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S. 803—E-GOVERNMENT ACT OF 2001

HEARING

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

ON

S. 803

TO ENHANCE THE MANAGEMENT AND PROMOTION OF ELECTRONIC GOVERNMENT SERVICES AND PROCESSES BY ESTABLISHING A FEDERAL CHIEF INFORMATION OFFICER WITHIN THE OFFICE OF MANAGEMENT AND BUDGET, AND BY ESTABLISHING A BROAD FRAMEWORK OF MEASURES THAT REQUIRE USING INTERNET-BASED INFORMATION TECHNOLOGY TO ENHANCE CITIZEN ACCESS TO GOVERNMENT INFORMATION AND SERVICES, AND FOR OTHER PURPOSES

JULY 11, 2001

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S. 803—E–GOVERNMENT ACT OF 2001

WEDNESDAY, JULY 11, 2001

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 9:32 a.m., in room SD–342, Dirksen Senate Office Building, Hon. Joseph I. Lieberman, Chairman of the Committee, presiding.

Present: Senators Lieberman, Carper, Carnahan, Thompson, Stevens, Voinovich, Cochran, and Bennett.

OPENING STATEMENT OF CHAIRMAN LIEBERMAN

Chairman LIEBERMAN. We will now convene the hearing on electronic government. The bill before us is S. 803, the E–Government Act of 2001.

I want to welcome our witnesses and guests and thank you for joining us today to examine the new universe of possibilities that the Internet and other information technologies are providing for government and the people whom we serve.

I think we have a strong consensus in this country, in both parties, as President Clinton said about 5 years ago, that the era of big government is over. Our goal is not to make government bigger but to make it smarter, less wasteful, and more efficient. That clearly is the responsibility of this Committee as the Senate's major oversight committee, and it is the purpose of the bill that is the subject of this hearing, because today and in the years ahead, I think there is no better way to make government smarter and more effective than by using the Internet and information technology (IT).

The reach of the Internet and the speed with which that reach was achieved may be the big story of the last decade and, notwithstanding the falling fortunes of dot-com stocks, I think it may be the big story of the next decade and beyond.

In order to get ahead in today's world, you pretty much have to be plugged in and powered up, connected and ready for business 24 hours a day, 7 days a week. The result is that just about every aspect of society in America is undergoing major transformation, and it is our obligation to see that government does not lag behind in that transformation.

Information technology offers an unprecedented opportunity to redefine the relationship between the public and its government just as it has redefined the relationship between retailers and consumers, teachers and consumers, and in fact in a very different area, soldiers and their foes.

The idea is to apply the lessons of the on-line private sector to the missions of government. That means providing better services, more accessible information, and greater accountability at significant cost savings.

At its best, next generation government would exchange what is now cumbersome, static, and often bewildering for a dynamic, interactive, and user-friendly government. In the end, hopefully, a more efficient and more effective government will emerge.

I think this Committee has an important role to play in that transformation. Today we are going to be considering the E–Government Act of 2001, bipartisan legislation that our guest and friend and colleague, Senator Conrad Burns of Montana, and I, along with 12 other cosponsors introduced 2 months ago to bring focused leadership to electronic government. Our goal is to use information technology to bring about a revolution in current bureaucratic structures so that we can engage the public, restore its trust, and ultimately increase participation in the democratic process.

As it stands now, electronic government at the Federal level lacks a unifying vision. Fortunately, though, we are not beginning at square one. A variety of projects are underway, and several agencies have created imaginative websites that provide a wealth of information and numerous services on-line. For instance, taxpayers may submit their income tax forms on-line, and millions do so. Students may apply for loans electronically. And some agencies have actually instituted electronic rulemaking already.

But overall, progress in digital government at the Federal level is uneven. We have a looseknit mix of ideas and projects that are often poorly coordinated, sometimes overlapping, and frequently redundant.

Remarkable innovations dreamed up by visionary Federal Government employees can be found in some quarters, but elsewhere, innovations are hampered by regulatory and statutory restrictions, the inability to move beyond traditional models of governmental management, and stovepipe conceptions of agency jurisdiction.

The result is that the progress of electronic government at the Federal level has been inconsistent, particularly in areas that require intergovernmental coordination.

One of the most important impediments to progress is the lack of concentrated high-level leadership on these IT issues. That is why our bill creates a Federal Chief Information Officer (CIO), inside OMB to implement information technology statutes, promote e-government, and foster innovation.

The CIO would not replace the agencies' authority to pursue their own IT programs but rather, would provide a much needed strong, government-wide perspective. Among other things, the CIO would address privacy and computer security issues, develop e-government initiatives with State and local governments, the public, private, and nonprofit sectors, and oversee a fund to promote cross-agency projects which are central to the kind of integrated service delivery and consolidation that will truly transform government. We want people to be able to go to a single site and do a host of different forms of business with the Federal Government, and that requires interagency coordination.

We also want information and services offered over the Internet to be accessible to citizens through a single Federal on-line portal, building on the progress that has already been made by the existing FirstGov.gov website which was launched by the Federal Government last year.

Based on the experience of the private sector, we expect major cost savings from more efficient agency-to-agency interactions. But progress in this area requires that we establish standards for electronic compatibility between the agencies and within the agencies.

As the government steadily moves information and services online, I think we have to be wary of what Senator Thompson has warned against, and that is automating existing inefficiencies. If we take this moment of opportunity to reexamine our existing processes, then I believe we must also implement performance measures to determine which e-government applications are successful and cost-effective so we are not duplicating government's existing inadequacies.

The task is not going to be without some headaches, but fortunately, we have excellent models in the private sector that have transformed their practices and now serve customers so much better while saving literally billions of dollars in the process, and we are going to hear about two of those models today.

As I said when we introduced this bill, and I want to emphasize it again today, this piece of legislation is a work in progress. It reflects the insights of many people and organizations. But we are going to continue to seek comments and feedback, especially from the administration, which is represented here today by Mr. O'Keefe and also, of course, from Members of this Committee.

I personally expect that the bill will change as we work to achieve a broad consensus, and I hope everyone involved will maintain an open mind as we strive for that compromise. This is a step forward that is within our reach, and I think that if we work together, we can take that step together for the benefit of our government and all the citizens whom we serve.

Senator Thompson.

OPENING STATEMENT OF SENATOR THOMPSON

Senator THOMPSON. Thank you, Mr. Chairman.

I think that was an excellent summary of where we are. I have certainly enjoyed working with you in regard to the interactive website that we established a while back for this Committee. You are absolutely right that we are all becoming more and more aware of not only the need to move in the direction that you suggest but the need to do it better.

I am struck by the fact that, according to the GAO, we have 809 initiatives right now to disseminate information, which is the simplest facet of e-government; 88 initiatives to provide downloadable electronic forms; 460 initiatives to allow people to complete a transaction like submitting a patent application. This is all going on right now, so there are an awful lot of things going on out there, but we are not doing it well enough. So the question is, what do we do about that, and where do we put the management responsibility to handle all that; and I think that is what your legislation addresses.

I look forward to these hearings because hopefully I will be able to put into a little better context for myself the obvious need that you are addressing with an equally obvious problem that I have been dealing with for some time. Just before my last day as Chairman, we put out a report which was basically a compilation of studies of the GAO, Inspector Generals, and others, as to the management situation in our government, and we have a pitiful situation as far as government management is concerned that has developed over several years.

We have a list of areas, government-wide areas, that the GAO delineates as high-risk areas that continue to be endemic problems that we seemingly can do nothing about. One of them is information technology. We have shown a remarkable inability to manage large information technology projects. We have wasted billions and billions of dollars in starting these big information technology projects that either did not pan out or were abandoned altogether. We have human resources problems that are going to be much greater in the future. Half of our work force will be eligible for retirement in 5 or 6 years. Many of these human resources problems are in the information technology area. We need some sophisticated, knowledgeable people to deal with these things that we are talking about. Financial management—hardly any department of government can pass an audit—waste and duplication, and so forth.

So that is the context in which the e-government initiative finds itself. So the question is are we trying to arrange it so that a citizen can get bad information from the government faster; are we paving over the cow path? What do we do about this circular problem of trying to come up with some new information technology initiatives, when information technology management itself is a major governmental problem; it is a circular kind of thing as to how we break through that. Is it essentially a management problem? I think that in large part, it is. Where should that responsibility lie? That is what your bill addresses with a new chief information officer. The administration has some different views; they think it ought to stay with the deputy director for management. That is a good question we should discuss and debate.

The Clinger-Cohen Act decided at that point that for this general area, the responsibility should be vested in the various departments and that we could get more responsibility and accountability that way.

We have just recently received a GAO report saying that the departments are not doing it; they are not meeting this legislative requirement as far as managing their information technology problems.

But we do not want to create a new bureaucracy on top of this mess and feel that just because we rearranged the boxes this will cure the underlying systematic, endemic management problems of government.

So I honestly do not know how all that relates to the various components. Do we need to solve one before the other? Will the other help solve the former? Do we need to travel down the road of trying to do what, I believe, the administration is committed to

doing—better management in these areas—as we proceed with a new e-government initiative?

Those are all questions that you have brought to the fore with this legislation, and they are good questions that need to be dealt with. So I look forward to this hearing.

Chairman LIEBERMAN. Thanks, Senator Thompson.

I wonder if any of my colleagues want to make a brief opening statement?

Senator CARPER. I do, Mr. Chairman. May I?

Chairman LIEBERMAN. Go right ahead, Senator Carper.

OPENING STATEMENT OF SENATOR CARPER

Senator CARPER. This is one that I wrestled with as governor not too long ago, and unlike the United States, which has over a quarter of a billion people, we have only 750,000 people in Delaware, and it is a small, manageable operation, but we still struggled with this. In my last couple of years as governor, we put in place the ability to provide folks the chance to file their taxes over the Internet, to incorporate in our State, to get many of their permits and licenses, whether it is auto-related stuff, drivers' licenses, hunting licenses, fishing licenses, and we made a fair amount of progress there.

This is such a rich vein for us to mine. Government has many jobs and many responsibilities, but foremost among them is serving people. It is so hard for people to get the kind of service they want, need, and deserve. A lot of them come to us, to our staffs back in our respective States, and that is all well and good, but if we can do this right, we can do our constituents, our taxpayers, a huge, huge favor.

There are 50 laboratories of democracy out across this country to look to to see how are you doing this, how are you doing it at your own level, and to see what lessons we can draw from them. I do not know if we have reached out to the States to identify just a handful of States, maybe larger States that, given their size and scale, might serve as a better example to us, but that is something that I would suggest we consider.

Two other points and then I will stop. One, if we come up with an idea about how we think this should be organized and structured and try to impose that on the Executive Branch, which may not be supportive, welcoming, or cooperative, it will die. We will have wasted our time and created turmoil for them.

The point that you made about inviting the full participation of the administration in conceiving of the structure, I think, makes all the sense in the world.

The last thing I would say is that I always felt that the people who are best able to come up with some of these ideas are the folks who are closest to our customers. The idea of folks here in Washington, the people who are running the operations, somehow figuring out what is best to serve people down in the individual States and at the community level—that is not going to happen. To the extent that we can avoid trying to mastermind it from Washington, infuse and push down incentives to the local level, to the folks closest to the customer, to enable them to do that better—terrific.

Here in Washington, we need to keep in mind that there are many different moving parts out there, and they need to be coordinated, but to somehow coordinate them all without taking away the incentive to be innovative and think outside the box at the local level. It is a tough balancing act, and hopefully, the hearing today will help us figure out how to do that balancing.

Thank you.

Chairman LIEBERMAN. Thanks, Senator Carper.

Senator BENNETT. I have no statement, Mr. Chairman.

Chairman LIEBERMAN. Senator Burns, we are honored to have you here, and I am honored to have you as a cosponsor. You have become a leader on technology issues in the Senate, and we welcome your presence here this morning.

TESTIMONY OF HON. CONRAD BURNS, A U.S. SENATOR FROM THE STATE OF MONTANA

Senator BURNS. Thank you, Mr. Chairman.

I want to respond to Mr. Carper. Even though Delaware is a small State, I have a recommendation from those of us west of the 100th Meridian. Several of you smaller States back here should get together and make one real State; that would help our situation out.

Senator CARPER. When you have as many people as we do, we might do that. [Laughter.]

Senator BURNS. We have got that.

Also, responding to what Senator Thompson said about the retirement of the work force and how close we are to a turnover, I am not so sure that that is not a good idea, because when we try to introduce new ideas on doing things in a new way and using the tools of technology, we run into this situation in the bureaucracy, whether it be corporate or government, that "I have done this ever since I worked here, and my Daddy did it like this, and this is the way I am going to do it."

We are ready for a new generation, I think, whenever we start looking at things. So I thank the Chairman for inviting me to testify today on the E–Government Act of 2001. I have enjoyed working with the Chairman on some critical issues on technology, and of course, we have introduced the CANSPAM bill, recently introduced, and we are looking forward to that.

I have long believed in the power of information technology in general and the Internet in particular making government more efficient to open up the public policy process to everyday citizens.

I want to recommend a study which was released, and we looked at it yesterday. The Marco Foundation released a study which I would recommend to the Members of this Committee as you consider this legislation, because it tells you a lot about the Internet, the attitudes toward the Internet, what people think about it, and how they use it, and who uses it, and some challenges that we have in front of us.

Those challenges are the same today as they were a year ago, and they have to do with privacy, security, and those kinds of challenges. I would recommend that study, and you can check with our office, and we will be happy to try to get it to you in some fashion.

On June 12, 1996, I chaired the first ever interactive Senate hearing which dealt with the need to reform the Nation's then obsolete encryption policy. The hearing was cybercast so that anyone with Internet access could follow it. Citizens were also able to submit proposed questions, several of which the members of the Commerce Committee were asked during that hearing.

I have long shared the Chairman's drive to make government more widely accessible on-line. In 1999, I launched a live, first of its kind, weekly Internet video broadcast where I answered questions from Montanans. For the past couple of years, I have often posted drafts of my bills on-line so that everyone has access to the legislative process.

I should add that it is only fitting that the e-government bill itself is in many ways a product of a collaborative process made possible through the use of the Internet. Several key provisions were the result of feedback offered by citizens over the Internet.

So that clearly, the Internet offers unique capabilities which help break down the boundaries between government and the citizens it serves.

