. Initially five departments were merged into one to create DIT. This was a culture shock to the employees of these departments and also meant that several department heads became subordinates within a department rather than heads of independent departments.

Eventually it was also recognized that the CIO could not actually run DIT on a day to day basis, especially after the addition of the Library, Cable, Consumer Protection and Document Services to the CIO group and a new department head position was created for DIT itself.

These changes have meant time and effort in team building and the loss of some staff that could not accept change. Even today we face challenges when old cultural habits of former departments and managers threaten to de-rail initiatives. To create a new structure around existing departments takes an investment in change management and careful selection of candidates to fill key positions that will be a positive force in fostering positive group dynamics and a cooperative atmosphere.

The recognition that the CIO directly affected County policy and the way in which technology was utilized within departments and integrated across departments, also called for change management, cooperation and collaboration. The creation of the ITPAC and the Senior IT Steering Committee as boards of directors for the CIO was very helpful in this area. The ITPAC gave the CIO a direct link to the Board of Supervisors, an unbiased group from which to garner opinions and access to private sector innovations. The Senior IT Steering Committee gave the CIO a link the County's departments and their opinions, a sounding board for new initiatives and verification of their acceptance by County staff and partners to ensure that County-wide IT standards and procedures were being followed.

Being connected to the County departments and being inclusive, open-minded and collaborative when setting up groups to look at enterprise-wide systems, standards, security planning, policies and other issues, has been critical in making the CIO concept work at Fairfax County.

The addition of the Library, Cable, Consumer Protection and Document Services to the CIO's group also brought fresh ideas, innovation and direct access to customer service expertise. The latter would be very important with the advent of E-Government and the first time that DIT had the public as a customer.

The Role of E-Government

E-Government has brought DIT and the County Departments a new way to reach our customers and has brought the County departments closer together.

E-Government in Fairfax County first means meeting citizen service expectations by employing E-Business practices for E-Government solutions in order to provide citizen centric government.

We have a mutli-faceted strategy with a single goal, to utilize technology to bring government to our citizens and "build a government without walls, doors or clocks" with 24-hour access to government. Our goals are to include all residents and businesses and interested parties, to bridge the digital divide and transform the way in which we conduct business though E-Government transactions.

The County's award winning E-Government program, includes three separate technologies to meet our goals. The technologies are an Interactive Voice Response (IVR) system, Kiosks and the County WEB Site. Thirty-seven County Departments are represented on one or all of the E-Government platforms, as seen in the chart below:

Agency	Web	Kiosk	IVR
Animal Shelter	X	X	
Board of Supervisors	X	X	
Cable Communications. And Consumer Affairs	X	X	
Circuit Court	X	X	X
Clerk to the Board	X		
Community and Recreation Services	X	X	
County Executive	X		
Electoral Board & General Registrar	X	X	
Environmental Advisory Council	X		
Fairfax-Falls Church CSB	X	X	
Family Services	X	X	
Finance	X		
Information Technology	X	X	
Internal Audit	X		
Fire and Rescue	X	X	X
General District Court	X	X	X
Health Department	X	X	X
History Commission	X		
Housing and Community Development	X	X	X
Human Resources	X	X	
Human Services	X	X	
Human Rights	X		
Juvenile and Domestic Relations Court	X	X	X
Management and Budget	X		
Office of Partnerships	X		
Park Authority	X	X	
Planning and Zoning	X		
Planning Commission	X		
Police Department	X	X	X
Public Affairs	X	X	X
Public Library	X	X	
Public Works and Environmental Mgmt	X	X	X
Purchasing and Supply Management	X		
Tax Administration	X	X	X
Transportation	X	X	
Vehicle Services	X		
Office for Women	X		

The Fairfax County E-government program's information and services include:

Sample Information Available	E-Government Platform
♦ Real Estate Property Assessment & Tax Information	*Web, IVR*
♦ Scrollable, Printable County Maps	*Web, Kiosk*
♦ Inspection Scheduling Status	*Web, IVR, Kiosk*
♦ Adult Education Classes	*Web*
♦ Bus Tour Schedule	*Web, Kiosk*
♦ Becoming a Child Care Provider	*Web, Kiosk*
♦ Child Care Provider List	*Web*
♦ Crime Statistics, Wanted List, Neighborhood Watch	*Web*
♦ Health Information	*Web, Kiosk*
♦ Housing Information	*Web, IVR, Kiosk*
♦ Newcomer Information	*Web, Kiosk*
♦ Park/Recreation Information	*Web, Kiosk*
♦ Public Safety Information	*Web, Kiosk*
♦ Information/Programs for Seniors	*Web, Kiosk*
♦ Budget Information and Approved Budget	*Web*
♦ County Demographics	*Web*
♦ Job Opportunities	*Web, Kiosk*
♦ Circuit, General District, and Juvenile Courts	*Web, Kiosk, IVR*
♦ Full text of County Code	*Web*
♦ Meeting minutes (searchable) of Board meetings	*Web*
♦ Multi-jurisdictional Information	*Kiosk*

Doing Business with the County	E-Government Platform
♦ Pay taxes with Credit Card	*Web, Kiosk*
♦ Pay taxes via eCheck	*Web*
♦ Pay traffic tickets with Credit Card	*IVR, Kiosk*
♦ Schedule special pick-ups of brush or bulk items	*IVR, Kiosk*
♦ Schedule inspections	*Web, IVR, Kiosk*
♦ Query Permit and Plan Status	*Web*
♦ Request/check status of an inspection	*IVR, Kiosk*
♦ Query current Real Estate property & tax information	*Web, Kiosk, IVR*
♦ Query Real Estate Comparable Sales and Parcel Map	*Web*
♦ Query the Human Services online "Resource Guide"	*Web, Kiosk*
♦ Query Victim Services data for offender release date info	*IVR*
♦ Query for current position on the housing waiting list	*IVR, Kiosk*
♦ Query specific Court Case Information	*IVR, Kiosk*
♦ Query Zoning Information (ISISNet)	*Web*
♦ Access the Library Card Catalog, reserve/renew book	*Web*
♦ Download RFP/IFBs	*Web*
♦ Report vehicle sale or "move out" with prorate calculator	*Web*
♦ Report change of address for tax purposes	*Web*
♦ Report a lost pet	*Web*
♦ Find location of closest Library by entering zip code	*Web*
♦ Renew Vehicle Registrations	*Kiosk*
♦ Subscribe to County Publications	*Web, Kiosk*
♦ Apply for County Jobs	*Web, Kiosk*
♦ Locate Facilities and Public Transportation	*Kiosk*
♦ Directly Connect to County Staff	*Kiosk*

The following data are some statistics on the business done using our E-Government technology:

- IVR – 750,000 calls in 2000 and $878,589 in traffic fines collected in FY 2000
- Over 4 million screen touches on the Kiosks since their introduction in 1996
- The County WEB Site averages over 1 million visits per month. 5 to 7 million hits a month and 300,000 to 500,000 visitors that access information or do business with the County
- 38,841 WEB tax payments were received from the Fall of 1999 until the Fall of 2000, with minimal advertisement
- $10.9 million in tax payments was collected via the WEB from the Fall of 1999 until the Fall of 2000
- 29,202 vehicle sale, moves, updates or tax questions were received during the same period of time.

Another excellent example of the power of this technology is its ability to focus on a hot topic for constituents. The current hot topic for the County is property assessment. The County provides accurate and immediate information 24 hours/day x 7 days/week in response to constituent assessment inquiries via its E-Government technologies. Both the Web and the IVR platforms have responded to a tremendous number of requests for assessment information, both experiencing almost a doubling in activity.

The following tables outline recent statistics for constituent access to Real Estate Assessment information.

Table 1: Information Sought Via Web Site (reassessment notices were mailed in 3 weekly batches of 100,000 beginning February 26, 2001)	
Week	Total Real Estate Assessment Page Views on the Web
February 25 – March 3	279,750
March 4 – March 10	330,777
March 11- March 17	308,954
Total	919,481
Average Week Prior to February 25	**150,000**
Table 2: Information Sought Via Interactive Voice Response (IVR) – Phone Calls (IVR phone number published in *The Washington Post* on February 15 prior to mailing of notices)	
Week	Total IVR Phone Calls
February 11 – February 17	8,182
February 18 – February 24	1,682
February 25 – March 3	1,391
March 4 – March 10	1,296
March 11- March 17	1,036
Total	13,587
Average Week Prior to February 11	**518**

Table 3: Information Sought Via Interactive Voice Response (IVR) – Faxes (IVR phone number published in *The Washington Post* on February 15 prior to mailing of notices)	
Week	Total IVR Faxes
February 11 – February 17	561
February 18 – February 24	309
February 25 – March 3	398
March 4 – March 10	382
March 11- March 17	389
Total	2,039
Average Week Prior to February 11	**300**

Table 4: Information Sought Via Interactive Voice Response (IVR) – Hours Spent with Callers (IVR phone number published in *The Washington Post* on February 15 prior to mailing of notices)	
Week	Total IVR Faxes
February 11 – February 17	300
February 18 – February 24	82
February 25 – March 3	60
March 4 – March 10	56
March 11- March 17	45
Total	543
Average Week Prior to February 11	**60**

As seen in the data above, E-Government has the power to enable customers to access government when it is convenient to them. This data also represents a great deal of business volume that is handled through technology and not by staff during the business day. Dozens of County employees are freed up from routine inquiries to handle unique situations and perform other duties allowing staff to concentrate on other projects or to be redirected to other tasks.

E-Government gives new options to serve the public. The CIO group also combines its E-Government technology with cable television and the power of the Libraries. The County's Cable TV operation can reach over 700,000 constituents through the information and programming that it broadcasts. The County libraries work directly with constituents of all ages to teach them how to use technology, provide access to the Internet and assist those with disabilities. The County is bridging its digital divide by providing multi-channel service delivery to our constituency, through the use of the IVR system, Kiosks, the County WEB Site, the Library and Cable TV.

E-Government also encourages the County's departments to work together and to work with DIT. DIT and the departments work on the framework for user and transaction interfaces and departments produce the content for their specific areas. DIT and our Public Information Office then review the content and put it into production. DIT, the Public Information Office and the departments also collaborate on determining the future direction of our program and work with constituents and businesses through focus groups to determine emerging needs and preferences.

The CIO group includes DIT, the libraries and Cable, the building blocks for the E-Government program at Fairfax County. The CIO's standards and governance set the tone for the collaborate nature of E-government. The Senior IT Steering Committee ensures that the departments have a place at the table with the CIO group and ITPAC provides outside input and endorsement for the entire effort.

Overall E-Government has been a positive influence in bringing the entire government together to serve the public, which is the mission of local government. This program has been greatly facilitated by the CIO structure, the Senior IT Steering Committee and the ITPAC.

Although E-Government at Fairfax is first thought of as externally focused service to our constituents and businesses, "E-Government" also is a focus in improving the efficiency and effectiveness of the internal County staff.

Fairfax County has made many other investments in technology, resulting in utilizing staff more effectively. One, which has become critical to doing business both with and within the County, is email. It not only allows staff to communicate, collaborate and share documents internally, it also provides more timely and effective communication with County constituents. From March 1 to March 22, 2001 County staff sent or received 1,675.652 emails, including 17,363 sent and received by the Board of Supervisors offices. This year it is estimated that the County will send and receive 27,800,590 emails and the Board offices will send and receive 211,250 emails. This level of communication would be impossible to handle manually. Fairfax County also relies heavily on other technologies such as Voice Mail; multifunction copiers, faxes, and other devices to stay connected, run the Departments and meet the service level demanded by customers.