The future of democracy is digital. It was with this in mind that I included the e-government bill as an element of my Tech–7 slate of high-technology bills I announced at the beginning of the 107th Congress, and I am very enthusiastic to be able to join forces with the Chairman to move this particular bill forward.

The e-government bill's guiding philosophy is a simple and practical one—the Federal Government should take advantage of the tremendous opportunities offered by information technology to better serve its constituents. The bill calls for the adoption by the Federal Government of the basic best business practice of the private sector—the creation of a chief information officer. This Federal CIO would serve as a central guiding force to coordinate information policy across agencies and would allow the government to fully leverage the power of the latest communication technologies. I should add that industry has been fully supportive of the creation of a Federal CIO and that the GAO has recommended the establishment of a Federal CIO for several years. And I share some of the concerns that Senator Thompson has—do we create another mess to deal with a mess. I think that basically, this is one small step in the right direction.

The second key aspect of the bill is the creation of a centralized on-line portal to serve as a one-stop shopping website for citizens. The Federal CIO would direct the establishment of this portal, which would build on the work done by the GSA in creating a single, simple website featuring all available governmental resources on-line. The bill authorized $15 million for the portal for the first year—2002—which is a small investment in the Nation's interactive future of digital democracy.

The third key component of the bill is the creation of an interagency technology fund. This fund would help break down the traditional and often arbitrary divisions created by agency boundaries and focus government resources on meeting constituent needs. I was interested in your statement about how do we get rid of the turf wars; how do we get people working in a single direction? A collaborative approach on information technology issues is far more

effective than the silo-by-silo way of doing business favored by the traditional budgetary process. The bill authorizes $200 million a year to accomplish this aim for fiscal years 2002 through 2004.

In short, Mr. Chairman, I thank you for your leadership on this particular issue. The e-government bill would bring the Federal Government fully into the age of the Internet.

I thank the Chairman for moving this legislation with such swiftness and enthusiastically support, his ongoing efforts to address this critical issue, and I thank you for having me this morning.

Chairman LIEBERMAN. Thank you very much, Senator Burns, for an excellent statement. I do not believe I could have said it better myself, and I probably have not, so it is good that you were here to do it.

Senator BURNS. Thank you very much.

I shall now go and spend your money.

Senator THOMPSON. Just make sure you spend it in the right places; that is all I have to say.

Senator CARPER. And do not forget the little States.

Senator BURNS. It is "pork" to Tennessee, "infrastructure" to Montana.

Senator THOMPSON. You are excused. [Laughter.]

Chairman LIEBERMAN. Thanks, Conrad.

I will now call our next witness. We are delighted to have the Hon. Sean O'Keefe, Deputy Director of the Office of Management and Budget.

Good morning, Mr. O'Keefe. We welcome your testimony at this point and appreciate that you are here.

TESTIMONY OF HON. SEAN O'KEEFE,[1] DEPUTY DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET

Mr. O'KEEFE. Thank you, Mr. Chairman. I appreciate it.

If you would permit me, I will submit my statement for the record and just quickly summarize.

Chairman LIEBERMAN. Without objection, please.

Mr. O'KEEFE. Thank you, sir. It is a pleasure to see you and Senator Thompson and Members of the Committee. It is a delight to be with you all again since my last opportunity to appear here a couple of months ago.

I particularly want to thank you for your attention to a very, very important initiative, one that certainly this Committee and certainly the leadership of the Committee has championed for several years. It is a critical element, I am very proud to report, of the President's management agenda.

Indeed, the five elements of the President's management agenda are designed to take advantage of the management tools that Congress has enacted in the past and that this Committee in large measure has been in the forefront of establishing the parameters as well as enacting those tools over the course of the last 10 years.

Let me briefly describe those five initiatives and then talk about the relevance of the e-government initiative in that regard.

The five specific issues that the President has elected as the primary focus of his time in this administration of the management

[1] The prepared statement of Mr. O'Keefe appears in the Appendix on page 66.

agenda that will be focused on and that has been handed to the Office of Management and Budget for the purpose of shepherding through this particular administration are to be found in the February blueprint that was initially the basis upon which the President's budget was organized, as you will recall, and were fleshed out very specifically in a Cabinet session that he had with each of the Cabinet officers about 6 weeks ago where we delved into these five particular questions at great length.

Each of them are interrelated, and e-government is an essential element or mechanism to accomplish the tasks that are designed.

The five specific focuses or issues are, first and foremost—and all of them will have resonance with this Committee again, given the leadership that you all have demonstrated over the years in enacting a range of different management tools to specifically implement these particular management agenda items, and they have been selected with that set context in mind, with the purpose of taking advantage of those tools and this unique opportunity now that they have fully matured to the point where we can actually utilize them in a different and more creative way.

The first one is a specific, very concerted effort to integrate performance criteria into the budget format. Beginning with the fiscal year 2003 budget, you will see a very specific outline of performance criteria relative to budget requests that are made to Congress in the fiscal year 2003 budget request that will be identified by programs and within select agencies and departments, depending on very specific criteria for how we are going to accomplish that.

The second one is very much in line with that—and again, all of these are in concert and designed to be complementary for the purpose of achieving the agenda itself—is to focus very specifically on the strategic management of human capital, an issue again that this Committee has delved into at great length and has concerned itself with very specifically. The actuarial tables tell us that indeed we are going to see a dramatic change in the work force over the course of the next 3 to 5 years even if we do nothing at all to shape that work force very actively—but we intend to do just that, to actively deal with those particular questions, and again, e-government has a specific applicability that I will get to in a moment.

The third one is to look at competitive sourcing procedures, which again is an element that this Committee has delved into and worked with many different provisions of the law over the course of the last several years that you have been championing, as a means to specifically attain the most efficient delivery of public service and accomplishment and administration of public programs by competitive means, be that through public or private accomplishment. So our agenda and our focus in those five issues, this third one, is to very actively pursue an effort to accomplish those particular tasks by whatever the most efficient, most cost-effective, and most appropriate method would be.

The fourth is to tackle a series of issues that, again, this Committee has been in the forefront of in dealing with financial systems. That is at the very locus of every matter that we are ultimately going to be dealing with because heretofore, the approach has been to look at financial management as a series of accounting systems as opposed to a more comprehensive management deci-

sionmaking tool for the purpose of examining all those. That in turn leads to the propriety of the fourth, which is the e-government initiative itself.

There are three primary features of the e-government initiative, which is the fifth feature and is encompassed in all five of these particular approaches. It is an essential mechanism to accomplish three primary agenda items in addition to all the other aspects of the President's management agenda as well.

First and foremost is that it be citizen-centric; that it be focused, as I think several of the opening statements have very strongly suggested, that it has to be a transparent system that facilitates the means by which Americans can access information, not just facilitate the faster accomplishment of looking at poor information, but that we organize it, as you suggested Senator Thompson, in a more comprehensive way.

Second is that it facilitate the means for business-to-government transactions and mechanisms to simplify that process and make it far more efficient as well as expeditious.

Third and most important among all is to look at the intergovernmental relationships between and among agencies, departments, and the State and local communities which in turn are interacting with those agencies and departments in a more complete way.

Forty-five billion dollars is what we spend every single year on information technology, and in large measure, the attempt in this particular initiative and in all the other four that accompany these five in total of the President's management agency, is to specifically focus on how to leverage that $45 billion to accomplish something that you referred to, Mr. Chairman, very succinctly in your opening statement—to accomplish interoperability, transparency, and standards and applications that are at present, at best, uneven. And as a consequence of that, we see a wide-ranging set of circumstances that we seek to standardize through this approach.

The e-government fund that we propose and that the President's budget incorporates is an attempt to start that effort to leverage, and certainly that is an effort which is encompassed in S. 803 as well.

I think the Chairman's and Senator Thompson's description of the circumstances that exist today on this was quite accurate. It is a very uneven, very disparate set of initiatives which need to be pulled together in a more comprehensive way.

Indeed, today's objective, and I guess part of the management focus I can report to you today, is that this afternoon, we intend to meet as part of the President's Management Council, which is the deputy Cabinet officers across the Federal Government, on an agenda which incorporates the information technology and e-government initiative, one of these five major issues, to lay out an aggressive management plan to implement the President's vision which has been outlined very briefly here and in the statement in a more comprehensive way.

I urge the Committee's support of the President's initiative in this regard and look forward to working with the Committee to fashion S. 803 in a manner that facilitates the realization of that

vision, and I appreciate the opportunity to be here today, Mr. Chairman.

Thank you.

Chairman LIEBERMAN. Thank you very much, Mr. O'Keefe, both for the detail and the content of your remarks.

As I said before, I am very eager to have a dialogue and a good working relationship with the administration in developing this bill, because it is obvious that we have common interests and common goals here. So I appreciated your comments, those that were positive and those that were more skeptical, in your prepared testimony.

Let me say, for instance, that your testimony mentioned one area of concern, which was that the legislation as proposed lacks sufficient performance standards. I want you to know that I absolutely agree with that comment. It is a point that we have heard now from others since the bill was introduced, and we are going to address that shortcoming.

I think that perhaps the major point of difference that we have at this juncture is in how to organize and place and define the responsibilities of the Federal Chief Information Officer. The bill that Senator Burns and I have proposed, along with others, as you know, creates a separate Federal CIO within OMB, reporting directly to the director of OMB. In doing so, it builds first on the very broad experience in both the private sector and in State government, where enterprise-wide CIO's has been, as I think we are going to hear from some of our witnesses later on.

I think it also builds on the statement of policy in the Clinger-Cohen Act that requires each agency to establish a CIO and specifies that the CIO has information resources management as that official's primary duty.

So my concern with the model that the administration thus far seems to have established here, which is by naming Director Daniels' naming of Mark Forman as Associate Director for Information Technology and E–Government. While he is not explicitly a CIO, his responsibilities at this point, as I understand them, appear to encompass all the things that we would expect the Federal CIO to do, yet he would then report to the deputy director for management and CIO, who would then report to the director of OMB.

This leads me to a series of questions which relate to why that choice has been made and, more particularly, why that choice, when in the private sector, the choice generally has been to elevate and separate the position of chief information officer.

Mr. O'KEEFE. Indeed. Well, first and foremost, we concur in your assessment that the focus on information technology needs to be elevated within the context of the larger management agenda. And certainly, within OMB, that is part of our charge. As you correctly cited, Director Daniels, by selecting and establishing the position of Associate Director for Information Technology and E–Government, I would argue is very, very compatible and comparable to how most corporate industry standards, that I have been familiar with, have operated for the following reasons.

First and foremost, the President's very strong statement about this question over the course of the last year or so has been to focus very specifically on identifying the deputy director for man-

agement as the Federal CIO, to reside within that office coordination of the Government Performance and Results Act, the Chief Financial Officers Act, Clinger-Cohen—all of those particular efforts, those tools for management are all means to facilitate better decisionmaking. In and of themselves, they become stovepiped.

My personal experience in this matter is that each time we seek to look at either financial systems or information technology or procurement systems or anything else as an individual, separable function with direct reporting requirements to the chief executive, it inevitably becomes treated as if it were a program element as opposed to a tool or a management process for the purpose of facilitating better, more comprehensive decisionmaking.

So in that regard, having that locus for the purpose of residing within the deputy director for management, the attention of all those particular issues and coordination across all elements of the Federal Government is the primary objective of this particular approach to this.

It also has the practical effect, too, I think, of avoiding what is again a propensity on the part of any large organizational entity to focus on information technology as if it were a set of stand-alone systems and programs for its own use. It is there; it is a means, as you appreciate better than anybody, to facilitate better management information and, therefore, decisionmaking to accomplish those tasks, and that is what we are focused on.

In that regard, on par with information technology is the focus on financial management incentives as well as Federal procurement policy, regulatory focus. All of those issues are ultimately tools for larger management objectives, which is the primary reason we have organized in the manner that we have.

Chairman LIEBERMAN. I hear you, and I guess I would say that my concern about locating this activity with the deputy director for management, apart from what I have already said about that, is that is a busy office already, and I fear that, therefore, the unique opportunities here in the chief information officer may be lost because of all the other responsibilities that the deputy director for management has and that we would be better served if we separated the office but gave it wide-ranging governmental authority to coordinate with other offices and then bring it all together under the director of OMB.

So I am going to consider what you have said, and I am going to keep my mind open. I hope you will keep your mind open. I think this is a point that we will have to continue to see if we can work out as we go forward.

Mr. O'KEEFE. If you will permit me, Mr. Chairman——

Chairman LIEBERMAN. Please.

Mr. O'KEEFE [continuing]. I guess the plea I would make in this case is that this was very much an administrative and management kind of attention question, and as a consequence, given the initiative that the President has launched in a very comprehensive manner for the President's management agenda, of which this is an essential element, our intent is to follow through. We have some very specific guidance from the President on how to conduct this. And as a consequence, to the extent that you see that there is a deficiency in the management and administrative functions in ac-

complishing that task within some period of time that you would consider to be a reasonable gauge, then by all means, let us reenjoin on this question. But we are quite confident that this is going to be the organizational approach that will accomplish this particular vision and do it in a way that is most efficient as well as integrated so as not to create a separate, stand-alone, potentially difficult circumstance of a stovepipe management focus, which I think is always the most dangerous element. But your indulgence on this point would be most appreciated.

Chairman LIEBERMAN. Yes, we will have to work closely together on this. My hope has been that we could move this legislation fairly rapidly. I know that Senator Daschle has listed this as one of the items on a longer list, all of which is not possible to take up in the fall, but he has listed it as one of the priority items for taking up on the Senate floor in the fall. So we will continue our discussions.

Let me briefly, in the minute and a half or so that I have left on my time, ask you about the e-government fund. We, both in our approaches to this, have the idea of an e-government fund. The numbers are a bit different. Senator Burns and I include $200 million for each of the next 3 years; the administration has proposed $100 million over 3 years, with $20 million available in fiscal year 2002.

I just wonder if you could speak for a bit about whether the administration believes there is value in setting aside money specifically for interagency projects that might not otherwise receive funding; and more pointedly, whether under the administration's plan, the fund that you have in mind, leaving aside the amount of money in it, will be used primarily for those interagency projects or for something else.

Mr. O'KEEFE. Well, first and foremost, the objective is to utilize the fund for the purpose of leveraging the $45 billion that we have budgeted across the entire Federal departments and agencies.

Again, I could not agree with your assessment more, that what we have is a very uneven application of standards; so until we complete the review this fall, I cannot attest to the fact that the $45 billion is on comparable standards. If anything, some agencies and departments just anecdotally that I can see are definitely on cutting-edged, current-generation technology acquisition efforts. Others are still trying to wrestle their way into the 20th Century on some of these issues.

So as a consequence, there is no relative measure of merit on how much or how little needs to be spent across the board. The e-government fund, we believe, is going to be a great opportunity to leverage those opportunities which have greatest interoperability and interface between and among different systems across Federal agencies and departments—and my personal obsession is within disciplines, so that we do not have a stand-alone procurement system, a stand-alone financial system, or a stand-alone personnel system. To the extent that they are more integrated, those are the kinds of things that will qualify best for financing under the e-government initiative.

The difference that we have between the amounts is again certainly arguable. This is not a point of great contention. I think we are about in exactly the same framework, which is to use it as a

leveraging mechanism against that larger set of resources involved. And with all deference to the ranking member of the Appropriations Committee, the determination of exactly how much that will be is certainly more within the Appropriations Committee's jurisdiction, and we will certainly negotiate with them for the maximum amount we can possibly attain.

Chairman LIEBERMAN. That is true. We propose and they dispose.

Mr. O'KEEFE. Indeed, sir.

Chairman LIEBERMAN. Just out of curiosity, a quick question. On first glance, to stress the positive, have you seen one or two government agencies that you think are applying information technology really well? Do you see any early stars is what I am asking?

Mr. O'KEEFE. Again, very preliminary; we just dove into this here in the last few months. But I would say that the most aggressive application of current technology that is there in a way to try to get ahead of what has been an historically difficult set of deficiencies is certainly the IRS. They have aggressively gone after this, and certainly the commissioner there has identified as contemporary an application of information technology uses across a wider spectrum as opposed to single dedicated purpose that I have seen.

Now, would there be better examples of that—I suspect there certainly are—but the commissioner has identified some of the visible examples of that.

Certainly within the Defense Department, there is a series of locations where you can see the very best and, I daresay, some of the very worst applications of information technology utility, and some of the most historic kinds of stumbling blocks that are created by what I would suggest is the same kind of stovepiping approach that we have looked at and that has been perpetuated in the past.

Certain elements of the financial community will be out, aggressively attempting to implement current applications of information technology whereas others will slavishly adhere to what has been in place for so long because it is a so-called legacy system that they cannot bear to give up.

So you have the range of those, and unfortunately, within departments and agencies, there are both great examples of its application as well as very poor ones.

Chairman LIEBERMAN. Thanks. That is very helpful.

I commend for your review—it just comes to my mind—the Department of Transportation, which has put some of its rulemaking on-line, inviting the public to comment on it. It has been very interesting and very interactive.

Mr. O'KEEFE. Thank you for jogging my memory on that one. You are exactly right. That is a superb example of a system that, frankly, many of us just "dumbed onto." Just looking at various systems around, it is one that really is a very cutting-edge system at the Department of Transportation—not a place where we would have naturally gravitated and said there should be residing one, but it has done an extraordinary job.

Chairman LIEBERMAN. Agreed, and to state the obvious, it provides the opportunity, again 24 hours a day, for someone to come home, log on, and offer a response to a proposed rule.

Mr. O'KEEFE. Thank you for the prompt.

Chairman LIEBERMAN. Senator Thompson.

Senator THOMPSON. I will give Senator Stevens 1 minute of my time.

Chairman LIEBERMAN. Well, since I have described him in God-like terms, I think I will have to yield; of course.

Senator STEVENS. That reminds me of the story about Lyndon Johnson when the policeman stopped him, opened the door and said, "Oh, my God." Johnson said, "Yes, son, and do not ever forget it." [Laughter.]

I came because the person across the table here looks like the gentleman who used to sit on my left hand as staff director of the Defense Appropriations Committee, and I could not pass up the opportunity to ask him a very pertinent question.

Mr. O'KEEFE. Thank you, Senator. It is a pleasure to see you.

Senator STEVENS. I happen to be chairman of the Joint Committee on the Library, the Congressional library, and we have found that we have two libraries now. We have the printed world, and we have the e-world libraries. And we are trying to run them with the same amount of money we provided for the old printed library. We have found that we cannot go too fast, because there are generations out there that do not use the e-world.

My question to you is are we going too fast in government? We still serve a lot of people who do not have e-capabilities, and yet we seem to be moving all of our people into the e-world very rapidly, including the IRS. Very soon, everyone is going to be asked to provide a disk, and that will be their total submission for their taxes. But there are many people up my way who cannot provide that, out in rural America—and beyond that, even in the cities, who are of my generation.

Are we going too fast? Are you going to accommodate those people in your planning, and will this bill push these people too fast into the e-world?

Mr. O'KEEFE. Thank you for the question, Senator. I think the approach that we are after here, I would characterize more as an attempt to make up for a lot of lost ground of where the commercial sector is now, which is by no means a fully e-commerce-oriented kind of approach to things. If anything, we are still moving through that process in society in a way that is just beginning to tap the potential of what the information technology can yield.

If anything, the government is probably more responsive than most public institutions toward the more standard requirements for information, and we certainly need to retain those for exactly the reasons that you cite. To assure access of all citizens to information, however the means and method to accomplish that task, is what our objective ought to be.

But in this particular case, I think we are way behind in a lot of respects in terms of an across-the-board kind of application of where the electronic commerce and transaction information process needs to go within the Federal Government. Some have attained that standard that is as good as commercial; others are so far away from it as to be not even generationally in the same area.

So if anything, I think that our attempt is to at least try to level that playing field a bit more, rather than try to make a further ex-

panse and eliminate access through more conventional, traditional means. I think we are extremely mindful of the point you mention and will continue to be so.

Thank you.

Senator STEVENS. Thank you. Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thanks, Senator Stevens. Let me point out that the bill itself tries to respond to your concern by at least stating the standard that no advances in e-government pursuant to the bill should result in a loss of services to those who do not have access to e-government. But my understanding is that it continues to be a problem.

Senator STEVENS. If you are not careful, you will have to double the budget. That is why I am here, because you cannot be fully prepared for both e-world and non-e-world. If you are looking at internal management and saying we are going to push them toward standards and toward total integration of the Federal Government into an e-capability, I am for that; but if you are saying that all services must be delivered and all submissions must be received in terms of e-commerce, then I think you are going too far.

I would like to work with you, and I would urge you to look at the Library of Congress to see how we have staged this. They are ahead of the rest of the world in terms of digitizing materials, but they are still providing the world with our printed word, and I think they have done that without doubling their budget. They have had an increase in their budget, but they have not doubled it.

So I hope it is a cost saving device rather than an increase in expenditure.

Chairman LIEBERMAN. That is certainly our hope. Incidentally, we have a witness from the library community who will testify later on.

Senator STEVENS. Thank you very much, Sean O'Keefe.

Mr. O'KEEFE. Thank you, Senator Stevens.

Senator THOMPSON. May I pick up from here, Mr. Chairman?

Chairman LIEBERMAN. Please.

Senator THOMPSON. Mr. O'Keefe, you heard my opening statement, I guess.

Mr. O'KEEFE. Yes, sir.

Senator THOMPSON. And I am sure it was very enlightening to you.

Mr. O'KEEFE. Indeed; always.

Senator THOMPSON. Picking up on what you said a moment ago in response to one of the Chairman's questions about some bright lights, you mentioned the IRS, which of course has spent billions of dollars in times past trying to modernize its computer system unsuccessfully. And you mentioned the Department of Defense as having some of the best and some of the worst; but it also has clearly some of the worst problems in terms of financial management. GAO keeps reminding us of that and remains on the high-risk list and so forth—which gets to an overall concern of mine.

Your personal opinion overview—just sit back and tell us what you think, big picture—how do these management problems that we have and these year-after-year inabilities to get our arms around these information technology problems and these financial

management problems—how do these relate to what we are trying to do as far as e-government is concerned? I guess it kind of relates to what Senator Stevens was talking about. Strictly from a management standpoint, are we kidding ourselves here? Do we really have the ability—regardless of whether we have a chief information officer inside or outside or cross-ways or wherever he fits in the box. Did you ever see the chart that we had showing the Department of Defense acquisition process, that maze?

Mr. O'KEEFE. Yes, sir.

Senator THOMPSON. If we put that on-line, are we accomplishing anything? [Laughter.]

What is the relationship between these problems and what we are trying to do in terms of e-government?

Mr. O'KEEFE. A range of responses to whether we would be accomplishing anything by putting that on-line raced through my mind, and I have elected to offer none of the answers I had in mind.

I think in part what you put your finger to is, again, my strongest bias on this particular question, and it is the basis of the colloquy that the Chairman and I had a few moments ago. Any time you set up a condition in which information technology for the service of any individual community, be it financial, personnel, logistics, acquisition—whatever—if it is set up as a means to service that individual community in and of itself, self-contained, you have created a marvelous stovepipe that positively self-preserves and therefore——

Senator THOMPSON. Even if it works.

Mr. O'KEEFE. Even if it works—that is exactly right. And as a consequence, it realizes Senator Stevens' worst nightmare, which is that you spend at least double—it is usually worse. Again, thinking back to a previous incarnation in public service, my greatest mistake in the financial management community in an opportunity of dealing with financial management question in the Department of Defense was not looking at the integration of those individual information systems and forcing, requiring, that there be an interoperability. Instead, we perpetuated, permitted, institutional concerns to continue to preserve individual stand-alone systems as if somehow those communities were sacrosanct for financial systems, for personnel, for inventory control—whatever.

There is not a corporate around that survives today with that kind of approach, at all—which I have subsequently learned a lot more about. And if there is an opportunity to really reinforce that in this initiative, that is the approach we are taking to it.

So if anything, I see not necessarily e-government as much as the application of information technology within an e-government framework as being the approach we are looking at to facilitate the accomplish of all those management agenda items identified at the beginning.

Senator THOMPSON. Well, what does that say about having standards, government-wide standards, best practice standards? This legislation has some requirements, as I recall. What does that say about letting every department find its own salvation with strong management at the top, versus having best practices or different kinds of standards, or mandates that, government-wide, ev-

erybody has got to do certain things because there are certain commonalities with regard to the needs and problems.

Mr. O'KEEFE. Well, again, I am extremely reticent to dictate or to advocate that anyone dictate what a common system ought to be. Instead—I think you put your finger on it exactly right—if you identify with a degree of precision and real clarity exactly what performance standards you expect, that in turn will facilitate the decentralized management discipline that you have outlined very succinctly.

A quantum, dramatic improvement that we could do that would be a real order of magnitude change all by itself is just to bring it up to commercial standards and to implement and requirement that those performance standards across the board for information technology be applied to commercial standards. That would be a major improvement. It would be a cake walk for some departments and agencies to accomplish. Certainly, as the Chairman described, the Department of Transportation system would be an ideal model for that kind of a case—and on the other side of the equation, to elevate it to at least those standards would be an improvement.

To look at cost savings objectives of what you anticipate in business operations to meet commercial standards would be a very enlightening approach to it, and to require that the technology be no more than two generations behind, which as this Committee well appreciates, we are therefore talking about not more than 3 years old, because that is how fast the technology moves, would be a major improvement in performance standards all by itself.

But if you look across the government, you find systems at the Health Care Financing Administration—until they changed their name, I guess—where they are operating data collection systems that trace their genesis back to the sixties and are still maintaining those kinds of systems for those purposes. It is incredible.

Senator THOMPSON. We are told by Silicon Valley that technology is changing so rapidly that they cannot go through a 30-day licensing process, that that is too onerous for them, and yet you are saying that our systems date back to the sixties.

Let me move on to another question. We keep talking about management. At OMB, the deputy director for management position is still not filled; controller is still not filled; OIRA is pending a Senate vote. We have spent quite a bit of time lately addressing the Presidential appointment process, and I think everybody agrees that that situation is badly broken, and we are trying to do something about it. The Office of Government Ethics testified that one way to improve the process would be to simplify the financial disclosure requirements, and they have come up with some suggestions. I understand that that is within the bowels of the administration somewhere, over at the White House for counsel's review, I suppose.

Do you know where that is and how fast we can expect some kind of response so that we can move that initiative down the road? We have got to have White House cooperation with regard to the FBI background checks. We have got to have Senate cooperation with regard to our forms. We need to review our whole policy and how many nominations we really want to have hearings

on. But a key part of it is the ethics requirement, and it has been a while since we have had a chance to look at that.

Do you know where that is?

Mr. O'KEEFE. First and foremost, I want to commend you for championing that initiative. On behalf of all others who are subjected to the confirmation process, that is a——

Senator THOMPSON. About 25 percent of top-level appointees now are in place—25 percent—and some are saying that it will be well into next year.

Mr. O'KEEFE. Yes, sir. It is a slow, difficult process which, again, you have shed a lot of light on through the hearings you have conducted, and I think it prompted the Office of Government Ethics to move to the legislative initiative and the rules changes that you have suggested that are under way right now on financial disclosure. As a result, they have pushed that forward. It is in fact in the coordination process now. I am advised it is with White House counsel, and they are due to meet on it, I guess, within the next week to work that through. So there are an awful lot of us who are very enthusiastic about moving this along expeditiously, and who thank you for your efforts on this issue.

Senator THOMPSON. Finally, let me ask you very quickly—the Chairman mentioned the Associate Director for Information Technology and E–Government. How is that going to relate to the Office of Information and Regulatory Affairs that has statutory responsibility for information technology?

Mr. O'KEEFE. In concert with it, but probably not much more so than what we see across all the statutory offices—for Office of Federal Procurement Policy, within OIRA, as well as the controller's position. I think all of those are going to be, as we discussed a moment ago, the kinds of interdisciplinary functions that will require a lot of coordinated effort with an information technology focus to facilitate greater decisionmaking and management coordination.

So in that regard, I think there is going to be as extensive a degree of interrelationship with OIRA within the Office of Information and Regulatory Affairs but also with other elements of that as well. So it will be very extensive in that regard.

Senator THOMPSON. I am not sure what that means, but it sounds pretty good.

Mr. O'KEEFE. Can I try again?

Senator THOMPSON. But if I were taking over OIRA, I would be asking you some follow-up questions.