In conjunction with email and other technologies, County staff have successfully entered into the world of Customer Relationship Management (CRM) systems, with the installation of a CRM system in the Board of Supervisors' offices, Consumer Protection, Clerk to the Board's office, County Executive's office and County's Legislative function within the County Executive's office.

There have been benefits to both DIT and the multiple offices using the CRM system since its implementation. First, since the system has replaced several unstable paradox applications and there are now multiple user agencies using the same stable system, it is easier for DIT to support the user group, even though it includes additional departments, some which were never automated before.

Within the user departments, the system provides functionality as diverse as: integrated management of correspondence; the ability to proactively message constituents; the capability for Consumer Services workers to better manage their investigations; access to historical data and the ability to relate data together and collaborate; downloading of legislative bills from the session directly into the system eliminating retyping; capabilities for imaging and workflow and other time saving functions. The Consumer Protection database made possible by this system will also be made public on the County WEB Site this summer, allowing constituents to do research themselves as well as report problems to the division via the WEB.

There have been significant staff productivity improvements with the use of CRM technology at the County. The implementation has resulted in staff now doing business proactively. The talents of the individuals are being mined. Automation is allowing staff the opportunity to be more involved in the mission and goals of their agencies.

The use of the WEB, relational databases, workflow, imaging and data sharing is best demonstrated by the Land Development, Land Records and GIS systems. These systems used by the Department of Planning and Zoning, Public Works and Environmental Services, Circuit Court, DIT, constituents and businesses, allow access to information that was before locked away in mainframe systems or accessible only in paper form. The Land Development system has made it possible for constituents and businesses to access and track information about the land

development process, permits, and inspections, as well as, schedule and cancel inspections from their office or home. They have also added workflow, collaboration opportunities and user friendly access for the County staff. The Circuit Court Land Records system is providing the imaging and remote access to land records documents that were once only accessible at the Courthouse. GIS brings access to maps and data-layers and other geographic information in a digital format. A great benefit from the days of paper maps and map making by hand. All three of these projects allow access to information about land and the processes that surround it to be easily accessible to those who need to utilize it. The fact that they are all based on relational database technology only adds to the ways that the systems can be made to work together to provide service to customers and make County staff more efficient.

Other IT investments that allow better utilization of staff include: the County's Human Services consolidated intake system; the new public safety positive ID system, which allows the County to capture fingerprints electronically and transmit them to Richmond and the FBI for comparisons; the WEB based system in Human Services which replaced a 25 year old mainframe system and now is providing the possibility for other Human Services Departments to use it and eliminate their individual systems. All of these investments allow us to be more efficient and effective.

The County is also collaborating with the Commonwealth of Virginia on various projects such as seat management, digital signatures, telecommunications contracts and enterprise architecture. These initiatives are the building blocks of E-Government. The reason that the County can collaborate with the Commonwealth is that it has a CIO, the Secretary of Technology. The Secretary is part of the governor's cabinet and puts a great deal of emphasis of using technology to better serve the citizens and businesses of Virginia. Like the CIO of Fairfax County, the Secretary also has a board of directors to work with called the Council of Technology Services (COTS). COTS is made up of representatives from local government, higher education and state agencies and works with the Secretary to develop, coordinate and champion technology across the Commonwealth.

The Commonwealth of Virginia and Fairfax County are also working on a project with the General Services Administration (GSA), which is called Government without Boundaries. This project is focusing on erasing the divisions between local, state and federal information and services on the Intranet. This project will make it possible for a resident of Fairfax to log onto the Fairfax County WEB Site and be transferred to the information or service that they need regardless of whether it is found on the commonwealth or a federal WEB Site. The converse would happen if the constituent entered the Internet via the commonwealth or a federal WEB Site and the appropriate information or service was available at the local level. The state of New Jersey, the City of Virginia Beach and others are also involved in this effort.

E-Government at Fairfax County is service to constituents, efficiency and effectiveness internally and collaboration with other local governments and levels of government.

CONCLUSION

The CIO model that has been adopted by the Fairfax County Government can be adapted to the federal model. Fairfax has already realized that the CIO cannot run the day to day operations of a specific department or departments. Department heads take on this operational role. The CIO's role really is one to prioritize, establish standards and policies, ensure integration, cooperation and collaboration and promote innovation and excellence in customer service. The CIO needs to be a visionary, both setting goals based on this vision and the strategic direction of the

organization and rallying people to achieve the goals. The CIO must also market the achievement of goals internally and externally, to show progress and to set an example for federal agencies and other governments.

The federal CIO will work with the federal agencies much in the same way as the Fairfax CIO works with the County's departments. Instead of a Senior IT Steering Committee the federal CIO will have the federal CIO Council with which to collaborate and learn the opinions and needs of the individual agencies.

The federal CIO will probably not have a highly centralized budget and planning process, as does the CIO in Fairfax County. Instead the federal CIO will need to create a process that concentrates on oversight of enterprise-wide collaboration for technology budgets and planning, standardization and integration, security and high level federal IT service goal setting.

The CIO will need to champion agency initiatives that meet service goals and work to modify or eliminate those that are not aligned with service goals. The CIO will need to work closely with the CIO council to accomplish this as a partner and will need to be empowered in order to empower agency CIO's to be leaders in their own right. Placing the CIO position at the right level within government is absolutely crucial to accomplishing this mission. At Fairfax County the fact that the CIO reports to the County Executive empowers the position and allows it to empower others. Additionally, to be truly effective in the role, the federal CIO should have experience in Government on their resume.

Finally the federal CIO must reach out beyond the federal government to citizens, businesses, states and local governments. An ITPAC-like board of directors made up of representatives from these groups can allow all parties to actually have a way to interact with the federal government and an empowered CIO. E-Government success depends on collaboration, cooperation and a focus on customer service. Creating a strong CIO that can empower and foster collaboration between all levels of government can create a government without boundaries and IT programs that make sense to everyone in the public and private sectors.

Mr. DAVIS OF VIRGINIA. Mr. Evans, last but not least.

STATEMENT OF DONALD EVANS, CHIEF INFORMATION OFFICER, PUBLIC TECHNOLOGY, INC., ACCOMPANIED BY BOBBY ARNOLD

Mr. EVANS. Good morning. Thank you, Mr. Chairman and members of the subcommittee. I am Donald Evans, and I am here with my colleague, Bobby Arnold, who manages the CIOs at local government across the country. It is our privilege to meet with you today and to offer testimony on this important issue.

Public Technology is a not-for-profit organization with a mission of, as rapidly as possible, delivering the benefits of technology to local government. Public Technology, during 30 years of concentrated focus on technology for local government, has earned the reputation as the premier knowledge company regarding technology matters in the local government space for citizen counties. Public Technology is also the technology arm for the National League of Cities, the National Association of Counties, and the International Cities/Counties Management Association.

Some of the attributes that make PTI rather unique are it not only makes recommendations to local government, but it also installs solutions in the local government space. We work closely on a daily basis with the leading edge local governments, from the largest—the New Yorks, Philadelphia, Dallases, the San Franciscos, the Fairfax VAs, and Montgomery Counties—to the small—the Urbandale, IAs; the Rockville, MDs. It also is active in international technology issues. We think that these factors provide us with a unique overview for best practice approaches to technology.

PTI considers proper management of technology as a serious and significant opportunity for realizing enterprise benefits. The benefits include enhanced service delivery, adequate return on investment and assets, timely implementation, cost reduction through the elimination of duplication of effort and aggregations, and others.

Having adequate infrastructure we have found as well as an appropriate governance structure to be essential for the benefits I've just mentioned. In fact, we have conducted two national surveys—one in April 2000, one in January 2001, that show the importance of infrastructure. That's listed in attachment one, tab one of our packet.

Mr. Chairman and members of the subcommittee, we base our testimony on the 30 years of focused involvement with the local government and the expertise on multiple environments—Federal, the private sector, local, regional, State, and intergovernmental. That synopsis is in attachment two.

Public Technology, again, is intensely involved with local governments of all sizes, with varying information technology management models. Our experience has rendered several important findings.

One, collaboration among stakeholders is an essential tool, but is often overworked and confused as a substitute for structure and accountability.

Two, political will is necessary to make any governance model function properly.

Consolidation of functions designated as enterprise reduce cost.

Fourth, consolidation of budgets for enterprise functions improves return on investment and return on asset.

Fifth, IT models where the CIO has a seat at the CEO or board room table accomplish enterprise goals faster.

Six, the IT function does well when it is commingled or placed under the budgeting function.

A think tank, the CXO Advisory Group, has listed several articles referencing the Federal CIO, and I point the committee to that in attachment three. I'd also like to point that the Web, I think, and the year 2000 examples at the Federal level would be deemed as Federal CIO mandates or actions and I think are noteworthy for the benefits that were achieved.

In tab four you have there the model of what might be described as the Department of State's IT model. I think that it is very, very interesting in how it is set up, and also it does meet the Clinger-Cohen Act, but I think that that model, that you see the separation between the technical readiness evaluation that the CIO would perform aside from the business return on investment that the budgeting function is quite telling.

I would be happy to answer your questions. Again, we thank you for being here.

Mr. DAVIS OF VIRGINIA. Thank you very much.

[The prepared statement of Mr. Evans follows:]

TESTIMONY TO

UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY

on

"Enterprise-Wide Strategies for Managing Information Resources and Technology: Learning from State and Local Governments"

April 3, 2001

Donald V. Evans

Chief Information Officer

Public Technology, Inc.

1301 Pennsylvania Ave, Suite 800

Washington, DC 20004

Good morning, Chairman Davis and members of the committee, I'm Donald Evans, Chief Information Officer for Public Technology, Inc., (PTI). It is my privilege to meet with you today and thank you for the invitation to provide testimony on this important matter.

Public Technology, Inc. is a not-for-profit organization with the mission of, as rapidly as possible, delivering the benefits of technology to local government. Public Technology, Inc. during its 30 years of concentrated focus on technology for local government has earned the reputation as the premier knowledge-company regarding technology matters in the local government space – cities and counties. Public Technology, Inc. is the technology arm for the National League of Cities (NLC), the National Association of Counties (NACo) and the International Cities/Counties Management Association (ICMA).

Some of the attributes that make PTI rather unique are:

- PTI not only advises and makes recommendations to local government, but also PTI installs solutions in the local government space.
- PTI closely works on a daily basis with the leading edge local governments –from the largest (e.g. New York City, Philadelphia, Dallas, Denver, San Francisco, San Diego) to the small (e.g. Urbandale, IA; Rockville, MD) – across the United States.
- PTI is active in international technology issues.

These factors provide PTI an outstanding expertise and capability for taking a best practice approach to technology issues.

We at PTI consider the proper management of technology as a serious and significant opportunity for realizing enterprise benefits. The benefits include enhanced service delivery, adequate return on investments and assets, timely implementation, reduced costs through the elimination of duplication of effort and the aggregation of economies of scale, and others. Having adequate infrastructure (people, tools, funding, equipment and systems) and a governance structure for decision-making processes and accountability produce such benefits. Without an adequate infrastructure and governance structure, we rarely observe the benefits listed above. This fact is borne out by two recent national surveys conducted in April 2000 and January 2001 by PTI along with two of its sponsoring organizations – NACo (2000) and ICMA (2001), respectively. Excerpts from the surveys are included in **Attachment #1 (Tab 1)**.

Mr. Chairman and members of the Subcommittee, our testimony today regarding the merits of establishing a Federal CIO not only comes from the excellent advantage provided by the PTI national technology view in local government, but also is based on 30 years of large scale technology experience across multiple environments: federal, the private sector, local, regional, state and intergovernmental. A brief synopsis of that experience is in **Attachment #2 (TAB 2)**.