That is all I have. Thank you, Mr. Chairman.

Mr. O'KEEFE. John Graham seems to be content, if he is ever confirmed, assuming the Senate moves in a manner in which that is successful.

Chairman LIEBERMAN. Thanks, Senator Thompson. Senator Carper.

Senator CARPER. Thanks, Mr. Chairman.

Mr. O'Keefe, welcome back. I think the last time you were before us was for your confirmation hearing. We are glad that you are where you are and delighted that you are joining us today.

Mr. O'KEEFE. Thank you, Senator.

Senator CARPER. I want us to back up just a little bit. Describe for me if you will the approach in the current administration, the

new administration, for e-government and what—this is a three-parter—just as status quo, where are we right now? What you have inherited?

Second, what would the administration like to do in this arena?

And third, how does that mesh or not mesh with what is proposed in the legislation before us?

Mr. O'KEEFE. First and foremost, the e-government initiative is part one of five in an interrelated set of initiatives that the President has selected as his management agenda for this administration and for this term. And it is an integral piece of that; the sum of the parts is far greater than any individual combination that would make that work, so they all have to be interrelated in this regard.

It is primarily focused on three areas that the President is committed to. First and foremost is a citizen-centric focus, which is to facilitate the information flow with all Americans who want to access through this particular means the information that is available throughout the Federal Government for that purpose and to make it available for transactions for individuals as well.

Second, is to transact commerce between individual business and government, to improve the efficiency in that regard as well as make information reporting requirements and all the other factors that we require of industry through Federal regulation as well as through statutory compliance to be reported through that mechanism.

Third, is to facilitate government-to-government relationships, State and local transactions as well as the Federal interrelationship with those offices for block grants, for a range of different kinds of direct intergovernmental kinds of activities that occur—reporting requirements, and so on.

Senator CARPER. What was the second one?

Mr. O'KEEFE. Between government and business, again to transact business as well as facilitate faster, more comprehensive reporting compliance.

So those three areas are the means by which it leverages the accomplishment of the other elements of the President's management agenda very specifically, which I outlined at the beginning.

In terms of where we are now, again, to borrow a term that the Chairman used in his opening statement, it is an uneven application right now. At very best, I think you can say that we can see throughout the Federal Government some of the very best examples of comparable commercial compatibility in some agencies and departments, and it is not necessarily even dependent upon whether you think they naturally ought to fit in those agencies or departments; it sometimes turn on the aggressiveness or the focus or the attention of the senior management and leadership of those agencies and departments more than any other variable.

We can also see some of the ultimate examples of information technology Luddite throughout the Federal Government in other areas. So I think it is an uneven application across the board, and where we are now is an attempt to at least raise all boats to at least that top common standard which we experience within commercial enterprise. That is a very ambitious goal in and of itself but one that is achievable.

In terms of how do we intend to mesh this with S. 803, which is as I understand the third part of your question, it is to take the Chairman and Senator Thompson up on their very gracious invitation to work with the Committee to fashion this as a means to facilitate this larger agenda and vision that the President has outlined as part of his management objective for this administration.

Senator CARPER. I want to revisit the structure that you have set up within OMB. Is there a person who reports to you who is in essence the CIO? I am sorry—you are the CIO; right?

Mr. O'KEEFE. Well, the approach that the President has outlined is that he will delegate and seek to have the deputy director for management serve as the Federal CIO, and we are in the active process right now of recruiting for a deputy director for management. In that regard, that individual will be the Federal CIO——

Senator CARPER. And whom would that person report to?

Mr. O'KEEFE. To the director and myself; the director, the deputy director, and the DDM would all operate within that process.

The Associate Director for Information Technology and E–Government, Mark Foreman——

Senator CARPER. Who?

Mr. O'KEEFE [continuing]. Mark Foreman—who has been brought on board and who is no stranger to this Committee, with industry experience as well as a lot of time here——

Chairman LIEBERMAN. Tom is new; you will have to forgive him.

Senator CARPER. Is he from Delaware? [Laughter.]

Mr. O'KEEFE. One of those 750,000, sir.

Senator CARPER. And counting.

Mr. O'KEEFE. Yes, and counting.

The approach that we have taken there is again on par with and comparable to the associate directors who have recognizance for individual parts of government review as well as with the Office of Information and Regulatory Administration, the Office of Federal Procurement Policy, and the controller. So those are comparable organizational standing for the purpose of facilitating this initiative in information technology across the Federal spectrum.

Senator CARPER. I guess the person who you will get to fill this position is the deputy for management?

Mr. O'KEEFE. Right.

Senator CARPER. You need someone who can actually reach out to the other departments and get their attention, someone who knows his stuff but can actually reach out and talk to Cabinet secretaries, and they will listen. You need someone who has your ear, who has the director of OMB's ear, and also to some extent, the President's ear.

Mr. O'KEEFE. We concur. That is exactly the job description we are looking at.

Senator CARPER. The idea of the approach that you are taking here of putting this power in OMB, I find attractive, because there is probably no agency as close to the Presidency as OMB. You have the money; you control the budget in OMB, and OMB has the clout to be able to reach out across the government and get people's attention, and to the extent that we want standards and adherence to those standards, that would seem to work.

I would go back to a point that I made earlier. There is a lot of innovation going on down at the grassroots that you may or may not be aware of, and I am probably not aware of, but there are some really good things going on down there, and part of what we need to be able to do is to encourage and to incent that innovation. To the extent that you have agencies that are doing an especially good job—we alluded here earlier to some things that are going on in Department of Transportation—to find ways for them to serve as role models, to get other people excited.

As my last point, I will just build on what you said earlier. If you look at an agency, and you find that exciting and innovative things are going on with respect to harnessing the power of e-government to serve people and do our job more effectively, the leader of that agency is really important in that arena. And often in the case of the leaders of those agencies, this is not their shtick. It is not something that they have grown up believing in or really knowing about. We find with our schools back in my State, that the schools that do the best job of harnessing technology in the classroom to raise student achievement are the ones where the principals understand, and the principals get it. So that somehow, we have to fashion a system here where not just the principals get it but where the folks who are leading our agencies get it and will say to the people who work to them: This is important; it is important to me, and it is important for those whom we serve.

Thanks very much.

Mr. O'KEEFE. Thank you, Senator. I appreciate it.

Chairman LIEBERMAN. Thank you, Senator Carper.

Senator Bennett.

OPENING STATEMENT OF SENATOR BENNETT

Senator BENNETT. Thank you very much, Mr. Chairman. I appreciate the opportunity to be involved here. I have been writing down questions, and my staff have been writing down questions, and I am going to ignore all of them—well, not all of them—and go to an area that has become something of an obsession with me, because I think the other questions that I would ask are being adequately asked by Members of the Committee.

As you may know, Mr. O'Keefe—we have had this conversation privately—I am very concerned about security, and not just cyber attacks and terrorism and the kinds of things that give rise to those sorts of scenarios, but let me talk for just a minute about interruption-in-service attacks. We have seen the "love bug" virus which cost the economy $8 billion or more, depending on whose estimates you read. We have seen the interruption-of-service attacks that hit Amazon.com and some other commercial entities. The vulnerability that the government might have if there were an interruption-of-service attack levied by someone who was more than a hobbyist—and the attacks that I have described have been very unsophisticated and almost sophomoric in their technology level—the exposure that the government would have if you moved to the level of e-government activity that you are talking about here would be pretty high.

Could you address that general question, and then I would like to get down to specifics about the role of the CIO and so on in deal-

ing with that. But first, if you become as accessible for e-government as, say, Amazon.com is accessible for e-commerce, what kinds of vulnerabilities are there for someone who wants to create mischief?

Mr. O'KEEFE. I guess my personal bias is that we are going to be vulnerable; there is just no question about it. There are just so many steps that you can take to be preventive in these cases; there are defense mechanisms that you can create for those purposes. But I think the key to the problem is to remain as attentive as you have suggested we need to be to the fact that it is a vulnerability that is out there all the time. There is no question that that is going to be a real challenge.

The approach that we have taken to this, rather than simply say here are the defensive mechanisms that we think are necessary or the particular approaches that ought to be used for security, given the fact that there are lots of different ways to go about this, and the nature of those attacks are varied, is first and foremost what we have done in development of even this first budget submission. But it will really be aggressive in the 2003 submission, and that is to require the agencies and departments to demonstrate how they have built in both security and privacy features in the information technology initiatives that they are championing prior to our advancement of those requests to the Congress for funding of those initiatives, so that at least we can identify what their plan is, how they intend to deal with it, and be cognizant of what the problem is. Because again, I think the lion's share of the problem in this circumstance is to be aware of the fact that that vulnerability exists and that it is a fairly easy proposition to break. Given the fact that we are looking for transparency, that opens us up even further. So we need to be more cognizant of that, and work on it very hard.

The second one I would offer to you is that our greatest challenge in this case is, again, back to some organizational stovepiping that exists. If it is not in some department's jurisdiction, they consider it to be somebody else's problem. So part of the approach that has been taken on is to create an interagency effort in this regard that is about to be codified in an executive order that the President will consider that has been in the vetting process for several weeks now, through the National Security Council and all the appropriate players involved.

Senator BENNETT. I am very familiar with that one.

Mr. O'KEEFE. OK. That is the two-prong approach we are trying to take with this.

Senator BENNETT. We held a hearing in the Joint Economic Committee on the vulnerability of the economy as a whole, and just to repeat as background for my next comment, 85 percent of the things that are vulnerable in our society are in private hands; so even if we had the very best of security on the government level, we would still be vulnerable to someone who wished us ill by attacking the phone system or some other key infrastructure circumstance in the United States. I have had some preliminary conversations with Chairman Lieberman about this, and I understand that he wants to pursue it further, as I do.

One thing that came out of the testimony before the Joint Economic Committee is that the witness from—I believe it was the CIA, but there were enough other witnesses that I may have it confused in my mind—he said we are approaching this challenge tactically, and we are not thinking strategically. We are not backing away from it to get the whole picture and understand the strategic vulnerability and opportunities that are there for the United States with respect to this world.

And let us understand, as Chairman Stevens has indicated, that we are living, whether we like it or not, in a full new world, and we have the old paradigms that are constricting us.

So if we are talking about a Federal CIO, wouldn't the responsibility to view this whole question strategically lie primarily with him or her, and would OMB be in a psychological circumstance where they could accept that kind of a strategic view, so that we are not just talking about from one agency to the other, but we are talking about the whole economy here and some Federal leadership that says, OK, we have to recognize the new world in which we live; it has potential for enormous productivity increases, enormous increases in sharing of information, enormous increases in efficiency, but at the same time, concomitant increases in vulnerability. And someone who either wants to shut down the government because they do not like us or steal money—organized crime is finding that unlike Willie Sutton, who robbed banks because "that is where the money is," they can rob the Internet sites, because that is where the money is, and we have had examples of organized crime, not in this country but from other countries, trying to break into American banks and steal money electronically. You are talking about putting an enormous amount of Federal information now available on the Internet and the vulnerability of people coming in and saying, OK, let us screw up the Federal Government by coming back at it.

Are any of these concepts on OMB's radar screen or are you saying, as you did in your earlier comment—and I am not being critical about it; I am just pursuing it—that this belongs to Condoleezza Rice's level——

Mr. O'KEEFE. Oh, no.

Senator BENNETT [continuing]. And she has spent a lot of time thinking about it—I have had several conversations with her about it—so we at OMB can stovepipe to the extent that we can say no, our mission is just to get it efficient, and we will leave this other—or are you and your potential CIO thinking in these strategic terms?

Mr. O'KEEFE. I appreciate the further clarification. I did not mean to suggest that this was something that we considered on somebody else's table. If anything, OMB has this as a dominant issue in the equation. I can assure you that just in the last couple of weeks, having spent several hours with an intergovernmental group co-chaired by me and Condy Rice's deputy, Steve Hadley, working through the very issues you are talking about here—so if anything, I associate myself with your remarks very directly, because I think we have failed to consider this on a strategic level and consider it to be more of a coordinative function and one that requires a lot more proactive stance to it. That is part of what the

President's initiative—the executive order pending that you are familiar with—is intended to deal with.

So we spent a lot of time vetting through that, and again, really pushing through the colander the kinds of requirements that I outlined on what the department and agencies have in mind, at OMB looking specifically at how they intended to address security and privacy issues, is a criterion we have pursued there.

So if anything, Condy Rice has done a tremendous job of leading the charge in this regard, convening the National Security Council sessions, with Steve Hadley as the deputy, but it is one that we have a very active part in at OMB and in which we are involved very closely in accomplishing that task.

That is a lot of the reason as well why our effort to recruit the Associate Director for Information Technology and E–Government was so essential, is to coordinate this on a more strategic level as opposed to continually looking at it as individual programmatic kinds of questions that fail to have that interrelationship.

So we concur with your assessment entirely.

Senator BENNETT. Thank you very much.

Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thanks very much, Senator Bennett, for raising this subject. You and I have talked about it, as you said. I appreciate your interest and concern, and I share it. The obvious fact is that the Internet and information technology open up extraordinarily exciting new possibilities to communicate in every way, and the more we do it, the more we become dependent on it and the more, also, there is a vulnerability. And of course, it provides people outside the United States who may for one reason or another wish us ill an unprecedented opportunity to strike at us directly. This evokes some of the thoughts that have been bouncing around here for a while about homeland defense, but we have become vulnerable in a very different kind of way.

So I hope the Committee can find a thoughtful and constructive way, and I look forward to Senator Bennett playing the leadership role in it, to pursue these issues and again, of course, to work with the administration. So I thank you.

Senator Voinovich.

OPENING STATEMENT OF SENATOR VOINOVICH

Senator VOINOVICH. Thank you, Mr. Chairman.

As the Ranking Member of the Subcommittee that oversees the management practices of the Federal Government, I am very interested in discussing the future of electronic government and how information technology can improve the delivery of services.

I think we all agree that the Federal Government lags behind the private sector, but Mr. Chairman, one thing—and maybe it is because I was a mayor and a governor—that I have noticed in Congress is that we have a tendency to mandate on the administrative branch of government how we think the management side should get the job done. I think the most positive thing I have heard today is that the administration is going to work with this Committee to try to figure out how we can best help. And I would hope that the final result of that is not that we impose something on the administration that it does not think it needs to get things done. So we

will be anxious to hear from Mr. O'Keefe how he thinks we can help.

I think we also cannot forget the fact that e-government is going to require a technologically savvy work force and that we would be remiss if this hearing did not include a discussion of how the Federal Government is going to recruit and retain the high-tech work force of the future. I would suspect that one of the reasons why many Federal agencies are not as competitive as the private sector side is the fact that we have not been able to retain and attract the kinds of people that you need in those agencies. I would respectfully suggest that hiring somebody to be the top person to run this show is in itself not going to get anything done unless you have capable troops out in the agencies.

I think I have talked to Mr. O'Keefe about this before, but I really think that the most important thing the administration should be doing is doing an inventory of the human capital resources that you have in respective departments, including the status of your capacity in the information technology arena, trying to make sure that you keep the folks that you have and also try to figure out how you can attract the folks that you do not have.

One of my first legislative priorities when I came to Congress was the passage of the Federal Financial Management Assistance Act. This act streamlines the application process for financial assistance by consolidating Federal paperwork requirements.

I would really like to receive from you a status report on the implementation of that Federal Financial Management Assistance Act. It is my understanding that OMB has designated the Department of Health and Human Services as the lead agency to coordinate the efforts of the various grant-making agencies and that a joint implementation plan has been drafted by the agencies that promotes the use of electronic grant projects.

My questions are: Do the agencies have sufficient resources and training to administer these grants electronically? What, if any, barriers prevent this act from fully implemented? And what assistance can this Committee give you?

The only reason I bring it to your attention is that here is an initiative that we started a couple of years ago, and I know that when we were talking about implementing that legislation, I had an argument—or, let me say a discussion—with the House sponsor about how fast the agencies would be able to move forward, and as we looked at the time line, part of it went from one administration to the next, and I suggested that the next administration might be going through a transition period, and it might be difficult to reach the time line.

But I think that if you looked at that legislation and where it is at, it would give you a very good insight into just how difficult it may be to do some of the things that this Committee thinks can be done if we had some person who was just dedicated to making it happen.

You have mentioned in your testimony that "E-government initiatives must be linked with other management reform initiatives such as the strategic management of human capital, budget and performance integration, competitive sourcing, and improved finan-

cial performance." I would be interested in how the administration proposes to integrate these various management reform initiatives.

The other thing that you talked about was the issue of standards, that you felt this proposed legislation does not provide the performance standards to be effective.

So if you could, in the few minutes that you have left, share with me—maybe the best way to start off is with the standards. What are your suggestions on how those standards could be put in place?

Mr. O'KEEFE. As usual, Senator Voinovich, you have posed an extremely challenging set of questions that I will try to tick through quickly.

Let me start with the standards question at your request and then move through the balance of the other questions as well. First and foremost, the standard that we are seeking is to at least make an order-of-magnitude leap to a commercial standard, which would be an improvement in and of itself; if we could establish that again as a more level kind of approach to things, that would be an accomplishment that I would be very, very pleased with in and of itself, because there are so many cases in which we are woefully behind even commercial standards.

The second one is to think more in terms of how to achieve cost-efficiency in just basic, garden-variety business operations. To achieve a cost-efficiency target or objective in that regard, which is a standard commercial practice anywhere, to just adopt that approach would be a useful mechanism as well.

The third one, very generically, is to look at the accomplishment or the attainment of a generational condition that is no more than two generations old which, by definition, is no more than 3 to 5 years. As a matter of fact, given the speed with which information technology advances are introduced, 5 years is probably way beyond two generations—it is probably much earlier than that—but I just use that as a general benchmark. So that would be an approach to start with and to flesh out even further than that, but it is one that the Chief Information Officer's Council, the CIO Council, will be charged with trying to establish what those standards ought to be and agree to terms that make more specifically who would apply in those three cases.

Let me work through a couple of other points you raised as well, because they are very important ones, and they cut directly to the issues that we are involved with.

First, in working with the Committee, I agree with you wholeheartedly, there is no question that we are dedicated to the proposition of making S. 803 a bill that will facilitate and help accomplish the President's initiative in this regard. So there is no doubt about it, this is a very helpful move and initiative in that regard. We are anxious to work together to do that and appreciate very much your sensitivity to the administrative and managerial realities of how this has to be done relative to legislative imperatives, and we seek to combine those and make them as compatible as possible.

Second, as far as the work force and the overall strategic management of human capital question, you are exactly right. Our objective is to inventory, and we are about that business right now. We have asked each agency and department to produce a work

force planning objective which, as a matter of fact, is due right now; we are seeing it coming in from each of the departments and agencies. They have been working on it for the last 3 months, to produce exactly what their objectives and targets are for not only overall personnel levels but specifically what skill sets and expertise requirements and training efforts are necessary, all of which we have asked for now as a means to factor into the fiscal year 2003 budget review and the 2003 budget presentation that we intend to make before Congress next winter.

So this is our effort to try to accomplish that task, get the information that is necessary, and try to factor that into the budget itself.

Finally, on your question on the Financial Management Assistance Act, indeed HHS has done a tremendous job of pulling this together and taking a leadership role that I heard about, as a matter of fact, just this morning in terms of an update of where they are on that.

Secretary Tommy Thompson has really taken this on personally, has been actively involved in it, and has, as I gather, assembled some 26 different agencies for the purpose of trying to pull together all the information necessary to comply and to work through this——

Senator VOINOVICH. I might make a suggestion that just by doing that, it will give you an insight into where those agencies are in terms of the personnel that you need.

Mr. O'KEEFE. Absolutely, and as I understand it, that was one of his observations, that this has demonstrated some of the glaring issues that are required there. And apparently, they have worked through this in the course of the last several months with the intent of developing a very comprehensive response to the requirements of the act that will go through not only what the training requirements are, what the funding requirements are, but also identify whatever statutory as well as administrative impediments and barriers may exist that we will identify for you and accompany all of that as part of the fiscal year 2003 budget submission.

So it was a very important initiative and one that has been taken seriously, and I was delighted to learn that Secretary Thompson has embraced this with a lot of enthusiasm.

Senator VOINOVICH. Thank you.

Mr. O'KEEFE. Thank you, sir. I appreciate it.

Chairman LIEBERMAN. Thanks, Senator Voinovich.

Senator Carnahan, welcome.

Senator CARNAHAN. Thank you very much, Mr. Chairman.

I would like to take a brief moment to make a few opening remarks, if that is all right.

Chairman LIEBERMAN. Please.

OPENING STATEMENT OF SENATOR CARNAHAN

Senator CARNAHAN. I would certainly like to applaud you for your leadership on this very forward-looking proposal. The time has come for government agencies to follow the example set by the private sector. We must begin to use the Internet and other information technology to increase efficiency, bolster accountability, and cut wasteful spending.

E-government will enable users to interact with government agencies at their convenience, 7 days a week, 24 hours a day. This is exactly what Americans have come to expect on-line from the private sector.

Electronic access provides a means to avoid trips to government offices and to avoid the aggravation of standing in line. We want to allow citizens to be on-line and not in line.

I am glad that one of today's witnesses will testify about States' efforts in regard to e-government. I am proud to say that the State of Missouri is engaged in an aggressive effort to deliver digital government services, and I look forward to hearing about the status of e-government in other States around the Nation.

Mr. Chairman, I am extremely pleased that this initiative contains provisions designed to protect users' on-line privacy and security. I have just come from a Commerce Committee hearing where the topic was the collection, use, and dissemination of personal information by commercial websites.

I believe strongly, however, that government must take the lead in guaranteeing on-line privacy protection. Especially as we move government into the digital age, we must pay particularly close attention to guaranteeing privacy and security on-line. I believe strongly in the importance of e-government. I am concerned, however, that the benefits that e-government promises to deliver will only be available to those Americans who have a computer and access to the Internet. As such, today's discussion must also address the so-called digital divide. Digital government must engage everyone, not just those who have the means to access the Internet.

Your legislation today, Mr. Chairman, begins to address this concern by calling for the Department of Education to evaluate the best practices currently being used by Community Technology Centers that receive Federal funds. These centers focus on providing Internet access to all visitors with the goal of making on-line services available to everyone. The bill also promotes the availability of Community Technology Centers through a variety of assistance measures.

But more needs to be done, and I am committed to finding ways to bring the benefits of Internet access, particularly high-speed access, to more Americans. E-government is a perfect example of the type of opportunity that is unavailable to Americans who do not have access to the Internet.

I am extremely supportive of your efforts to provide an on-line government that is seamless and efficient and secure, and I am convinced that digital government will provide countless benefits for the American people.

I look forward to working with you, Mr. Chairman, to ensure that digital government is accessible to all Americans. I have a question for the witness.

Mr. O'Keefe, we can create a solid e-government foundation and a complex service network, but citizens will not use these on-line services if they do not know how to access them or if they are unaware of their existence. What can be done once digital government is fully implemented to ensure that the American people are informed of the new service that is available to them?

Mr. O'KEEFE. I think that first and foremost is to keep it simple. Accessibility is in and of itself simplicity. I think the information technology industry has evolved to the point where they have emphasized accessibility. And again, its virtue is the simplicity of it. If it is complicated, any of us as humans then end up looking at the problem, whether we are interested in information technology or not, and do not want to go through the mechanics of making that happen. So it is one of the greatest advances in the industry.

What has, I think, made the market for the products of this industry so appealing to us as humans is that it is so much easier, much more—the old shopworn phrase—"user-friendly." That has got to be the first guide, and that has got to be the first fundamental premise, to make this as transparent and as "user-friendly," to use that old term, as we possibly can.

That therefore means it has got to be more interoperable with other systems. It cannot be a stand-alone proposition, and it cannot be something that only a department or an agency can maintain or operate or deal with for the purpose of advertising its own objectives.

One of the great advances that this Committee was on the forefront of initiating is the establishment of the FirstGov.gov system. It is a nascent effort, it is a beginning, but it nonetheless is intended for that purpose of portability, interoperability with a number of different systems, and a means to access a wide range of different government efforts just be a very simple, basic accessing, click-on kind of approach to things that they have designed in that site.

We have to take more and more of those kinds of cues to make this a user product, one that citizens and citizen-centric kind of focus can always emphasize but that also has the sophistication to it necessary to make business and government transactions and government-to-government transactions. All those things are achievable, and the state of the industry, the state of the commercial products that exist out there now, is such that this is an attainable objective and one which we ought to be able to aspire to.

Senator CARNAHAN. Thank you very much.

Mr. O'KEEFE. Thank you, Senator.

Chairman LIEBERMAN. Thanks, Senator Carnahan. I look forward to working with you on this subject.

Mr. O'Keefe, we have no further questions. Thanks very much for your testimony. It has been a good interaction.

I just want to repeat my commitment to working with the administration on this, and I would really like to do it soon. In other words, to state the obvious, this technology is moving so rapidly, and we have great opportunities. If there are differences—and there are some differences, but I do not consider them by any means unbridgeable—we ought to try to bridge them as quickly as we can so that the country can enjoy the benefits of the best information technology in the Federal Government that we can manage.

So we are going to be in touch with you real soon to see if we can begin the process of going forward with the legislation.

Mr. O'KEEFE. I am anxious to do that. I appreciate your gracious hospitality as always, Mr. Chairman. It is nice to see you.

Chairman LIEBERMAN. Thank you. You, too. Have a good day.

We will now call the third panel, which includes Anne K. Altman, Managing Director, U.S. Federal-IBM Corporation; Dr. Costis Toregas, President of Public Technology, Inc.; Aldona Valicenti, President of the National Association of Chief Information Officers of the States; and Greg Woods, Chief Operating Officer of the Student Financial Assistance of the U.S. Department of Education.

Thank you all for being here, and I appreciate your testimony.

Ms. Altman, why don't you begin?

TESTIMONY OF ANNE K. ALTMAN,[1] MANAGING DIRECTOR, U.S. FEDERAL-IBM CORPORATION

Ms. ALTMAN. Thank you, Senator.

Chairman Lieberman, Senator Thompson, and Members of the Committee, I am delighted to be here today to speak to you about IBM's views on e-government.

I am Anne Altman, the Managing Director for IBM Federal. I was really eager to testify today, because we believe the E–Government Act of 2001 will truly speed the transformation of the Federal Government to a more contemporary enterprise, a government that can improve services for its citizens, improve efficiencies, reduce costs, and continue the leadership of the United States into this networked society.

S. 803 also hits very close to home for those of us at IBM. We have gone through our own transformation out of necessity. So I would like to spend a moment talking a bit about IBM's transformation.

Incorporating Internet technology into our core business allowed us to be successful in today's very global and changing economy. We have become an e-business leader, and we have done so by breaking down silos or the walls between our own business; we have integrated across business through our processes and systems, and we now approach the market as one IBM, a single integrated organization rather than the 20 separate business units that we had several years ago. The results of that transformation were well worth the risk and the discomfort that we experienced along the way.

To regain control of our IT environment, we consolidated 155 data centers across IBM. We replaced segregated networks into one global network. We appointed a single, enterprise-wide CIO responsible for defining consistent architectures and standards. And we restructured our IT strategy to be consistent with the overall business strategy of IBM—and that is something that has been brought up today—very important in aligning that IT strategy with the mission and objectives of the business of government.

These changes enabled a lot. We did $23 billion over the Internet last year. That is nearly one-quarter of all of IBM's revenue.

Chairman LIEBERMAN. That was business-to-business or business-to-consumer?

Ms. ALTMAN. Both business-to-business and business-to-consumer. That is up 350 percent in just 2 years.

[1] The prepared statement of Ms. Altman appears in the Appendix on page 72.

We also provided a means to handle 99 million self-service, self-customer service over-the-web transactions. That was up from 14 million just 2 years ago.

But that is not all. We did 96 percent of all of our procurement with paperless invoicing.

The benefits of these changes were truly significant. We save now 70 percent of the cost of every service transaction that we do over the web versus the old paper way. Seventy percent is tremendous.

All told, we saved $377 million in 2000, and beyond the hard savings is the actual cost avoidance. That was $2.4 billion for IBM, or nearly 2.7 percent of our revenue. If you were to apply these metrics to government, you begin to focus on the size of the opportunity that e-government offers.