The testimony I offer today is based on that experience and the nationwide perspective that PTI has acquired during 30 years of intense involvement with local governments of all sizes, and using various information technology management models.

These experiences have rendered several important findings or observations that are germane to the consideration of establishing a Federal CIO:

1. Collaboration among stakeholders is an essential *tool*. But collaboration is often overworked and confused as a substitute for *structure* or *accountability*.
2. Political will is necessary to make any governance model function properly.
3. Consolidation of functions designated as enterprise reduces costs.
4. Consolidation of budgets for enterprise functions improves ROI/ROA.
5. I/T models where the CIO has a seat at the CEO/boardroom table accomplish enterprise goals faster.
6. The I/T function performs less well when it is co-mingled with or placed under the budgeting function.

The CXO Advisory Group – a think tank organization that focuses on Chief Officer type issues – recently published *"A Federal CIO?"* in the PUBLIC SECTOR CXO Magazine, January/February 2001 Issue and expressed parallel views to the above findings. The article is included in **Attachment #3 (TAB 3)**. Also, similar issues regarding accountability, infrastructure and organizational structure are before the House Subcommittee on Anti-terrorism and National Security. The recent testimony of the distinguished witnesses on March 27, 2001 highlighted the same urgent need to consolidate the enterprise functions, budgets and accountability with a Chief X Officer reporting directly to the President.

On the surface, having stovepipes in Departments and Agencies are cited as reason for these similar recommendations. If one considers the impacts of the amounts of information and the speed such information flows to a function, stovepipes are necessary to deeply data mine and achieve the required operational efficiencies of a function. What this means is organizations are in a state of data overload with little time to adequately perform *secondary responsibilities*. For an example, if the primary function is budgeting, then there would be little capacity to attend to the rapid changes in technology, if technology was considered a secondary responsibility. Resultantly, there would be inadequate capacity to properly manage the horizontal or enterprise aspects of a function in a timely and efficient manner.

This phenomenon is the burdensome affect of the rapid advances in information technology. A simple example is how the many benefits of email impact one's capacity to perform other daily duties. In aggregate, where information technology management is the secondary responsibility – second to the mission or business function, one could anticipate that the horizontal or enterprise aspects of I/T management would not be performed efficiently.

To the merits of a Federal CIO and taking into account the existing governance structures, there are two noteworthy federal actions that are of interest. The first is the web. The web has been in effect since approximately 1995 but it took the directive of President Clinton in September 2000 to create the federal FIRSTGOV enterprise web site within 90 days. In effect, President Clinton issued a Federal CIO mandate and the

FIRSTGOV enterprise site was implemented in 90 days by assigning the project to the GSA Administrator. Put another way, the *Federal CIO* issued a directive and assigned an *Enterprise Program Executive* with appropriate authority to implement the project.

The other event is the Year 2000 Problem. Departments and Agencies had their individual Y2K Programs with varying start dates, standards and goals. In February 1998, the President issued a Federal CIO mandate and put in place a Y2K Czar. With the Y2K Czar in place, the project was coordinated in an enterprise manner and the Y2K Problem resolved.

These examples indicate the numerous benefits that can be attained through a Federal CIO. Enterprise goals are quickly achieved, Departments and Agencies have a dedicated and focused advocate, missions are enhanced, costs are reduced, there is clear accountability, there is room for collaboration and there is a mechanism for decisive decision making. And, yes, there was noise across the federal systems in both of these events. But the accomplishments overshadow and outpace the noise.

For those arguments against a Federal CIO, applying the argument at the Department and Agency level can assess their validity. Notwithstanding the need for changes in statutes and regulations, the application of the argument should be applied by asking the Department or Agency with an existing CIO, how does that CIO keep from adversely impacting his line organizations in a similar fashion? At the State and local government levels, States and local governments have successfully implemented the

Enterprise CIO function through supportive Charter (i.e. statutes and regulations) and political will. And, the other organizational entities receive the benefits that the enterprise CIO function produces.

The foregone is to not minimize, however, that there are some significant issues that must be considered regarding a Federal CIO position. For example:

1. What governance structure will support a consistent initial review, implementation and oversight of enterprise projects that will produce the desired benefits and also meet the 1996 Clinger-Cohen Act?

The existing governance models developed by Departments and Agencies in response to the Act should be reviewed for their portability and adaptability for the Federal CIO model. **Attachment #4 (TAB 4)** depicts the Department of State model.

2. What authority mechanism will the allow the Federal CIO to meet the enterprise challenges that are five and ten years over the horizon that would also minimize the frequent re-crafting of that authority? What assets will the Federal CIO require to be effective? Consideration should be given to a governance mechanism or authority similar to the Chairman of the Joint Chiefs of Staff. Such an authority allows for assets and resources to be assembled or task organized to meet unknown future requirements. A modification could be that budgets are coordinated but only enterprise project budgets are moved under the authority and oversight of the Federal CIO.

3. How would competition be affected by potential very large procurements for enterprise Federal CIO projects? For example, if desktop computer and seat management (i.e. maintenance) was an enterprise project, is it desirable for such a contract to be awarded to only one vendor. If multiple vendors are awarded, what should the price(s) to vendors be? The GSA should be useful in resolving such matters.

Again, Mr. Chairman and members of the Subcommittee, thank you for the opportunity to come before you and provide testimony on such an important matter.

List of Attachments

TESTIMONY TO

UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY

"Enterprise-Wide Strategies for Managing Information Resources and Technology: Learning from State and Local Governments"

April 3, 2001

Donald V. Evans

Chief Information Officer

Public Technology, Inc.

1. PTI National Survey Excerpts on E-Government Readiness in Local Governments
2. Bio Synopsis of Large Scale Technology Experience
3. "A Federal CIO?"
4. U.S. Department of State I/T Model

ATTACHMENT #1

PTI National Survey Excerpts on E-Government Readiness in Local Government

A. PTI and NACo Survey Excerpt (April 2000)

What do you see as the three greatest obstacles to moving County government services to the Internet? (Please select three.)

* Staffing	327 (46%)	* Lack of technology infrastructure	191 (27%)
* Funding	501 (70%)	* Privacy	174 (24%)
* Training	225 (32%)	* Implementation/Maintenance	275 (39%)
* Security	310 (43%)	* Keeping Pace with new Technology	185 (26%)
* Fear	135 (19%)	* Other	45 (6%)

Twenty-three percent of the nation's counties completed and returned the survey. These 714 counties represented a cross section of counties by region and by population size.

B. PTI and ICMA Survey Excerpt (January 2001)

Which if any of the following barriers to e-government initiatives has your local government encountered? (Check all applicable.)

* Lack of technology/Web Staff	66.6%
* Lack of financial resources	54.3%
* Lack of technology/Web expertise	46.7%
* Issues regarding Security	42.1%
* Need to upgrade technology	33.9%
* Lack of information about e-gov applications	28.3%
* Issues regarding Privacy	27.7%
* Issues relating to fees for transactions	26.4%
* Lack of support from Elected Officials	12.4%
* Other	7.4%
* Time constraints	1.3%

Total Reporting: 1,547

The survey was mailed to 3,749 city and county governments with 1,881 (50.2%) responding; municipalities (50.7%) and counties (48.2%). The 1,881 responses represented a cross section of population size, geographic region and division, and Metro status (Central, Suburban, Independent).

ATTACHMENT #2

Synopsis of Large Scale Technology Experience

- Who is Public Technology, Inc.
- Professional

See next pages.

P U B L I C T E C H N O L O G Y, I N C.

Who We Are

PTI provides us an avenue to learn the best technical ideas and actions from cities and counties across the nation...One of the biggest advantages of membership is that some of the most progressive and successful local government units in the nation work together sharing ideas and methods.

--Frank Fairbanks, City Manager, Phoenix, AZ

WHAT IS PTI?

Public Technology, Inc. (PTI), is:

- a unique membership organization of innovative governments offering a wide range of technology products and services;
- a technology think tank where technology experts and novices work together;
- a national showcase of the technology innovations and achievements of local governments;
- a center with guidance for your tough problems;
- an organization perfectly positioned to join private industry initiatives with government's technology needs; and

WHAT WE DO

PTI was founded in 1971 to advance the use and development of technology in local and state governments. Today, local governments of all sizes and structures join resources under the PTI umbrella to keep pace with rapidly changing technology, share successes, and compete in a global market. As we prepare for the 21st century, PTI and its members are positioned to meet new challenges and capitalize on new opportunities.

With PTI your local government is not alone. You have access to colleagues ready and willing to work together to solve your problems. Whether the issue is telecommunications, transportation, energy, public safety, or sustainable development, PTI experts are there to share.

WHAT PTI CAN DO FOR YOU

Access the best solutions, the latest information, and the newest technologies through a variety of PTI media.

Guidebooks. Based on the expertise and real-world experience of members, PTI's guides, videos, and CD-ROMs cover a wide range of technology issues, including:

- How to manage technology risks;
- How to price local government information;
- How to create Enterprise-wide E-Government;
- How to use technology to relieve traffic congestion; and
- How to convert your fleet to alternative fuels.

PRISM, PTI's award-winning online member newsletter, covers technology news and trends and is available at no charge.

Training and technical assistance. Whether the issue is energy conservation or selecting the best information systems, learn more through PTI's:

- Workshops and conferences;
- PTI staff expert assistance;
- The PTI ANSWER Executive Information Service;
- PTI's SWAT peer-to-peer exchange program.

over to page 2

1301 Pennsylvania Avenue NW Washington DC 20004-1793 ▪ Tel 202.626.2400 800.352.4934 ▪ Fax 202.626.2498 ▪ http://www.pti.org

WORKING TO BRING THE BENEFITS OF TECHNOLOGY TO LOCAL GOVERNMENTS

from page 1

Internet exchanges. The PTI web site at <http://www.pti.org> provides:

- Over 1,000 links to official local government sites;
- An easy-to-use search engine;
- A Members-Only section, including a news service and document archives;
- Newsflashes, updated regularly;
- PTI guides and PRISM on-line; and

Online forums. PTI members are eligible to participate in active online listserves, where they can obtain invaluable advice and "lessons learned" from their peers.

Technology transfer through peer exchange

Through task forces, advisory boards, technology testing and focus groups, PTI's members and partners work together to keep pace with advances in today's technology and forge innovative solutions to tomorrow's challenges. Member research is furthering technology use in:

- Energy, finding cleaner, cheaper energy alternatives to conserve one of America's most precious resources;
- Environmental management and sustainable development, enabling local governments to improve public health, respond to federal mandates, and enhance community quality of life;
- Telecommunications and Information, harnessing the power of the Information Age for communities;
- Transportation, applying intelligent transportation systems to reduce traffic congestion and improve mobility; and
- Public safety, exploring new law enforcement tools to increase safety and reduce crime.

With PTI, local governments are part of the solution.

Membership: the one-stop technology solution

Membership in this unique organization ensures that your city or county is part of the solution.

With PTI, you stay on top of trends, challenges, and answers. Attend a workshop. Join a task force or focus group. Or take advantage of PTI's unique SWAT peer-to-peer exchange program. Networking with other members has proved to be one of the most valuable benefits to membership.

Members have continuous access to the ANSWER Executive Information Service, technical assistance from staff and other members, and PTI's many publications-at no additional cost!

And members' achievements stay in the spotlight, through the national annual SOLUTIONS Technology Achievement Awards program, and in articles and books citing member technology successes.

To find out more about becoming a member or using your membership benefits fully, e-mail: membership@pti.org or call the Membership Department at 1/800-852-4934.