Consider, for example, the discretionary spending in the HHS budget alone, at $55 billion—2.7 percent cost avoidance there would be nearly $1.5 billion; or for HUD, with discretionary spending in their budget of $30 billion, that cost avoidance would be around $810 million.

So for the Federal Government, transformation will not be easy. There will be problems. We have talked about some of them this morning—technical, political, bureaucratic problems. But I assert that the results will be well worth it.

To create transformation, government leaders have to focus on several critical policy issues and choices surrounding leadership, integration, and infrastructure. In addition, you have to address human resources, privacy, security, and resistance to change. This bill successfully addresses the most crucial of these.

Developing a transformation plan in the starting point. The E–Government Act of 2001 begins the process and will address the most important issues in creating linkages to integrate the entire government enterprise—interoperability, funding, and leadership.

The most fundamental aspect of the transformation is creating a technical foundation that will enable the agencies to communicate with each other and with the outside world. With the breadth and size of the technology currently used in the Federal Government, I think that this interoperability is key.

To that end, those serious about e-government must create and maintain standard, spaced information infrastructure. The speed of technological advancements in our networked world demands this, and the technology exists today to do it.

The second major aspect of the bill is the e-government fund. Once you recognize the need for connection between or within agencies, you then have to get them to actually do it. Our experience has shown that starting in small steps through pilots projects such as those anticipated with the e-government fund helps break down resistance to change.

Pilot projects reduce risk, they create momentum, and they allow success to breed success. It results in providing an example and raising the bar of success for everyone involved.

The fund will promote interagency cooperation, it will provide an incentive for savings to the people doing the saving themselves, it allocates money based on the value of a project, not on the basis

of a fiscal year time line. All are excellent means to drive cooperation which is necessary for the success.

The funding level proposed in the bill is a start. It is a minimum necessary to have impact. But I believe that to truly implement transformation, agencies must have their skin in the game within their ongoing IT budgets.

A third point regards the Federal CIO provisions of the bill. In our experience, executive leadership is the critical element in enterprise-wide transformation; without it, nothing really happens. This is especially true in large organizations with great inertia and the ability to wait it out, wait until the next, less demanding leader comes along.

We believe that the title "CIO" is not as important as the accountability and the strategic leadership of the position. To move forward quickly with interagency cooperation, visionary, aggressive, top-down leadership is required. This leader must be appointed by the President, recognized by most senior leaders in the government as a peer and a partner. This leader must focus on cross-government IT infrastructure and on implementation.

The E–Government Act of 2001 is a giant step toward closing the growing gap between e-transformation in the public and the private sectors.

Chairman Lieberman, Senator Thompson, and Members of the Committee, I thank you for the opportunity to be here today. IBM is ready and able to work with you on this issue.

Chairman LIEBERMAN. Thanks very much, Ms. Altman, for a very thoughtful statement.

Dr. Toregas, thanks for being here. Please proceed.

TESTIMONY OF COSTIS TOREGAS, Ph.D.,[1] PRESIDENT, PUBLIC TECHNOLOGY, INC.

Mr. TOREGAS. Chairman Lieberman, Senator Thompson, and Members of the Committee, I am very pleased to be here representing the voice of local governments.

Public Technology, Incorporated is a nonprofit, tax-exempt institution created over 30 years ago in the belief that technology has a role to play for cities and counties—the very rubric of our society.

Our mandate is to focus on technology, and you will not be surprised to hear that cities and counties have been experimenting around the edge of this e-government opportunity since the early 1990's when the City of Palo Alto and the City of San Carlos and a few other small communities set up what they thought was an experimental thing called a "website" on the Internet. This was 7 or 8 years ago, before most of us appreciated the power that was to be an electronic government potential.

I would like to share with you a couple of lessons that the local governments, the cities and counties of this country, have learned in the true hope and belief that we can learn from one another.

First, we have found that in order for e-government to work, there has to be an e-citizen. I think the Committee has already heard quite a lot about the concerns about accessibility. The only slightly different answer that I would give to the answer that was

[1] The prepared statement of Mr. Toregas appears in the Appendix on page 82.

given to Senator Stevens on the question about how about the people who cannot access is that I would just overturn the order and make that my priority. I would make it my priority to make the system, the technologies, become more and more accessible to those who do not have it today.

I think that allowing the systems as currently existing to separate people from their government is not right. So I would urge the Committee and I would urge this bill, S. 803, to enhance the opportunities for the elderly, for the young, for those who do not have the financial resources to find access to the Internet.

Second, the opportunity from e-government is massive in the area of reengineering. The consultants would call it "business process reengineering" or BPR. We have found at the local government level that it is not as important to have a beautiful website as it is to do the work behind the website and to get the departments and agencies to begin to butt some heads and change the way they have traditionally done their business. I believe that Ms. Valicenti will also speak to that from the State perspective.

That opportunity to reengineer is a tremendous opportunity, speaking to Senator Thompson's concern about how can we get the whole government mandate reformed. E–Government is an opportunity and a tool for government reform.

The fund that the bill contemplates is a wonderful idea for what I would call horizontal systems, where you try to integrate systems across departments and agencies. But I would add the little footnote that it is across departments and agencies of the Federal Government. The States have exactly the same concerns, and the cities and counties have exactly the same concerns.

So what we have are three parallel platforms, each spending billions of dollars, each committed to some kind of organized and integrated approach. I would say that instead of thinking only horizontally, we have to start thinking about the vertical dimension, the intergovernmental dimension. And more important is the diagonal dimension, because the citizen does not really care whether it is the Federal Government, the State Government, or a county or a city that provides the service; they simply want the service, and they want it quickly, cheaply, and efficiently.

So that imperative for diagonal systems development and implementation I think is a tremendous opportunity that S. 803 has a great chance to focus on.

My final quick remark—and Mr. Chairman, I do have prepared testimony, and I believe it will be made part of the record——

Chairman LIEBERMAN. Yes, indeed, Dr. Toregas. We are going to accept testimony from all the witnesses, and it will be printed as part of the record.

Mr. TOREGAS [continuing]. Thank you, Mr. Chairman—the last point I want to make is about the opportunity that e-government offers us to learn how to work together in a more collaborative fashion and in a nonhierarchical fashion.

The Internet is a very strange animal. If I have a website and you have a website, and you attach my website to yours, you do not lose control of your website, but all of a sudden, you become enriched with what I have. It is that horizontal, that networked

feeling of connection between agencies, departments, and levels of government that I think the American public will really enjoy.

If I can, I would like to end with my own definition of e-government, because it is very difficult to have a bill on e-government without knowing exactly how you feel that e-government should be defined.

Our own definition of e-government at the local level has three very important components. The first one is service delivery—making sure that the residents, the citizens, and the taxpayers receive prompt and efficient service.

But there are two other components. The second one is economic activity. I believe you touch on it when you speak about the massive investments that we make in IT overall. Those investments have to produce economic activity, jobs, happiness, and food on the table. I think that e-government has a great opportunity to do just that in the area of trade promotion, in the area of job creation at the local level.

Finally, democracy is the third and most important component that e-government has to begin to address. This very hearing here today is a hearing done in old style. We are here physically, we speak with you—but imagine the thousands of people who would like to contribute.

I will tell you a quick story. In Des Moines, Iowa, they set up a communication system for their city council. Traditionally, they would get about 40 or 50 e-mails per week from residents of Des Moines. One significant issue came up in front of the council, and they received 5,000 e-mails in a week. Now, that says two things. One, we had better make sure that our democratic systems are able to accommodate that kind of surge of people who want to become involved in democracy once again. On the other hand, how do you deal with 5,000, or 10,000, or 100,000 e-mails in a week's time? The very mechanisms of government that we have may not be quite ready for it. So I would say that the e-government direction also has to begin to prepare us to change the democratic principles and institutions that we have.

Mr. Chairman, the localities and the counties of this country stand very, very ready to work with you and the Members of the Committee and with the private sector, which is an important counterpart, and our friends at the State level, to implement the results of your bill.

Chairman LIEBERMAN. Thanks very much, Dr. Toregas. That was very helpful.

Next is Aldona Valicenti, who is President of the National Association of Chief Information Officers of the States.

Welcome.

TESTIMONY OF ALDONA VALICENTI,[1] PRESIDENT, NATIONAL ASSOCIATION OF CHIEF INFORMATION OFFICERS OF THE STATES (NASCIO)

Ms. VALICENTI. Thank you very much, Mr. Chairman, and thank you for the opportunity to be here.

[1] The prepared statement of Ms. Valicenti with attachments appears in the Appendix on page 86.

Senator Thompson, in this Committee, it is great to have an opportunity to talk about what the States are doing.

I bring to you probably a blend of experiences, and as President of the National CIO organization, very much about what the States are doing. I bring to you the experience of Kentucky, because I am the CIO for the Commonwealth of Kentucky. And third, in my past, I come from the private sector, so I bring to you a meld of experiences.

First of all, I very much appreciate the opportunity for the organization to comment on this bill, because we in fact have spoken out on various parts of the bill over the last few years in terms of direction for the Federal Government.

I would like to do that by commenting in a couple of areas—first, the leadership issue, the integration issue, consultation and what has gone on in the last couple of years, the investment part that is addressed, and last but by no means least, that this is now a citizen-centric world, and we are in the service business.

The leadership issue is one where I would like to draw from my own experience. I was specifically recruited into the State of Kentucky to become its first CIO, to sit at the executive cabinet level. So I have enjoyed the luxury of actually creating my position. The vision for the position in many ways is very similar to what you have envisioned in this bill. It is someone who will have not only the budgetary accountability, but someone who will have the vision and the responsibility to look forward at how to best manage the information technology process.

Technology waits for no one. It turns over every few weeks or every few months. It is our ability, though, on when we invest in it to make it useful.

We have looked at various models, and I would suggest to you that much of what I heard this morning was very interesting discussion. Ultimately, I think it is not so much about titles, but it is very much about accountability and whether the constituency will buy into that leadership.

At the State level, we see more and more States creating a CIO position. In many cases, that position reports directly to the governor because it is viewed as being so important, not only from an expenditure perspective but also from a perspective of leadership and how technology will be used to serve not only the citizens but to make government much more efficient.

The integration issue is a very important issue. We have heard various facets of that this morning. Traditionally, departments, agencies, and cabinets tended to have their own control and viewed the IT direction strictly from their own perspective. We cannot serve citizens that way. Citizens do not know our structure, do not want to know our structure, and should not need to know our structure. All they need to know is, from a functional perspective, where can they get the service and how quickly can they get the service. And by the way, that is not confined to State boundaries any longer or to county boundaries or to city boundaries. In fact, it is not confined to any boundaries.

So that how we work together is very important, and that is one reason why the Federal CIO position is so important, because it has to continuously drive that.

Some of the discussion this morning was about whether things can be done from a departmental perspective or an enterprise perspective. I suggest to you that this is not an and/or proposition. We have to do both, and we have to figure out how to do both.

Our organization very much appreciates the part of the bill about the consultation process. It is only through consultation, because it is not just a horizontal integration but is also vertical integration. So the ability now for the Federal Government to actually propose legislation, which in many cases is really enabled through information technology, and the States actually become the implementers of that technology. Consultation is vital to that process.

On the investment portion, I will refrain from speaking about the amounts, because frankly, I am not sure that I am the best person to comment on that. But I think investment is critical, and I would like to use the example that we actually had in Kentucky. We set up a technology trust fund, not only to talk about enabling the new processes but also about reengineering processes. I would suggest to you that that is probably the most important part that we have discussed here today. We need to redesign how we work, not necessarily enable how we work today and do it much faster.

The last point is on citizen-centric and service delivery. I have brought you a piece of technology to show you a couple of State portals, because I think there is an opportunity to look at the portal. And by the way, a portal is described as nothing more than a gateway to services. If we think of it as a gateway or a doorway—hopefully, you can see them on the screen.

Chairman LIEBERMAN. Yes, we can.

Ms. VALICENTI. Let me address the first issue. Citizens really are consumers first—I want to do it myself, on my own schedule, fast and easy. I think you have already heard that this morning.

Chairman LIEBERMAN. Senator Thompson and I both identify with those three things. [Laughter.]

Ms. VALICENTI. The first one that you see up there is Connecticut. The portal is not organized according to the traditional lines of structure, but according to services.

Let us move on to the next one—I think I have chosen the right two—Tennessee.

Chairman LIEBERMAN. Excellent. I understand this was a random selection.

Ms. VALICENTI. Very random, Mr. Chairman.

I think you can see the idea that citizens do not have to know the organizational structure; they really need to know what it is they would like to do.

The third one is the State of Washington, and one must give credit to Washington, which has been viewed very much as a leader in the digital State. They have been very successful. And by the way, we borrow from each other, very proudly; it is called sharing of best practices.

Pennsylvania has been very instrumental in organizing their website to services. What you see now is true portals and examples of portals.

The State of Michigan very recently unveiled their portal, and again, it is all about services.

North Carolina is one where the citizen can design it, so it becomes my portal, and I will see my information. Again, many of us will probably repeat that in what we are doing at the State level.

Utah recently unveiled a new portal which is all around citizen services.

The last but hopefully by no means the least is Kentucky, "Kentucky Direct." We do the same. You can get your hunting or fishing license. You can sign all kinds of forms to start a business. You can order birth certificates and death certificates; tax filings.

We have one more, and I would like to address this one specifically, because it is also an opportunity to educate. It is the Kentucky Virtual University. We now have over several years enrolled almost 10,000 students. This is another way to learn—not only to use the technology but to upgrade your skills.

Chairman LIEBERMAN. Is that 10,000 from within Kentucky or outside as well?

Ms. VALICENTI. It is available to anyone.

Chairman LIEBERMAN. That is great.

Ms. VALICENTI. Thank you very much, Mr. Chairman.

Chairman LIEBERMAN. Thanks, Ms. Valicenti, for sharing your experience. I look forward to asking you some questions.

Mr. Woods, thank you for being here.

TESTIMONY OF GREG WOODS,[1] CHIEF OPERATING OFFICER, STUDENT FINANCIAL ASSISTANCE, U.S. DEPARTMENT OF EDUCATION

Mr. WOODS. Thank you, Mr. Chairman, and Senator Thompson.

I am the Chief Operating Officer for the Student Financial Aid Program within the Department of Education, and I was asked to testify about our use of the web and our e-commerce strategy.