YOU AND PTI: A DYNAMIC TEAM

Your participation is important. Share your challenges, lessons learned, and success stories. Learn from the experiences of others.

Public Technology, Inc., is the non-profit technology research and development organization of the National League of Cities, the National Association of Counties, and the International City/County Management Association.

Updated 2/2001

Bio Synopsis of Large Scale Technology Experience

- Federal Level – co-designer of the Marine Corps' first database management system (M3S) from a tape file system, and as the government's lead software engineer on the land-based GPS weapon system (Position Location Reporting System – PLRS) successfully deployed in Desert Storm.
- Private Sector – Program Manager and Systems Engineer at IBM successfully worked a $2 billion technology project, and provided strategic technology plans for the U. S. Department of State and Department of Agriculture.
- Local Level – as CIO for Montgomery County, Maryland we achieved 15 national technology awards, generated over three years of return on investments and assets during a five year tenure, and a national and international acclaimed Year 2000 Program that also provided consultancy to the Y2K leaders from 40 countries, including Australia, Russia and China. The Program was presented to the Senate Year 2000 Subcommittee and 9 of its 10 recommendations were implemented at the Federal level. Montgomery County has a population of 890,000 citizens and an annual operating budget of over $2 billion which ranks it sixth among the nation's counties in operating revenues.
- Regional Level – as Chair, CIO Committee, Washington Metropolitan Council of Governments conducted the largest Y2K test anywhere in the nation at the local level that included 18 jurisdictions in Washington, D.C., Maryland and northern Virginia, using the design of the Montgomery County program.
- State Level – Governor's appointment to State High Speed Network Task Force.
- Intergovernmental Level – member of Intergovernmental Advisory Board chartered by the Federation of Government Information Processing Councils; completed Harvard University, JFK School of Government Senior Executive Program for State and Local Government.
- Formal Level – MS Computer Science (Artificial Intelligence); BS Computer Science.

A Federal CIO?

Editorial/Op Ed

Wanted: Champion of Infrastructure Over Stovepipes

Should the United States have a federal chief information officer? Yes.

Why? First, connectivity and computing power enable management across the federal enterprise. Substantial efficiencies can be achieved from standardizing on this scale. Second, a critical mass of government customers is now electronically enabled. In other v s, Washington's focus on customers can now be government-centric – and not limited to individual programs or agencies. This means more than crimping federal program stovepipes at the top using web portals. It means establishing an enterprise infrastructure for use by all programs. There are billions of dollars to be saved by government, and even more billions to be saved by government's constituencies through a more efficient national operating system.

What should this individual do? Set and advance the vision and strategy for United States government information management, focusing on electronic interactions between the g nment and its external constituents. This executive should be the champion of customer-centric information management infrastructure investments.

What kind of person is needed? Someone with the inherent credibility, marketing savvy and stamina to fight on multiple fronts and multiple levels the battles of infrastructure versus stovepipes. Someone with the ear of the President. Someone who can articulate the benefits of a customer-centric infrastructure to the President. Someone with a proven vision for electronic business in a large enterprise.

Where should this individual reside organizationally? On the President's staff, reporting directly to the nation's CEO. This individual should chair the federal CIO Council and have broad latitude to cultivate support among members of Congress who believe in putting government's customers first.

Who should this individual be? How about Jack Welch as the architect of a new customer-centric information management infrastructure for the federal government? Perhaps, having created the widely admired operating system of General Electric, Welch would be willing to follow in the footsteps of David Packard in lending his legendary C-level push to dot-gov efficiency.

Vision

Foster an environment in which all those who have business wi the United States government can conduct the information-bas part of that business electronically in a secure, reliable, consiste and efficient manner.

Strategy

Define broadly and advance an infrastructure for electronic inte actions between the United States government and its various constituencies, emphasizing:

1) Policies that acknowledge the new possibilities, both rewards and risks, of broad and accelerated information flow.

2) Standards for secure, reliable, consistent and efficient electro interaction between federal agencies and external constituencie

3) Technologies and data types that maximize the range of pote tial external constituents that can use the infrastructure.

Tactics

1) Develop and issue within three months policies that define secure, reliable, consistent and efficient electronic interactions.

2) Define broadly core infrastructure elements for federal inform tion management, including the look-and-feel of the interface f external constituencies, in accordance with the strategy.

a) Set critical standards for these infrastructure elements.

b) Identify federal agency plans for build-out and maintenance of these elements, including funding.

c) Align agency plans with critical standards.

d) Coordinate agency plans with respect to design, devel ment and timing, including assessment of the impact c this coordination on overall cost and cost to each ager

3) Monitor progress in migrating information-based transaction between federal agencies and external constituencies to electro form.

a) Establish a baseline of information-based transactions by agency and constituency.

b) Measure changes semiannually in the percentage of such transactions that are performed electronically.

4) Communicate, communicate, communicate with external cu tomer constituencies and internal service providers.

ModelShop

Best Practices

Collaboration on Enterprise IT Investment Analysis...at the U.S. State Department

- Orderly review, with balanced business and technical analysis.
- Quantitative investment assessments, based on consistent criteria, of risks and returns to allow direct comparison of investments.
- Involvement of key staff and line executives.
- Clear decision-maker.

This diagram depicts the U.S. Department of State's model for the information technology (IT) capital planning process. The agency developed this process to (1) meet the requirements of the 1996 Clinger-Cohen Act and (2) improve its overall return from major IT investments.

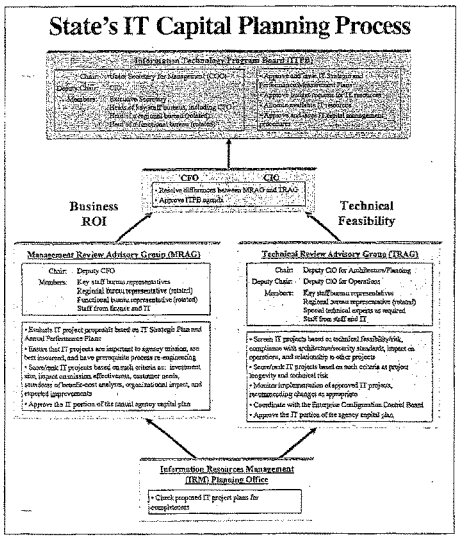
The Information Technology Program Board, chaired by the undersecretary for management, oversees the process. Two advisory groups, one focused on business factors and the other on technical issues, support the board in the review of IT investment opportunities proposed by agency organizations. The deputy chief financial officer chairs the Management Review Advisory Group (MRAG), and a deputy chief information officer chairs the Technical Review Advisory Group (TRAG). Members of the board and the advisory groups represent key staff, functional and regional organizational units.

The process flows as follows:

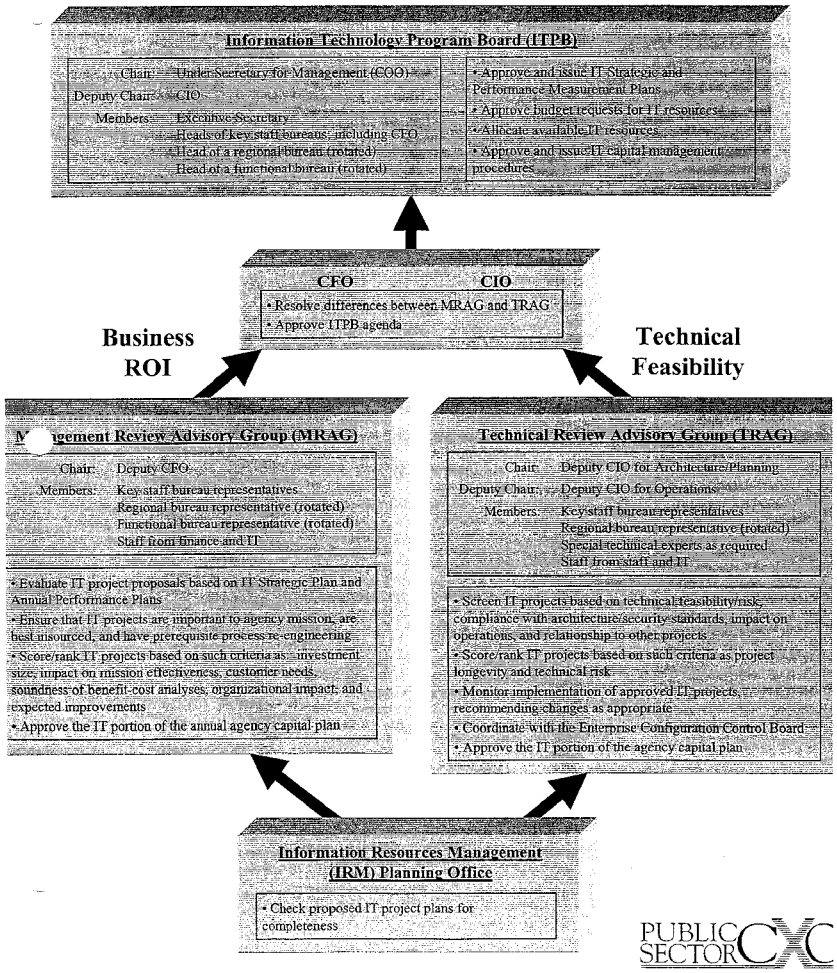
1. Agency organizations submit proposed IT project plans to the Information Resources Management (IRM) Planning Office, which reviews them for completeness. The IRM Planning Office forwards the proposed project plans to the MRAG and the TRAG.
2. These two groups deliberate independently on the merits of proposed projects, scoring each one based on consistent sets of criteria. The MRAG focuses on business, management and financial aspects of proposed projects, and the TRAG focuses on technology and risk issues.
3. The MRAG and TRAG forward scores for proposed projects to the chief financial officer and the chief information officer, who jointly reconcile significant differences between the two groups. These executives compile final results into project packages and provide them to the Information Technology Program Board for review.
4. The Board convenes once or twice a year to discuss the results of the MRAG and TRAG deliberations and to recommend an IT investment plan to the undersecretary. The undersecretary makes final decisions on projects and funding.

For more information on U.S. Department of State IT management and planning processes, try http://www.state.gov/www/dept/irm/strat_plan/ITSP-IT-3.html. X

If you would like a soft copy of the diagram from this article, email edith.holmes@cxoadvisory.com.



State's IT Capital Planning Process



PUBLIC SECTOR CXC

Mr. DAVIS OF VIRGINIA. We are going to proceed to questions. Let me start. We'll do 5 minutes a round to start, and alternate back and forth.

Mr. McClure, let me just ask you—you opened up—how would you assess OMB's role and performance in providing Federal IT leadership and oversight?

Mr. MCCLURE. Mr. Chairman, since the passage of Clinger-Cohen I think OMB has taken an aggressive role in trying to provide better policy and guidance to the Federal agencies. There is a litany of guidance that has come out of OMB in the last 5 years.

In that regard, they are performing a critical role that was envisioned for them under that important Clinger-Cohen Act.

I think in the Office of Management and Budget in the separation between budget and management, concentration on financial management and information management, sometimes, as Don just referred to, gets so commingled that there is inadequate attention being focused on some of the highest-priority IT issues. That's where I think we see a Federal CIO being able to provide constancy, constant attention and purpose and direction to some of these issues that require it, as was illustrated by the Y2K example.

Mr. DAVIS OF VIRGINIA. Let me ask each of you State folks—Ms. Valicenti, Mr. Upson, Mr. Gerhards—how are you held accountable at your position? It seems to me you are coming in, you are a new position, there's always going to be resistance in terms of other agencies, in terms of what you are doing. How much clout are you given, and how are you held accountable?

Ms. VALICENTI. In my case, in the State of Kentucky actually I have a tremendous amount of clout, which is driven through several policy and budgetary issues. From a policy perspective, I head the Committee on Standards and Architecture, which is extremely important, because I would suggest to you that is as important, if not important than budgetary oversight. Initial planning of systems that would eventually speak to each other, exchange data, is paramount to what we do in the future.

Budgetary oversight for prioritization of projects, especially ones that would have an enterprise impact, is also something that I do across the Commonwealth. I think that is—both of those responsibilities are necessary to really deliver on the enterprise vision.

There was one other issue I think that was brought up that I would suggest to you is probably as important as any others, and that is the oversight of the information technology discipline, as well. That is extremely critical today. We still have a shortage of information technology people. We will never be able to turn that over to a total public/private partnership, although that is the direction. That's also a very important part of my office.

Mr. DAVIS OF VIRGINIA. Mr. Upson.

Mr. UPSON. Mr. Chairman, I was asked the other day at a conference: what are our performance metrics, how are we measured, which gets to the heart of your question. And the fact that there is a position now that reports to the Governor that's responsible for technology, we don't have to set our own metrics. We are measured by everybody. There are more measurements out there—one of them, U.S. Commerce Secretary Don Evans, does it down here at the end. There are more people measuring what we do. And I guar-

antee you, we are very proud of consistently coming up now in the top five or so, but if we fall below that, every week at the cabinet meeting I'll hear about it.

And I was very proud that we got an A-in technology management, one of only a few States, which going to school my parents were delighted when I brought that home. And the Governor said, "Why didn't we get an A?" So the accountability is there in terms of measurements.

Mr. DAVIS OF VIRGINIA. Let me just say I was in law school with the Governor. When he gives you any trouble about an A, I'll share some stories with you. [Laughter.]

Mr. UPSON. I'll take that back next Monday.

So I think the accountability is built in because people are watching what all of us do, and we are exploring issues, bringing together different levels of government, putting together systems that communicate, cutting costs.

I am also accountable to the budget process, to two different committees. Congresswoman Davis served on the Science and Technology Committee, which actually is the authorizing committee for my office. So I'm not only accountable to the legislature, to the Governor, but to the legislature on a regular basis. And I think that's important to have as part of the statute when right now who is responsible for technology management. If you had a hearing, I'm not sure who you would call. Why don't we know what the top data bases are in government? Why don't we know how they are secured? Why don't we know whether we should buy or lease computers? Why don't we know even what we have? And I'm not sure you could call anyone right now. So I think creating the office puts in place the accountability that I think you are looking for.

Mr. DAVIS OF VIRGINIA. Thank you.

Mr. GERHARDS. I have to obviously agree with Don. Governor Ridge is very much results oriented, and he routinely reads all of the national surveys that are done ranking States, and our grades have continually improved, and I am sure if that didn't happen that I am ultimately accountable then to either making the improvement or stepping aside.

I'm lucky that the Governor has given me a lot of empowerment to make change, in two ways. One is the empowerment of just change, itself, and that is, if I need him or his senior staff to move mountains, all I need to do is to ask. And, second, I work very, very closely with our budget office.

What I have found in my experience is the funding, the budget, is the best lever both for incenting agencies and staffs to do what you need done, or using as a disincentive—that is, removing the funding, either in part or all—as a way of getting their attention.

So I feel at the State level that we are empowered. I think we are accountable. Again, many, many folks are doing independent evaluations of our performance, not to mention that internally we have many legislative committees and other types of committees that routinely take each of our major initiatives and then critique those.

Mr. DAVIS OF VIRGINIA. Thank you.

Mr. Turner.

Mr. TURNER. Thank you, Mr. Chairman.

Mr. McClure, you've spent countless hours working on this issue within your office, as well as with me, Mr. Davis, and others, and I think that most of us up here are convinced that we need a Federal CIO for a variety of reasons, but I'd like to ask you if you could basically share with us your perceptions of what the major impediments are to us accomplishing that goal. What hurdles do we have to overcome? What problem areas do we have to resolve in order to achieve this objective that we have all, at least on this committee, have worked on it and have concluded that it is a good idea? Where do you see our problem areas, things we have to overcome in order to get this done?

Mr. MCCLURE. I think really the issue is being real clear about what you want this individual to do, and that goes back to the comment that I think you've heard consistently from the panel. Until the roles and the responsibility and authority of this office are clearly understood by the community, I think there will be differences of opinion about the value that it can bring.

The CIOs themselves in the Federal Government are not welcoming additional oversight and micro-management from a Federal CIO. What they would welcome is a champion for the types of technology projects that they believe could be implemented to achieve more efficient and productive results, perhaps across agency lines.

So I think establishing the accountability, the role, the responsibility of this position is paramount to overcome any reluctance or obstruction to it.

In addition, I think that the position has got to be held accountable for results. If you create this position and then are not explicit about what it is the individual is going to produce and be held accountable for, then again it will be a hollow position.

Listen to what Don Upson just said. He is held accountable. He has performance metrics that he responds to and demonstrates that he is adding value to the State government. You would expect the Federal CIOs to do this, but on cross-cutting projects, on common infrastructure investments that maybe the Federal Government wants to invest in across agency lines. I think those are the kinds of things that you would want to make sure that this individual is reporting on—progress and charting progress, so that it is, again, not just a position that is talking and not producing.

Mr. TURNER. So the two areas of concern you shared is that there are concerns coming from the agencies about the role of the Federal CIO, and they want that clearly defined and understood, and you also believe that there needs to be accountability for the Federal CIO, which obviously will give them credibility over time.

In terms of the opposition of some of the agencies, what types of concerns do you hear and how do you weigh the legitimacy of those concerns?

Obviously, there's always a tendency to protect one's own turf, and I'm trying to sort out here what type of issues do we really have to come down to in order to deal with the agencies? And I include in that the concerns that will come from OMB that has some responsibilities in this area currently.

As you know, in the bills that I produced and Mr. Davis produced last year, I was somewhat deferring to OMB at the time. I think Mr. Davis' bill was more comprehensive, and perhaps centralized

some of those roles to a stronger degree than I was doing in my bill. I'm interested—and our sensitivities may now reverse, since the change in administration, but we both had a similar objective in mind. We were trying to reach a desired goal and to do it in a way that was politically achievable.

So what do you see as the legitimate concerns flowing from OMB and/or the other agencies?

Mr. MCCLURE. I'll try to respond. I remember at the end of the hearing last year I was asked which of your two bills that I favored, and I hope you don't ask me that again. That was a very difficult question in front of both of you to say I preferred one bill over the other.

Let me see if I can answer the agency concerns. I think it does boil down to, even for the Federal CIOs, to understand what this Federal CIO will do different or similar to their responsibilities. Again, the issue is one of fear of micro-management, fear of enforcement of policy and guidance without understanding the practicality of the pressure to deliver results. Will this person be a partner or an overseer? I think those are generally concerns that you get.

However, as I mentioned, I think many of the Federal CIOs welcome a champion for some of the issues that they are struggling with across agency lines, and I think they also are very encouraged by having a champion that can be a priority setter for the Federal Government because of the many long list of IT priorities that the Federal Government has.

From an OMB perspective, I think the central issue is one of separating budget control for IT from management and direction, and there's a firm belief within the Office of Management and Budget that if you separate the budget lever and budget oversight from these management issues, including IT, that it is very difficult to exercise oversight in the Federal environment.

This goes back to just a question of an implementation model. Certainly, OMB can continue to provide, as it did in both of your proposals, a budget oversight role, but that can be done in concert with a person that does not necessarily reside within that office. There's a partnership that would have to be established and a clear understanding of roles.

But, again, the problem is that there's a lot of focus on structure and defining the organizational box as to where this person is going to sit, and less of a dialog about what it is we want this individual and the Office of the Federal CIO to achieve. What is the problem that we are trying to solve? I think it is articulated many times over what some of the issues are that we'd like this individual to focus on, but I think the more that can be addressed and discussed the better these issues would be resolved.

Mr. TURNER. Thank you.

Mr. Chairman, I think my time is up. I think Ms. Valicenti has a comment she might like to add.

Mr. DAVIS OF VIRGINIA. Go ahead.

Ms. VALICENTI. I'd like to offer some perspective from a State level. I would think that many of the concerns are very similar to what a State concern is, and I can talk to you first-hand of that experience. There is a concern that you will add another level of

oversight; that decisions will take a much longer time to make than before; that people are going to "micro manage"; that you're going to stop whatever progress a project has and you will put another layer in there. But I will tell you that much of that may not be well thought out sometimes; that really the point is that the champion point is a very, very important point—the ability to champion projects that have the enterprise view, projects that need to take first priority, help with individual projects.

Many agencies come to us now and say, "Look, I've got a project that needs your input and oversight," and if you have some review of that it is much easier to get it through the budget process. I would suggest to you that the same is applicable for the Federal Government.

Mr. TURNER. Thank you.

Mr. DAVIS OF VIRGINIA. Thank you.

Mr. UPSON. Mr. Chairman, could I have one other comment on that?

Mr. DAVIS OF VIRGINIA. Sure.

Mr. UPSON. Just on the biggest impediment, I really think it is something different. I think it is the fact that the secretaries, the OMB Director, the President, and maybe many of your colleagues don't think it is important. I think sometimes they view the CIO as the person that fixes computers and faxes, and do we need another person advising us at that level, really? And sometimes I think what's in a name. I like the position "technology and management." I think it is a little more understood.

But I think if the President and the Secretaries, the people that you want—even the Clinger-Cohen Act was envisioned that those Assistant Secretaries report to the cabinet officer. I'm not sure there is a department in government where that occurs today.

So I think the biggest impediment is buy-in at the senior executive level that you're trying to reach. I mean, I think the Federal CIOs would welcome it. I just think that's the wrong audience for this bill. I think they get empowered by this bill, but right now I think they are not empowered, which is the point of it, and I think it is getting to the executives to understand exactly what is involved with this $94 billion.

Mr. DAVIS OF VIRGINIA. Thank you.

Did you have something to add, as well, Mr. Molchany?

Mr. MOLCHANY. I think one thing to add to that is the whole sense of empowerment. In talking to CIOs at the agency level in the Federal Government, they don't feel empowered, even in their own agencies, many times.

Mr. DAVIS OF VIRGINIA. Yes.

Mr. MOLCHANY. And I think that a person that is empowered to make technology happen, to be a champion, to be an innovator, who can also empower those CIOs in their individual agencies to make a difference and have some clout is something that's needed.

One of the roles that I take on at the county government is literally to work with the project sponsors and agencies and make their own directors understand how important their projects are and why they should be supporting them and why they should be a part of them and why we need to put resources to this, why we need to actually put budget funds to their projects.

That sense of empowerment really is not there for the CIOs you put in agencies. In talking to many of them, they don't even have the types of powers that I have at a local government. They really don't have a say in how the business runs. As a deputy county executive at Fairfax County, I not only am able to empower the people in the departments who use technology to make a difference technology-wide, but I also am empowered to be part of running the business, and I think that's something that's really missing for the agency CIOs.

Mr. DAVIS OF VIRGINIA. Thank you very much.

The gentlelady from Virginia, Ms. Davis.

Mrs. DAVIS OF VIRGINIA. Thank you, Mr. Chairman, and thanks to each one of you for coming here to testify before us today.

This question is for Mr. Evans. Do you believe that the creation of a position of Federal CIO would help or hinder local government IT in any way?

Mr. EVANS. For local government, to help?

Mrs. DAVIS OF VIRGINIA. Right.