The context for this story is a new kind of government organization, the "performance-based organization." Congress made us the first PBO. The heart of the PBO idea is a contract where we are held accountable for results and given control over the things that determine those results.

Congress wanted our organization to improve service, cut costs, to get off the GAO high-risk list, and to do it by modernizing what was a tangle of old computer systems.

Most of my career was spent in the private sector, where I ran businesses in the technology community, so these kinds of challenges were a natural for me.

Secretary Paige has made systems modernization one of his six major management goals in his Blueprint for Excellence, his plan for correcting the management problems and restoring the confidence of the Congress and the American public in the Department.

To get all this done, we do not just do websites, but we are changing practically everything. We changed the people, we changed the organization, we changed the financial systems, how we make investments, how we contract to buy new systems. By the

[1] The prepared statement of Mr. Woods with attachments appears in the Appendix on page 101.

way, we are already using share-in-savings contracting to finance our modernization.

We have built numerous award-winning web products in the process, and we have had a number of firsts. We tied all this to a strong use of back office operations and systems proven in the commercial financial sector, tools used by Wells Fargo, Bank of America, and others.

The idea behind all this is to be able to integrate customer services—and this is a key point I would like to make—so that once we get an electronic customer, we keep him as an electronic customer. We do not chase him back to paper.

We do this with a series of websites. Let me show you what this means for students, who are our primary customers. The first business that a student does with us is the completion of his application for aid. This is known as a FAFSA. A few years ago, practically nobody filed the FAFSA via the web, but customers vote with their mouses, and this year, half of our applicants, about 5 million, will file electronically. The counter on my slide shows that we have a visitor to this site every 1.1 seconds.

Chairman LIEBERMAN. So that 5 million people will apply for financial assistance this year electronically.

Mr. WOODS. Five million, yes, sir; half of our population.

Chairman LIEBERMAN. That is great. How old is this site?

Mr. WOODS. We are trying to operate at web speed, so we are actually on the fifth iteration of our website, our fifth iteration of this application. We change it not just annually but within the year whenever it is appropriate.

To get a loan to make this whole thing happen, people have to sign a promissory note. This is the toughest piece of litter to get off the information highway, because of its legal standing and its importance in enforcement. Thanks to GPEA and the E–Sign legislation, they can now even sign with us on-line. This application actually went live last week; it is the first of its kind in government and probably the first of its kind in the world. Private lenders use our system to make their student loans. The e-signature promissory note process, because it has inherent checks, balances, and extensive electronic recordkeeping, actually produces a lower-risk system for us than a paper version.

Next, we keep these e-customers in the system with our direct loan site, where direct loan borrowers can service their loans online. They can see their account status, including the private sector loans, not just the government loans; they can change the payment schedule and see what the impact will be on them; they can opt for automatic debit payments, which is growing exponentially; and they can get deferrals and forebearances. They can also do a number of other things. Customers using this website have climbed to 3.5 million this year.

We have similarly reengineered the process for how we deal with schools and members of the financial community. It is all tied to another one of Secretary Paige's priorities, that is, to completely retool and modernize our financial system so that we can produce auditable reports, the kinds of reports that you need for oversight and that we need in order to manage this operation.

I think a key question is whether e-commerce really saves money. My answer to that is yes, it does, but it is not that simple. I know from my business experience that you cannot just automate a current system and assume that you save money.

Look at that FAFSA process that I talked about, that application for student aid. If you look at the electronic application itself and compare it to the paper version, you will find that the electronic application costs about 50 percent as much as the paper one. Good—it looks like a victory for e-commerce—but not so fast. If you look at the total system, you will find paper everywhere; we are mailing out and printing signature pages; we are printing and mailing out PIN numbers; we are printing and mailing the results from the web application itself. And even though millions more applicants file with us electronically, the schools were still ordering the same number of paper applications to distribute to their students. And we found that the web applications were calling our 1–800 number, asking simple questions but being connected with our most expert and most expensive operators to get those questions answered.

So we attacked this issue. We revamped the phone system. Now, most of the calls are handled by a voice response unit. We are weeding the paper and mailings out of the web process, and we are working with schools to cut down on their demands for the paper FAFSAs. When I am done with all this, I expect that my electronic version will cost one-third or less compared to the paper version.

The lesson in this that I want to leave is that e-commerce is a powerful tool in this battle of the budget, but you cannot win this battle from the air. This thing is trench warfare, and you have got to get down there and change the system.

Thank you for listening to the story. I believe it is one of the success stories that the deputy director of OMB has not gotten to yet.

Chairman LIEBERMAN. I agree.

Mr. WOODS. Thank you for the E–Sign and GPEA legislation. They have made a huge difference in reality and attitude about how you do this business. And thank you for making SFA a PBO and giving us a chance to improve this important system for America.

Chairman LIEBERMAN. Thanks, Mr. Woods. In fact we invited you because we think you are one of the success stories. We appreciate very much your story.

How many are filing today in paper as opposed to the 5 million?

Mr. WOODS. Five million each.

Chairman LIEBERMAN. Five million each. And I presume you have no doubt that the number filing electronically will go up in the years ahead?

Mr. WOODS. We make people very much aware of that. Our goal is to get that number as high as we can. Our particular population will include people who do not have computer access. We are mindful of that, but we believe that with the population that we serve, numbers up in the 90 percent utilization range for the electronic aspect of our business are well within reach, so that is where we are headed.

Chairman LIEBERMAN. We have had discussion throughout the morning about the digital divide. I know it exists, but I saw num-

bers recently over the last 5 years which showed a remarkable increase in the percentage of people who are now on-line. But you are the experts in this. Does anybody have a number of what it is today and what it is projected to be?

Ms. VALICENTI. Mr. Chairman, I think it really depends on whatever survey you look at and how recently it was done, but that number is probably well over 50 percent in many cases. I know that Kentucky has had a digital divide and continues to have a digital divide issue, but 53 percent of our population can actually get to the computer through work, home, school, or the library.

Chairman LIEBERMAN. This is somewhat to the side of the e-government program, but obviously not, really, if the aim is to extend services and involve more people. We are talking in this bill about support for Community Technology Centers, which Senator Carnahan pointed to in her statement.

Let me ask any of you what you think about those, and what other ideas do you have for rapidly closing the digital divide?

Dr. Toregas.

Mr. TOREGAS. We asked cities and counties, and about 2,000 responded in a survey about 3 months ago. One question we asked was what are you doing to implement a digital divide bridge. Not surprisingly, about 83 percent of the cities and counties that answered—and this included about 2,000 cities and counties, so it is a very large percentage of the major cities and counties in the United States—provide Internet public access at government facilities. More important, 45 percent are working with local schools to establish bridges and provide the capability not only for the students but for their parents to come in, sign on, and become part of the e-generation. In addition, 22 percent are funding technology technical support efforts for the citizens out of their own local budgets.

Those are three numbers that might give you some examples of ways that you can begin to look at the digital divide. A smaller number, about 13 percent, is using the Community Technology Centers. Perhaps what this indicates is that we need to make sure that these programs are well-understood and easy to get to by the localities.

Chairman LIEBERMAN. Ms. Altman.

Ms. ALTMAN. I will just make one comment which is really more on the technology side. The transformation of technology is occurring at such a pace that the device we think of as interacting with government or with business today, we think of as a PC, but very, very soon, devices like the handheld telephone and other devices will be the means for accessing information, and through that, accessing our government.

So I think that although the digital divide is real, it is going to be shrinking based on the fact that technology will be so accessible to everyone.

Chairman LIEBERMAN. That is great. Thank you. I agree.

There was some testimony here and I think a good-natured, good faith discussion between Mr. O'Keefe and members of the panel about how to construct the CIO office. I take it from your testimony that you feel that the closer the connection between the CEO and

the CIO, the better off we are, and the more you can highlight and separate the CIO functions, the better it is going to be.

Based on your various experiences, Ms. Altman, Dr. Toregas, and Ms. Valicenti, could you respond to that point?

Ms. ALTMAN. Yes, I would be happy to. Certainly, in industry and IBM, our CIO is both the business transformation executive and the CIO, and in that capacity is responsible for defining our strategic growth with technology, marrying that strategy to our business strategy as well as executing the overarching information technology plan, which includes, as you are discussing, an interoperable architecture, an overall architecture to allow us to move our business forward.

I do not know that I can make a real judgment on where this individual should reside, so as I read through the proposed legislation, having this individual in OMB is fine; it is really a matter of is this individual accountable, is this individual a leader, is this individual going to hold a place at the table with the senior leadership of this government and be able to project the change and be essentially a change agent for this e-government transformation?

Chairman LIEBERMAN. Thank you. Dr. Toregas.

Mr. TOREGAS. I would add to what Ms. Altman said the fact that it is not only the technology argument that is important in transformation but also the programmatic one. Somehow, whether you do it in the flesh of another human being or intellectually, you have to get the programmatic initiatives of the agencies linked with the information technology question. You cannot address business transformation from an IT perspective alone. You have to have the programmatic people there. In fact, the absence of a table around which the information technology experts and the program people who are responsible for delivering programs and the elected officials who have the mandate to do that is, I think, something that stymies our ability to transform government. Such a table, such an intergovernmental, interdepartmental platform to discuss, dialogue, and make decisions to change the way government is done is a weakness right now of our system. I think S. 803 could be strengthened by providing a platform not only for a single human being, the CIO, but a platform between program people, IT people, and the elected officials who ultimately hold the will of the people to discuss how we transform government along the intergovernmental dimension.

Chairman LIEBERMAN. Would you write into the law some committee of that kind?

Mr. TOREGAS. Some ability to dialogue between three levels of government and across programs. It is almost an impossibility to imagine as a bill paragraph, but perhaps we need a new process. We need something. Right now, there is no place to discuss these e-government issues and opportunities.

Chairman LIEBERMAN. Yes, and to state it as a goal.

Mr. TOREGAS. That is right.

Chairman LIEBERMAN. Ms. Valicenti.

Ms. VALICENTI. I would like to emphasize a couple of things that were said before that I would like to put a little different spin on. I think that being a peer at the table is very important. I think the investments that have been made in the past have been done

strictly from a technology perspective—that I now need to automate the system, and I will put a system in place; I now need to do e-government, and consequently, I will put up a website.

I would suggest to you that the dialogue that goes on with your peers is before you implement anything. It is whether the process is the right one. Do we need to change the process? Do we need to make two or three agencies work together that traditionally have not worked together?

I can tell you from my own experience that we would have built three imaging centers if we had not come to the table and said maybe we only need to build one and share it, and we need to build it with standards that all of us can use it. I talk about technology standards, not just performance standards. Both are important, but I would suggest that technology standards are as important to make interoperability work and to have a vision for what we are going to deliver.

When we embark on what we now call "e-government" or "digital government," I think we are at the low end of investment yet. We are primarily thinking about commerce and commercial transactions. Ultimately, I would suggest, as has already been talked about, where is e-democracy, how do we involve our people in the democratic process differently.

I think the only way that we are going to be able to do that is if we get this part somewhat right.

Chairman LIEBERMAN. Amen. Thank you. Those were very helpful responses.

Senator Thompson.

Senator THOMPSON. Thank you very much, Mr. Chairman.

This is a very good Committee—a very good panel, I should say—well, it is a good Committee, too.

Chairman LIEBERMAN. Thank you. We are just trying to build on the record of the previous leadership.

Senator THOMPSON. It reminds me of several things. Ms. Altman, we often say that some people say government ought to be more like business, and other people say it is different because we are not in the profit business and so on, but I think that at least in your area, you are reminding us that in some respects, we can certainly learn from business, because what you are talking about has been one of the driving forces of the savings that you have achieved through increased productivity. And while we may not be striving to make a profit, we certainly need to not have so much in losses and deficits that we have had in some departments, and we can increase our productivity. I think that that is one of the things that we are looking for.

Dr. Toregas, I was taken by your comment about the Des Moines example, and it caused me to think about the Federal Government. If we are having such difficulties in doing some of the things we are trying to do, and if we really get geared up the way we are talking about, are we going to be able to handle the volume that we may be asking for. We feel it in our own offices now. So that is going to be something.

Ms. Valicenti, you mentioned accountability. I think that having someone like you probably in large part accounts for the success

that Kentucky has had, and that is certainly important and something that we have not had in times past.

Mr. Woods, your department or your program represents what troubles me the most about what we are talking about—and I hope that this is constructive, because to me, it goes to the heart of what we need to address and some things we need to avoid as we move forward in a way that we all want to move.

I am talking about this idea of having a shiny, new chassis over an engine that is not running, and the car is not going anywhere. The student financial aid programs have been on GAO's high-risk list ever since the high-risk list started in 1990. You were made a PBO 3 years ago and given some additional flexibility to do some things. There are some positive signs, but you are still on the high-risk list, in large part because financial management is lacking.

Here is what the GAO said in January, "These student aid programs, however, continue to be at high risk for fraud, waste, error, and mismanagement, because education lacks the financial and management information needed to manage these programs effectively and the internal controls needed to maintain the integrity of their operations."

The IG and GAO for some time have addressed this problem. It is not just yours, but yours is one of the 23 or so on the list, and one of the few that has been on the list for a decade as subject to waste, fraud, abuse, and mismanagement.

The GAO said in March of last year, "Beginning with its first agency-wide audit effort in fiscal year 1995, Education's auditors have each year reported largely the same serious internal control weaknesses, which have affected the Department's ability to provide financial information to decisionmakers both inside and outside the agency." That is department-wide.

Talking about the student financial assistance program, "highly vulnerable to waste, fraud, abuse, and mismanagement"; "have been on the list since 1990"; "have been included in every update since then."

"Student assistance programs," according to the IG, "have spawned a cottage industry of criminals who counsel students and their parents on how to obtain loans and grants fraudulently." And they have been very successful. In the Inspector General's report, they recount numerous instances of where this has happened, and these are the ones that we know of.

"The IG recommended that the Department develop a method to estimate how much it loses each year in improper payments." Millions of dollars are sent out by the Department improperly. "Thus far, the Department has failed to act on this recommendation. Also, the Department has failed to implement a 1998 law intended to allow it to verify with the Internal Revenue Service income information submitted by student aid applicants."

In the financial management area, both the GAO and the IG have reported year after year on largely the same financial management problems. The IG found many cases that proved the point of the financial management weaknesses. In October 1999, for example, the Department's system generated several duplicate payments; one was a $19 million double payment of grant funds.