Mr. EVANS. I think it will certainly be of a tremendous help, and I might add I think that, whatever the cost is for setting up the Federal CIO, it would be quickly regained in terms of the returns of investment that the Federal, as well as State and local government, would benefit. So cost should not be an issue. The benefits would be tremendous in terms of a much sooner three-tiered or seamless government being implemented, and I think an economy of scale that we would just love to have.

I would just like to add that local government—Fairfax County, Montgomery County, just two examples—are larger than many State governments, and so I think that there is a tremendous wealth of how has the problem been solved at the local level.

Mr. MOLCHANY. Can I just add one point?

Mrs. DAVIS OF VIRGINIA. Sure.

Mr. MOLCHANY. I'd just add one point. I think we would certainly welcome a Federal CIO. In just looking at the model in Virginia, where I have a Secretary of Technology to work with, I have been able to have Fairfax County cooperate a lot better with the projects going on at the State level, and actually in some cases eliminate duplication, where if something is much better done by the State government or actually much better handled by us as a part of one of their programs, it has been very helpful to have a Secretary to work with. I would welcome having a CIO at the national level to also do the same with.

Mrs. DAVIS OF VIRGINIA. And this would be—I guess anybody can jump into it. How have you handled the security problems?

Mr. EVANS. I'd like to start. After looking at many of the governments across the country, I think the security issue—it depends on what kind of security you're talking about. If you're talking about telecommunications, network protocol, that's one issue. If you're talking about the kinds of securities that would reside at national secrets—NSA, CIA—I think that those kinds of functions I would say are not part of the Federal CIO. Those would be specialized kinds of systems, as one might view, say, air traffic control, as an operational system that is not in the mainstream of computing general office automation, horizontal systems, so we would take that

out by setting up centers of competency—for an example, the Washington Metropolitan Councils of Government—I think Fairfax is for project management, Montgomery County was for strategic planning.

So you could vest, for an example, a department or agency to take over the lead for security, whether it be networking or some other function.

Mrs. DAVIS OF VIRGINIA. Anybody else want to jump in on that?

Ms. VALICENTI. Congresswoman Davis, I think security is one of those issues that needs attention at all levels, because our security is really dependent upon the weakest link. We are all interrelated. I think that we would need to distinguish what level of security we want for what applications and what systems.

But the general kind of security right now that we all enjoy and intend to enjoy is in many cases driven by policies at a local level, sometimes at a State level, and then at a Federal level. That is a conversation that all of us need to have together, because that is probably a set of very basic principles that applies to all of us in order to do that.

That right now is facilitated by certain conversations and conferences, etc., but probably would be better driven if we had a conversation at the appropriate level among all government.

I will tell you citizens do not distinguish what is government. They don't distinguish sometimes what is local, State, or Federal. They talk about it as "government." And, consequently, we need to look at our citizens in that same way.

Mrs. DAVIS OF VIRGINIA. Thank you.

Mr. MOLCHANY. Congresswoman?

Mrs. DAVIS OF VIRGINIA. Yes?

Mr. MOLCHANY. Security issues, I think, also just to add to that are hard enough to figure out when you have a group like we have, which you are familiar with, our COTS Council. David sits on it. We talk about it on a monthly basis, driving toward a level of collaboration and coordination that is critical if you are going to ever secure and protect privacy and secure data bases.

Without collaboration, the ability to collaborate and coordinate, it is going to be a giant mess forever, and without a functional office that can bring together the people for collaboration and coordination, you can just forget about it.

So I think it is a critical component, and once you've established this office the Congress suddenly has someone they can—again, to go back to Chairman Davis—be accountable.

Mrs. DAVIS OF VIRGINIA. Right.

Mr. MOLCHANY. So it is that collaboration and coordination that comes into play with your question with this office. It's hard enough when you have it, but impossible without it.

Mrs. DAVIS OF VIRGINIA. So having the centralized figure would help in the security——

Mr. MOLCHANY. You bring people together. That's right.

Mrs. DAVIS OF VIRGINIA. Yes, sir.

Mr. MOLCHANY. A perfect example of security and something that probably should be centralized and worked across all levels of governments is when you get into the area of digital signatures, and basically in Virginia we've already decided that each locality

should not be handling that on their own. We should go at least to the State and work with the State agency that would handle that type of security for us.

When you look across the country—and exactly what Aldona said—people don't look at us as separate governments, they look at us as—they look at themselves as customers to us, and they have to have multiple ways to work with us through security. It is going to be very confusing. So something that actually gave some leadership in that area would be quite helpful.

Mrs. DAVIS OF VIRGINIA. Thank you, Mr. Chairman.

Mr. DAVIS OF VIRGINIA. Thank you.

Mr. Horn.

Mr. HORN. Thank you, Mr. Chairman.

I've been very impressed by the statements that you all have made, and I just have a few questions here.

My questions go at the matter of the role of the President and his staff or line. I think, if we are going to pass out the chief financial officer we've already done, chief information officer we've already done, inspector generals, we already done 20 or more years ago, and we have to give the President, I think, the authority as to which person should report to him or her, as the case may be.

And right now we've got to see a focus in what they call "Office of Management and Budget." The fact is, it has never been working on management. The budget is overwhelming. That's why. And most of the people, the Presidents, regardless of party, look for somebody that has financial background, accounting background, not management usually. They don't know the first thing about management. And yet Congress has put four statutory agencies by law into the Office of Management and Budget on all sorts of regulation, clearance, and this kind of thing, all of which are necessary if the President is going to have control of the executive branch of the Government.

Let's take an example—and one of you mentioned it. On the Y2K thing, that was going nowhere. Every person should have been—and the President didn't know what was going on that, and no President did anything. So in April 1996, when we held the first hearing on that, after that we wrote, with the ranking democrat on my subcommittee, and said, "Mr. President, you've got to get somebody to run this show." It took him 2 years before he faced up to it.

In the meantime, Mr. Koskinen was Deputy Director of OMB for management. Nothing was done on Y2K. He retired. The President—and this was a very good move—the President took Koskinen out of retirement, said, "I'll make you assistant to the President, as well as any other functions," and that's exactly what you have to have. And it is—the President needs that authority.

I don't think Congress should push things in the situation unless the President agrees, as some Presidents have different styles and they need to know how to function on it.

And so Koskinen worked very well. He was assistant to the President and he was chairman of the council, and so forth, so he could pull all these people together. He could go around and talk to the agency heads, the deputy Secretaries and all the rest, so that was a plus because there was a direct line to the President and ev-

erybody had to listen to him, as a result. And, besides, he was a friend of the President, knew him before he was the President, and so that certainly helped, and he did a fine job.

But on this situation I think any position within the Executive Office of the President, the President should have the authority to move that with which function is the most comfortable in terms of technology, let's say. If the President doesn't care to think any about it, he's not going to want to have them beating on the door. On the other hand, that function has to be done, and it is a very valid function.

Some of the things, when we put the financial officers on the books, what did they do in some of the agencies? They simply gave it over to the Assistant Secretary for Management, which had been put together in the Hoover Commission of 1948, 1949, and 1954, and that just was going nowhere, very frankly, when they also threw the chief financial officer and the chief information. Congress wanted those people to report directly to the cabinet head, and we didn't seem to write the law carefully enough, and the result was we didn't get much done years on decent financial management or on decent technical and computing.

So I just think we need to look at that, and I would like to know, for those of you that have worked through more than one Governor, I'd like to hear what your experience was.

And Governor Ridge, of course, was No. 1 in the Nation, and I praised him in every press conference I had that he was way ahead of everybody else. Governor Wilson started it with Mr. Flynn, in terms of the chief of technology for the State of California and a member of the cabinet, and it worked very well.

So I'd just be interested in where you think that position ought to be within the Office of Management and Budget, because some of us think that we ought to have an Office of Budget and an Office of Management, with those two people reporting, but we can't have everybody reporting to the President. So do they report to the President through the budget side, or do they report to the President through the management side? So I'd appreciate anything you want to say on the subject.

Let's just go right down the line. Mr. McClure.

Mr. MCCLURE. Mr. Horn, I think it goes right to the heart of the question. I think there is interest in focusing on producing better IT results in the Federal Government. The question is: how do we ensure that is going to happen?

We do have a statutory office in OMB called OIRA that's empowered with the responsibility to oversee information management and policy and even oversight of agency IT budgets in the Federal Government. You know as well as I do some of the inherent problems. That office is greatly under-staffed in comparison to the workload that it is asked to do. The majority of the occupants focus most of their time on the regulatory aspect of the office, looking at paperwork reduction reviews, cost/benefit studies in relation to the proposed rules, and less of the staff are actually focused on IT issues.

I don't think there's any disagreement that there needs to be a higher degree of executive attention within OMB or outside OMB on IT, because of tremendous IT problems that we have in the Fed-

eral Government that need to be addressed, but also the tremendous opportunities that we're passing by, by not taking this enterprise-wide look at information technology.

It could work lots of ways. I think the States are prime examples of where you have some reporting to Governors, some reporting to boards, some doing some combinations. There's no secret method of success. But what is needed is some attention to this issue, and it is analogous to the creation of CIOs in the private sector, some of whom would argue they are dinosaurs and who have already been subsumed back into the business side of the organization, and that may very well be the case for the Federal Government. But right now we need attention and focus and executive-level focus on what these opportunities are that we're missing and some priorities established for them. What are the key problem areas that we need to address to make sure that we are producing better results? Within our outside of OMB, I think that's what we want to focus on.

Ms. VALICENTI. Let me offer some comments in terms of where I think the emphasis ought to be placed. I'm probably not well schooled in terms of the organization of the Federal Government, but having worked in the private sector it is very clear that the position has a lot of emphasis on the management side.

The budget side has always had emphasis because you always have had to live within a certain budget within certain means. It's the management side that has gotten attention over the last few years, and I would suggest to you that it is the management side that is getting attention in State government, also.

It is very clear that some of the issues that Don Upson just articulated—getting acceptance by other management folks is very important, that you are part of the decisionmaking process, that you sit at the table, that what you have to say and the input that you have becomes part of the overall strategy. For far too long, technology has been viewed as the afterthought. "By the way, here's where we're going to go and here's how technology, at the very end, is going to help us." Unfortunately, that is not the case. The technology perspective has to be integrated from the very beginning of when the strategy is done, so, consequently, I would weigh in on the management side.

Mr. HORN. I might add that I have done that as a university president for 18 years, where they sat at the table after my first 2 months and everybody knew that was the person that was going to work with all of them in terms of the technology portions, and it worked for 18 years, and I didn't realize that I was putting a CIO in my—I didn't call him a CIO, but I got a business manager out of his way, a vice president out of his way, and he was part of my management group every Monday afternoon, and that ran the university, basically, so I've done it and it worked well.

Mr. Upson.

Mr. UPSON. I would just only add, Congressman, that I think that all those—the four offices that exist in the Department of Management all were designed to elevate, as you said—I agree with it—technology and management to a higher level, and I think that a clear direction in establishing an executive in statute is important for this reason: absent that, there is no predictability. Y2K

was an example of bringing people together, but now it is gone, and issues like security and others are out there. And the biggest question I got early on when the Governor created my office, first by Executive order and before statute, was, as we started progressing—and I think David Molchany will agree with this—what happens after you leave? That was answered by the General Assembly when they put it in statute. And, absent that predictability, the level of cooperation and coordination and executive attention goes down, and I think that's the reason that Secretaries pay attention is they think the White House is looking, in my mind, and the reason that people pay attention to me is they think the Governor listens to me, as he does. So I think that it is important to have that continuity.

Mr. GERHARDS. From my perspective, I probably spend 90 percent of my time on cultural and program areas, probably 10 percent on technology issues and budget issues; therefore, I really think the emphasis needs to be on management. But, regardless of where you position a CIO, I think the important part of it is the empowerment, having the senior-level empowerment. Without that, again, I don't think that you are going to have or achieve the results that you're looking for.

You also need the high-level access, that when there are issues, when there are cross-cutting difficult cultural issues to deal with, that you have ready access to the senior executives who can, again, move those mountains.

And just the last piece of that are adequate resources. Certainly, having empowerment and having high-level access are all needed and important, but unless this office or any CIO's office has sufficient resources to carry out that mission, I think there's going to be a lot of lost opportunities.

Mr. HORN. Mr. Molchany, do you want to comment on that?

Mr. MOLCHANY. I think that the reason that our position has been successful and I have been successful at Fairfax is because I have the support of the Board of Supervisors and the county executive and the other deputies. The realization that they all feel IT is important, that they basically look to me to make the IT decisions, to plan it, to make sure it gets funded, etc., empowers me and it empowers whoever works with me.

I think I would agree that the management side is what I do most, making sure that we collaborate, making sure that people work together, making sure that projects are on track and our money is being spent wisely.

The one other key part that makes us successful is a very good tie between myself and the CFO so that, as I am planning IT, I am working with them to make sure it is within budget guidelines and make sure that we have the money and make sure that we are actually getting some return for what we are investing. Looking at IT as the financial investment as well as a management opportunity is really what makes a difference.

Mr. HORN. Mr. Evans, any more to say on whether it ought to be the management or the budget side?

Mr. EVANS. I would just simply say the management side, but I would also like to say I think where the middle ground between H.R. 4670 and 5024, if you could look at them as being the ends

of the compendium, is that, for those projects that would be deemed enterprising, that those would be the ones elevated up to the CIO, the Federal CIO for his oversight and his budget control.

Likewise, you heard my colleagues mention about the predictability or the unpredictableness of IT that Y2K was present. Now it is not. Today it is security.

If you were to consider an authority or a mechanism similar to, say, the Joint Chiefs of Staff, the ability to task organize would be a mechanism that I think would have the flexibility for the Federal CIO having the resources that we know are needed but don't know exactly what but can be very, very responsive because it has the authority at that moment in time, as Mr. Koskinen had.

Mr. HORN. Thank you, Mr. Chairman.

Mr. DAVIS OF VIRGINIA. I want to thank you very much for that line of questions.

Mr. Turner.

Mr. TURNER. Thank you, Mr. Chairman.

Ms. Valicenti, I wanted to ask you to comment on a subject that we had the pleasure of discussing with you in Mr. Davis' office a few weeks ago with Governor Gehring of Wyoming and Governor Barnes of Georgia, and that's the issue of what can the Federal Government do to assist the States, and primarily to prevent the Federal Government from hindering your efforts at the State level to implement information technology through the regulations that we may promulgate, and in our meeting a few weeks ago you shared one very concrete example of a change that you would suggest the Federal Government make to help you at the State level, and I wanted to give you the opportunity to share that with the committee, as well as to share with us any other thoughts that you may have on ways that we at the Federal level can do a better job to assist you and, of course, to prevent the policies that we promulgate from hindering your efforts.

Ms. VALICENTI. Congressman Turner, thanks for the opportunity. I think that there are several areas, and let me point to them.

Many of the initiatives that are now being addressed and have been addressed by the Federal Government, in fact, do come to the States for implementation. It has everything from the Workforce Investment Act to the regulations that are now being—that are coming on around HIPA, etc., are going to be up to the States to implement. In many of those cases, there probably was not enough dialog in some of those cases on how the States will implement.

And, by the way, I would suggest to you that this is another area where a Federal CIO would have the foresight and would have the ability then to work across government lines to do that.

I think the very specific topic that we addressed when we spoke with you a few weeks ago was really to remove some of the barriers around very specific funding—funding that is toward specific projects. And I would suggest to you that we will probably provide additional testimony for you over the next few months when we have an opportunity to do that of more examples. But I would tell you in some cases funding is so specific that it is for a program area.

If you look at the States and how the States want to deliver services, they tend to deliver those services from a very holistic way.

We look at processes and we say, "What is the—a family in need may need multiple things, may need some transition funding, may need child care, may need educational opportunities. Today, many of that funding comes for a specific project. So when we set up an office to do a holistic view, to do a process view, we are, in fact, stymied by that funding that goes to a specific program, and in those cases we have to come and ask for dispensation—that, by the way, we would like to set up one office that can serve a family for multiple needs for multiple programs.

And if you look at the citizen as a customer, more and more of the services at the local and the State level are probably going to be delivered from that very holistic view. It is in those areas, Congressman Turner, that I think that you could help us.

Mr. TURNER. Thank you.

Thank you, Mr. Chairman.

Mr. DAVIS OF VIRGINIA. Thank you very much.

Kind of a question for everybody, but I'd like to ask—let me start with you, Ms. Valicenti—do you think there is currently an effective working relationship between the State and the Federal IT communities? And if you have any examples of that, I'd like to hear them.

Ms. VALICENTI. Congressman Davis, I think that we have a relationship right now which is based more on individual departments and agencies. I think that we, by the way, have had a very good relationship of interacting with the CIO Council, and we've done that on a regular basis, and we want to share participation on that council. But it is at a very specific point. It is not continuous. And when I talk about delivering services from a government perspective, I think that is our opportunity to do that from a very initial planned perspective.

I suggested to you a couple of areas. The Workforce Investment Act was one area. I guess that HIPA is probably another example where ultimately the States will require implementation. To have that conversation early on with a focal point is probably most important. So we can certainly improve on what we're doing.

Mr. DAVIS OF VIRGINIA. I mean, it seems to me that when you're talking about State and local governments you want to interact with your clientele, which are the customers or the voters, the citizens, but at the Federal level our biggest clients are really State and local government, to a great extent.

Ms. VALICENTI. That is correct.

Mr. DAVIS OF VIRGINIA. It's not the average guy out there who is going to hook up to a kiosk, although that is not unimportant, but it is not the major concern.

Mr. Upson, do you have any comments? I'll go down the row.

Mr. UPSON. Yes, Mr. Chairman. And I think the Federal CIO Council is making attempts to work with State and local government. The truth is, though, when State and local government—when David Molchany turns around from a meeting with the Federal people, he goes back and talks to the chairman of the Board of Supervisors. I turn around and I talk to the Governor of Virginia. She talks to the Governor of Kentucky. Who do the Federal CIOs go talk to?

So when we cut a deal, we know we can deliver, but when we talk about reforming HIPA or A87 or consolidating these, the ridiculous process that my colleague here just described where all the moneys have to be separated 20 different ways and ends up costing more for all of us is—there isn't the ability to change it. So we've got that authority, and I think that's why I think all of us endorse your concept, because it's great, they are well intended, but I'm not sure they can execute to the extent we can.

Mr. GERHARDS. Our interaction primarily at the Federal CIO level is agency by agency. And I think, as Aldona said, many of the programs that are coming out now we would rather deal with them in a holistic way, which means that we need to deal with multiple CIOs at the Federal level in order to try to either seek exemptions or seek their approval for some of their initiatives, and that becomes very, very problematic.

And I also want to just take a second and echo what was said about inflexibility and funding. There are a number of opportunities, I believe, we would have in Pennsylvania, but we can't take advantage of those opportunities because, when we bring the State agencies to the table, they say, "We can't participate because Federal law or Federal regulation precludes our participation."

Some of that is perceived, but many times it is real, and I think we are missing a significant opportunity again to deal with problems in a very strategic, holistic way instead of the very tactical way that we are looking at problems at this point.

Mr. DAVIS OF VIRGINIA. Thank you.

Mr. MOLCHANY. I would say our experience has been mixed. Probably our biggest example is the GSA and working with the Government without boundaries project. That has been outstanding. The people that we work with there are very creative. We have been able to work with them, as well as the Commonwealth of Virginia, as well as our own people to come up with a concept, and hopefully a demonstration in the late spring timeframe, very quickly.

The same agency, however, decided they were going to put kiosks out over the United States. They put one in what they thought was Falls Church, VA. It actually was Fairfax County, VA. They didn't realize the ZIP codes didn't mean you were in one place or the other. All of the information was for Falls Church. My chairman of the board was going to go and cut the ribbon, because they did figure out it was her that needed to do that. I had to go and look at that kiosk and tell them at the 11th hour, "Change this. Change this. Change this." They buried all the Fairfax information on that kiosk. You can actually pay taxes on that kiosk, but you could never find out how to do it because they never worked with us. So in one agency two separate programs—one that has been an outstanding, outstanding collaboration, and one, no matter how many times I called from here to Texas to anywhere could I get anyone to realize that the kiosk, A, didn't have to exist, because I could put one of mine there and actually collaborate with them to make it a better implementation; or that they needed to actually call me back because the kiosk was actually in my county not in the city of Falls Church.

I've also spoken at the Information——

Mr. DAVIS OF VIRGINIA. I just have to tell you, as a resident of Falls Church and chairman of this subcommittee which oversees GSA, I don't know why I wasn't invited to the ribbon-cutting. [Laughter.]

But that's an issue for a different day. I thank you for alerting us, though, to that.

Mr. MOLCHANY. That is an example of excellence and not so excellent in one agency.

I've also spoken at the Information Resource Management College at Ft. McNair several times on the role of a CIO, what does a CIO do, for potential CIOs. I have been struck at how similar the actual things that people do in IT and IT management in the Federal Government is to local government and State government. I think there needs to be a lot more synergy there, and I think a focal point at the Federal level could certainly bring some synergy.

The other thing is the CIOs are looking for some direction. They are looking for someone to empower them. Many of them have said the same thing and different programs have been involved with them.

And then I would echo Aldona. We need our simplification of how Federal moneys and programs end up at the local level. There is no holistic approach. There are strange things, such as system of record, which means something that is foreign to anyone that is in IT. You know, if data is in a data base, it doesn't matter how it got there as long as it is right. Those types of things are so complex that it is very hard to actually interact with programs, especially at the local level where you have a person that may need multiple pieces of the same program all done at once. So I would echo Aldona that that is absolutely a critical issue.

Mr. DAVIS OF VIRGINIA. All right. Thank you.

Mr. Evans, do you want to comment on it?

Mr. EVANS. I think it has been said. Thank you.

Mr. DAVIS OF VIRGINIA. All right. I'm not interested in ribbon cuttings in Montgomery County, but Mrs. Morella might be. [Laughter.]

Ms. VALICENTI. Congressman Davis, I want to just leave you with a very graphic last example, and I failed to mention that earlier, but I have been told stories—and I did not personally see this—but, in fact, we had an office where there were two programs funded separately, two people sitting side-by-side with their own individual personal computers but not being able to share a printer because that printer had to be supported out of two separate programs. So two computers sitting side by side with two individual printers because that printer could not be shared.

And I will tell you that is one small story, but I think that is probably replicated hundreds of times.

Mr. DAVIS OF VIRGINIA. And, as Mr. Turner and I have also heard about stories like that, we're trying to work with your group and others to try to ensure that kind of thing doesn't have to happen. It is hugely inefficient, but it just talks to the changes that take place when you move from one model and one society into the information society. We just have to change the laws accordingly.

Just one last question from my perspective, and I'll start with Mr. Upson, because I know what Don went through.

Don, when you went down to Richmond it was new for the State, obviously. I think one of Governor Gilmore's greatest accomplishments has been in the area of information technology. He has been very, very proactive in those areas. What kind of resistance did you meet from other State agencies? You're a new kid on the block at this point. No agency likes to give up authority and power over procurement and those kind of issues that obviously your position raised. And I will ask everybody else to take it, because I think the key is, if you can have somebody, whatever you call him, what's their clout going to be and what's the resistance going to be from the old line sectors that have been in power for a long time?

Mr. UPSON. That gets to the heart of construction of a statute. In fact, I think that it is important to create the office, an office that has the authority, but I think that same statute has to bring together the stakeholders, and the biggest obstacle I have—it was on August 26, 1998, when we first met and we had a 4-hour meeting scheduled, and the Governor was going to come 2 hours into it, and we were supposed to discuss things until he got there, and you could just see around the room everybody—nobody wanting to talk like, you know, what are we going to be told what to do.

And I think the important point is to construct a statute somehow that lets the agencies know that this person is going to be your agent, not your dictator, and is going to be representing the collective views and provides a focus to go to the Congress, to go to the executive, rather than be someone directing.

And our whole statute was created from the point of view that the Internet drives power choice and control to the individual, and if you believe that you have got to believe that central authorities can't tell people what to do very effectively unless you bring them into the game.

I think the private sector management, in technology companies especially, is different. It is diffused. It isn't top-down. I use the analogy it is more a soccer game than a football game, where, instead of the coach tells the quarterback tells the team every single play, they're all out on the field all at once and they're all cooperating.

And so I think that—but it was that initial belief that government somehow, the central authority, new Governor for a short period of time is going to try to tell us what to do, and that's what I think. If we've changed anything, I think we've changed that.

Mr. DAVIS OF VIRGINIA. Anyone else want to comment? Mr. Gerhards.

Mr. GERHARDS. I think in Pennsylvania in 1995, when we went to a CIO, our agencies were looking for some leadership. They also were looking for a champion, because they had gone through some tough budgetary times and they were looking for one voice that could work with our budget office and champion the cause that technology can provide a good return on investment, properly implemented.

We also tried to keep it in a collaborative mode. We try to do everything in a collaborative mode that we can and only get dictatorial when we need to. We try to also keep our focus at the enterprise level and not micro-manage, provide a lot of flexibility to the

agencies, and we do that through setting standards and general policies.

I think it is also important early on, at least, to have some small wins—to look for the low-hanging fruit. Nothing—success breeds success, and a good way of building the team and having everyone feel that they are an important part of the team is collectively identifying some of those opportunities and having success.

And I think what really drove it home in Pennsylvania was the Y2K effort. Some folks were challenging the wisdom of having an enterprise approach to Y2K, and I can tell you, after we were finished with Y2K, two of the agencies—I had them come to us and say, "We would not have been successful, we could not have achieved this, if each of us had to go out and procure our own vendors to help us do this, if each of us had to find the best techniques to remediate the technology."

So I think all of those components together—and what I'm seeing in Pennsylvania now is more interest in collaboration, because they see it can work, and less interest in trying to maintain the traditional stovepipes that we had before 1995.

Mr. DAVIS OF VIRGINIA. Thank you very much.

Any other comments on that?

Mr. MOLCHANY. I have one. I think that you have actually gone beyond creating a CIO with that question to what type of person would you need. You really need to have a person that actually wants to collaborate, that realizes that they can't be a dictator, that realizes they have to have people work with them, and especially in a Federal model, where you may not have direct control over budgets and departments, you have to make people want to work with you. You have to make them realize that you have value to them, that you are an added value, because if you aren't you'll be ignored. So you literally have to be able to tie those departments together and make a difference and really be a person that people want to work with and really think there is some value.

Ms. VALICENTI. Mr. Chairman, I'd like to offer——

Mr. DAVIS OF VIRGINIA. Go ahead, and then we'll go to Mr. Evans.

Ms. VALICENTI. Two thoughts.

Mr. DAVIS OF VIRGINIA. Sure.

Ms. VALICENTI. First of all, information technology has been an enabler to everything that State government, in our case, does, but everything that government does, and so if you can get that message across to, in my case, my peers, my cabinet-level officers, that we're there to help them.

Second, to distinguish what needs to be done at an enterprise level and what not needs to be done at an enterprise level, but that there is some control at the agency or at the department over the things that have no enterprise perspective. I think if you can make that—distinguish that early on in the program, that is it much easier then to work.

Mr. DAVIS OF VIRGINIA. Thank you very much.

Yes, Mr. Evans?

Mr. EVANS. Yes. I would just simply agree. To be very candid, as we are currently installing enterprise information technology models in some of the largest jurisdictions currently, we see opposition

that may be mirrors from wait and see to outright sabotage, and what we find is that, as was indicated, when the CIO does deliver, agencies, departments realize that there is real benefit. I think the recommendations that my colleagues make in terms of identifying the roles and responsibilities will help clarify that, and also the guiding principles that are associated with the collaboration that David here mentions, as well. I think all of those things will eliminate them. But they are no different than any other project, the kinds of people issues that you have.

This is a 10 percent technology problem and 90 percent people problem.

Mr. DAVIS OF VIRGINIA. Thank you. Any of my colleagues want to ask any other questions?

[No response.]

Mr. DAVIS OF VIRGINIA. If not, let me just say before we close I want to thank everyone for attending the hearing this morning. I want to thank our distinguished panel of witnesses and our Members for participating. I also want to thank the staff for organizing this.

I think we've learned a lot, and I look forward to continuing our work on these issues with my colleagues on the subcommittee.

I will now enter into the record the briefing memo distributed to the subcommittee members.

We will hold the record open for 2 weeks from this date for those who may want to forward submissions for possible inclusion.

These proceedings are closed.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned.]

[Additional information submitted for the hearing record follows:]

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ENTERPRISE-WIDE STRATEGIES FOR MANAGING INFORMATION RESOURCES AND TECHNOLOGY: LEARNING FROM STATE AND LOCAL GOVERNMENTS

BRIEFING MEMORANDUM

April 3, 2001

10:00 a.m.

Room 2154 Rayburn House Office Building

On September 12, 2000, the then-Subcommittee on Government Management, Information, and Technology held a hearing to look at the merits of establishing a Chief Information Officer for the Federal Government based on proposals introduced by current Technology and Procurement Policy Subcommittee Chairman Tom Davis and Ranking Member Jim Turner. Currently, there is no centralized leader for the Federal Government to perform the statutorily-required oversight and accountability over information resources and technology management responsibilities now held by the U.S. Office of Management and Budget (OMB). That hearing highlighted the infrastructural complications and deficiencies that now exist because of this absence and the merits of establishing such a position at the Federal level. Our discussion also raised a number of challenges to the creation and operation of a Federal CIO, such as what enforcement authority would a Federal CIO possess, what type of funding would a CIO require, and how would the CIO specifically work to implement efficiency, quality, and accountability agency-wide?

As a result, the Subcommittee on Technology and Procurement Policy is undertaking what will be the first in a series of hearings designed to assist the Subcommittee in answering these and other questions about the role and powers of a Federal CIO. **On April 3, 2001, at 10:00 a.m., in Room 2154 of the Rayburn House Office Building**, the Subcommittee will hold a hearing that will examine the various approaches that a number of states and local governments have implemented to manage and oversee information and information resources, including the use of information technology enterprise-wide and the promotion of electronic government.

The proposal to centralize the management of information and of technology government-wide in the hands of a Federal CIO has existed for a number of years. Senator William Cohen originally required the establishment of a national CIO within the U.S. Office of Management and Budget (OMB) as well as CIOs for all major agencies in the Information Management Technology Reform Act (the Clinger-Cohen Act) enacted in 1996. However, the national CIO provision was removed in the final draft of the legislation. With our economy becoming even more information-driven since that time, and with technology providing the tools for manipulating and protecting that information, there have been various voices in both the private and public sector supporting the creation of a central figure to manage information and technology government-wide.

Last year, Chairman Davis introduced H.R. 5024, the Federal Information Policy Act of 2000, which would have established an Office of Information Policy (OIP) headed by a Federal CIO and housed within the Executive Office of the President (EOP). The CIO would have acted as the principal adviser to the President on the development, application and management of information technology government-wide. H.R. 5024 would have also consolidated and centralized information resource management (IRM) in the OIP and created within that body, an Office of Information Security and Technical Protection with responsibility for facilitating the development of a comprehensive, federal framework for devising and implementing effective, mandatory controls over government security.

H.R. 4670, the Chief Information Officer of the United States Act of 2000, was introduced by Representative Jim Turner and would have created an Office of Information Technology headed by a Federal CIO and housed within the EOP. The CIO would have acted as a special assistant to the President. Also, the Office of Information Technology would have been responsible for providing analysis, leadership, and advice to the President and Federal department and agencies on government use of information technology.

Currently, the U.S. Office of Management and Budget (OMB) has statutory management and oversight responsibilities over IRM for the federal government. IRM is defined in OMB Circular No. A-130 as "the process of managing information resources to accomplish agency missions . . . [and] encompasses both information itself and the related resources, such as personnel, equipment, funds, and information technology." The Paperwork Reduction Act (PRA), for instance, established the Office of Information and Regulatory Affairs (OIRA) within OMB and gave it the authority to "develop and maintain a Governmentwide strategic plan for information resources management." Several agencies, including OMB, the National Institute of Standards and Technology (NIST), the General Services Administration, and the National Security Agency, all play a role in overseeing and implementing computer security procedures and reviews that are supposed to protect government information resources.

However, there is a general sentiment supported by various GAO reviews that the lack of a centralized focus on these efforts is undermining the accessibility, efficiency, and security of government information and assets. In a July 1998 report, GAO found that OIRA had failed to satisfy its IRM responsibilities assigned by the PRA. The following year, GAO reported that

improvements in broad IT management reforms "[would] be difficult to achieve without effective agency leadership support, highly qualified and experienced CIOs, and effective OMB leadership and oversight." And last year, GAO cited the need for strong central leadership for coordinating information-security related activities across government in addressing security weaknesses in federal information systems.

Discussion about a central IRM coordinator is equally important in light of the potential for electronic government. Early last month, the Bush Administration stated that it would appoint a federal CIO to provide leadership and coordination for e-government initiatives. And the Council for Excellence in Government in February recommended that a Cabinet-level position of "Assistant to the President for Electronic Government" be appointed to make government information and services more readily available to the public.

Many of these complex issues have been or are being tackled by State and local governments, and this is our focus today. Most States have created chief information officers or their functional equivalent, and that position is usually a cabinet-level post responsible for overseeing and coordinating all information technology and IRM in the state. Some states like California, Colorado, Massachusetts, and New Mexico have one office to carry out these functions, while others may rely on two or more divisions to perform those duties. Likewise, there are counties across the nation who have centralized IRM and/or information technology practices in a CIO.

This hearing is intended to gather information from states and localities about what types of IRM strategies are being utilized, what factors were considered by each entity in establishing a CIO or similar office, how do they address enterprise-wide issues that have traditionally been dealt with agency by agency, and what are the challenges they have faced, how were those resolved, and what difficulties do they see in the future. In addition, the hearing will identify what are the primary differences between a state/local approach and a federal approach to more centralized IRM management and what lessons learned at the state and local levels may be applied at the federal level.

WITNESSES

Dave McClure, Director, Information Technology Management Issues, U.S. General Accounting Office

Aldona K. Valicenti, President, Executive Committee, National Association of State Information Resource Executives (NASIRE), and Chief Information Officer, Governor's Office for Technology, Commonwealth of Kentucky

Donald W. Upson, Secretary of Technology, Office of Technology, Commonwealth of Virginia

Charles F. Gerhards, Deputy Secretary for Information Technology, Governor's Office of Administration, Office for Information Technology

David J. Molchany, Chief Information Officer, County of Fairfax, Virginia

Donald Evans, Chief Information Officer, Public Technology, Inc.

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