There are information technology management problems. One is the Department's failure to comply with the Clinger-Cohen Act, which goes to the heart of what we are trying to do here, because that has to do with management of information technology. The Department is not complying yet.

Another problem is its computer systems security. They say the weaknesses constitute a significant threat. And the last audit of Ernst and Young, the most recent audit last year, talks about approximately $859 million, primarily representing funds drawn down by schools for which the loans have not yet been recorded. That means that the schools have not yet demonstrated that they are eligible for those loans—but they have already drawn down the $800 million.

So you have drawn the short stick, I guess, today by accident. I could go through this with a lot of other departments. But here we are celebrating a website with regard to a program that in many ways is a basket case in terms of waste, fraud, abuse, and mismanagement.

If you talk about accountability, I do not know where our accountability is in Congress. Long before you got here, and I trust—I do not mean this personally to you; you do have an excellent background, and I am sure you are trying your best. Maybe it just shows how endemic the problem is and how difficult it is to solve, but you have been dealing with it for 3 years now. But we are talking about what—making it so that these criminals can rob the Department of Education more efficiently? Could that be part of what would be happening here?

We clearly have not been able to get a grip on these basic management problems, and I am worried that if we get more people using this, and we have the human resources problems that we know we have and keeping our arms around it, can one guy over at the OMB ride herd on all this?

As I said, I am talking to you about a lot of problems that you do not have anything to do with, but some of them, you do. I guess I am interested in knowing if you appreciate the interrelationship of these things that I am talking about. It does not matter what kind of website you have or how many people are using it if your underlying management is that deficient, it seems to me.

Now, I have laid out quite a lot of charges here, and you should have a right to respond at whatever length you wish, or as far as the Chairman is concerned.

Mr. WOODS. May I respond, Senator?

Chairman LIEBERMAN. Yes, sir.

Mr. WOODS. I take the criticism as constructive. The reason I started my remarks by talking about changing everything is because these issues of integrity and program integrity are at the heart of what we are trying to do. One reason I was reluctant to testify here about websites is because we are not just about websites. We are completely retooling these computer systems. The financial problems, the financial audits that we have had and the systems that we have had are nothing like the tools I had to manage my businesses in the private sector. We do things with spreadsheets. We are replacing all that. We have half the modules up for

a brand new system that will kick in for next year's audit. We are very proud of things like that.

We do work with the IRS to do statistical matches that allow us to verify that students seeking Pell Grant monies are reporting the proper income. We do not have the ability to do individual data matches with them. Their legal counsel does not believe that the law allows them to do that. But we have pushed that as hard as we can.

Across the board, we have hundreds of people reporting and working on all of these issues, and I can report progress to you in all of those areas.

Maybe the most important thing goes to where the biggest dollars are. Defaults in this program were by GAO and others viewed for years as our biggest issue. In the past several years, the default rates come from 22 percent down to 6.9 percent. I would hasten to point out that defaults are only dollars at risk; they are not dollars lost. In the past 2 years, years of the PBO, the collection efforts have brought more money back in than has gone out in default. We have turned the corner on that, and the computer systems are part of that. The systems we use in debt collection, for data matching, for comparing profiles and identifying addresses for people who owe us money—those tools are powerful forces in trying to combat exactly the ills that you described.

We are not about websites. We cannot get it done just with websites. Websites are the customer service window, but the back end stuff, this back office stuff, the kinds of tools used by the best banks and the best in the private sector, have to be part and parcel of it, and I think that given time, sir, I could convince you that we are making progress in those areas.

Senator THOMPSON. Well, I hope so. The GAO suggests that the downward trend in defaults may be more attributable to the strong economy of recent years. They also have a problem with the calculation method used by the Department; they say that it understates the default rate.

So we could talk about all of this in detail for a long time, but the bottom line is—and please take it back to the Department and let it, hopefully, soak in to you, who have been there for 3 years—if I were you, I would concentrate on the things that I was talking about along with the high-tech glitter stuff that we are all interested in and we need to make progress on, because the bottom line, we talk about accountability, and we talk about results-oriented government, and by either of those measures, the student loan program has real problems. I would bet that 90 percent of the people in the audience, or whoever might be watching or listening to this, are not aware of that because it is part of a much bigger problem. It is a government-wide problem, and that is the point. Like I said, you happen to be here today, but I could go through this with any number of folks.

To me, it shows perhaps a wrong emphasis or not appreciating that you have got to walk before you can run. I really am concerned with regard to some programs and some departments—if we put all this emphasis on this stuff, and we gear up, and we have all these applications coming in that we are dealing with, and all these programs, we already have numerous schools that are not

qualified for loans being reimbursed by the Federal Government. And all that is going on now under the current circumstances. I do not want to make that easier to do. I want to make it easier for the ones who need it and deserve it, but that can only be done while being accompanied by progress in these other areas.

I do not know what else to do. When an area stays on a high-risk list for a decade, and the GAO—it is not us; it is not just the Members of the Committee—when the GAO tells us that they make recommendations for changes that are not being carried out; you still get funded in the same ways every year; budget time rolls around, and we take a look at this and say "That is a shame," and we give you the same amount of money or even increase it—it is a real problem.

So I would just ask you to take back from this today, while you are doing the good things that you are doing in terms of e-government, to realize that it is going to create more problems than it solves unless we do something about the underlying management of your program.

Mr. WOODS. Yes, sir. We will take it back, and I assure you that those issues that you have addressed and raised we take to heart, and those things are being fixed as I sit here.

Senator THOMPSON. Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thanks, Senator Thompson.

Senator Thompson makes a strong point. E-government is a means to an end; the end is government, and government is an imperfect instrument that we are constantly trying to make better. There are obviously ways in which e-government not only allows more people to more conveniently, for instance, apply for student loans, but if used properly, as you have all testified and as our experience suggests, allows us to be more efficient as well—in other words, not just to improve ease of access but to actually reorganize internally so that you are doing what you are supposed to do better. And of course, both of those are our hopes in this bill.

I thank this panel very much. You have been extremely helpful. If you have any afterthoughts, we will keep the hearing record open for a while for you to submit those to us.

Thank you very much.

We will now call forward our final panel today, which includes Sharon Hogan, University Librarian, University of Illinois at Chicago; Barry Ingram, Vice President and Chief Technology Officer of EDS Government Global Industry Group, who is here on behalf of the Information Technology Association of America; Patricia McGinnis, who is President and CEO of the Council for Excellence in Government; and finally, Hon. Joseph Wright, Jr., former Director and Deputy Director of OMB and now Vice Chairman of Terremark Worldwide, Incorporated.

Thanks very much to all of you for being here. Thanks for your patience in listening to the preceding discussion. I hope you found it as interesting as I have.

Ms. Hogan, it is a pleasure to hear from you now.

TESTIMONY OF SHARON A. HOGAN,[1] UNIVERSITY LIBRARIAN, UNIVERSITY OF ILLINOIS AT CHICAGO, ON BEHALF OF THE AMERICAN LIBRARY ASSOCIATION, THE AMERICAN ASSOCIATION OF LAW LIBRARIES, AND THE ASSOCIATION OF RESEARCH LIBRARIES

Ms. HOGAN. Good afternoon. I am Sharon Hogan, University Librarian with responsibility for academic computing at the University of Illinois at Chicago. I am testifying today on behalf of the American Association of Law Libraries, the American Library Association, and the Association of Research Libraries.

We want to thank you, Senator Lieberman and Senator Thompson, for your leadership on e-government, and we want to acknowledge our appreciation for the work of your Committee staff, especially Kevin Landy.

We cannot have an effective e-government without access to government information. Our Nation's libraries are key access points for the American public and already are and should be members of e-government teams at the Federal, State, and local levels.

While there are many Federal agency success stories exemplifying good practices for public access to Federal Government information, the move to an e-government has not been accompanied by the development of a comprehensive policy framework focusing on the life cycle of electronic government information.

There are three principal points I would like the Committee to keep in mind as they consider S. 803.

One, centralized coordination is necessary to make government electronic information accessible, usable, and permanently available. That is why we support S. 803. Such coordination is ultimately needed for all branches of government.

Two, legislation is absolutely imperative if we are to embody life cycle principles in e-government dissemination activities. Agencies are not doing it today. This bill recognizes the needs and puts a framework in place to accomplish that goal.

Three, the legislation must be adjusted to incorporate and built on the institutions and activities going on today.

I would like to elaborate on these three points. First, access and coordination. Librarians, working with the American public every day, find that locating the government data or document can be exceedingly frustrating because "finding tools" are inadequate and not comprehensive. Also, much web-based government information that one might have accessed a month or a year ago disappears from agency websites. While many agencies do a great job of posting important electronic documents to their websites, there is often no recognition of the long-term value of that information and the need for it to be publicly available for continuous future use and preservation. In the electronic environment, an Executive Branch CIO can provide leadership where there is currently a lack of coordination, cooperation, guidance, or a means to oversee and measure agency compliance with many existing statutes. However, the emphasis on technology should be balanced by an emphasis on public access.

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[1] The prepared statement of Ms. Hogan appears in the Appendix on page 114.

Second, build a new framework. We want S. 803 to promote the teamwork necessary to serve the American public within and between agencies. A benefit of section 215 will be to bring together within the planning and policy functions how agencies manage and coordinate the flow of information within agencies as well as to and from the public.

Agency CIOs play an important role in issues related to technology but often do not have the time or resources, do not have a strong background in information dissemination, nor are they always aware of the agency's responsibilities for public use. Agency records managers, webmasters, privacy officers, public affairs staff, and agency librarians should work together.

Three, use existing agencies, institutions, and resources. You will not need to reinvent all services or functions. For example, in setting cataloguing and access standards, librarians and information scientists—not information technologists—are the specialists in establishing cataloging, classification, indexing and metadata standards for government information products. Cooperative international bodies already set current cataloging and classification standards.

We are also pleased that S. 803 contains important provisions in sections 205 and 206 to improve access to information from the Federal courts and regulatory agencies. However, the courts and regulatory agencies should not be given permanent opt-out options. There should be an annual statement of progress each year and a set time frame for compliance. We support repeal of current statutory language permitting the Administrative Office of the U.S. Courts to charge fees to access PACER. Congress should appropriate adequate funding for this purpose.

We recommend clearer roles for the Library of Congress and the national libraries as well as the Institute of Museum and Library Services and the Federal Library and Information Center Committee. Further, permanent public access can be accomplished through a comprehensively coordinated program that includes Federal agencies, the Superintendent of Documents, the National Archives and Records Administration, the Library of Congress, other national libraries, depositories, and other library partners.

Effective public access for the American people is the first step toward effective e-government. S. 803 includes many important provisions that can improve public access. Collaborative approaches and government-wide policies across all branches and levels of government will be necessary to fulfill the potential of e-government. The library community stands ready to work with you.

Thank you for this opportunity to testify.

Chairman LIEBERMAN. Thanks very much, Ms. Hogan. Just while it is in my mind, I believe you were here when Senator Stevens spoke and expressed his concern about the fact that effectively, we have two libraries now at the Library of Congress—the one that we are familiar with and the new one which is on-line—and that the net effect would be to add costs. That was his concern—obviously, he hopes we would save. How would you respond to that?

Ms. HOGAN. I would say that all libraries are now running two libraries. We are all running our print libraries and trying to build electronic ones. And yes, at the moment, it is costing us more. I

would hope that it would not double our costs, but it absolutely is increasing it. We are making investments in the new technologies. Once these investments are made, we hope that increased access will make them all worthwhile. But yes, right now, it is not cheaper.

Chairman LIEBERMAN. So that is the hope, that obviously, you are involving more people in using the services of the library.

Ms. HOGAN. Correct. We are seeing libraries all over this country increase access not only to the collections themselves but also to the electronic collections. There is actually an explosion of use in libraries as people come to libraries to access the technology, to access electronic resources—and, by the way, to use the print.

Chairman LIEBERMAN. From the user point of view, obviously, it is one of the more thrilling aspects of the whole Internet revolution, which is that you can suddenly plug into the resources of the Library of Congress and every other library in America.

Ms. HOGAN. And then you have more questions, because you have accessed the information, so we are finding that people then want to ask even more questions.

Chairman LIEBERMAN. I see. Thank you. Mr. Ingram, welcome.

TESTIMONY OF BARRY INGRAM,[1] VICE PRESIDENT, EDS GLOBAL GOVERNMENT INDUSTRY GROUP, ON BEHALF OF THE INFORMATION TECHNOLOGY ASSOCIATION OF AMERICA (ITAA)

Mr. INGRAM. Good afternoon. Thank you for this opportunity to testify before you today on this important topic.

My name is Barry Ingram. I am Vice President for EDS' Global Government Industry Group. You already have my testimony, so I am going to give you a slightly shorter version.

I have over 37 years of experience in information technology, over 20 of those working with governments, and have led many innovative e-government initiatives locally, nationwide, and globally for EDS. This morning, however, I am representing the Information Technology Association of America, or ITAA, which is the Nation's leading trade association for IT industry.

ITAA represents over 500 member companies across the United States which produce products and services in the IT industry, and the association plays a leading role in public issues for the IT industry.

ITAA has been a long-time proponent of electronic government and, as you know, helped provide input on principles used early on to develop this legislation. We are particularly eager to generate the same interest and progress in e-government at the Federal level that we have witnessed at the State and local levels. We believe the E–Government Act of 2001 contributes in a meaningful way to these goals.

Mr. Chairman, we applaud you, Senator Burns, and the colleagues who have officially joined you in introducing this E–Government Act of 2001. We are particularly pleased with the importance that the legislation places on the need for a well-funded government innovation fund, and with the emphasis on the exist-

[1] The prepared statement of Mr. Ingram appears in the Appendix on page 124.

ence of someone at the highest level who has the responsibility and the authority to move the Federal Government into the e-government sphere. It is crucial for this person to have the means, both the budget and the staffing, to implement and oversee these efforts for the enterprise, and we hope that those resources can be made available in the 2002 budget.

However, when I say e-government, I do not mean only Internet-related efforts, but any efforts where governments are using newer technologies to improve their business processes and provide enhanced services to citizens, businesses, and government employees or other governments. If we limit our thinking only to Internet-related efforts, we are limiting the scope of the possible.

In these efforts, I have seen a mixture of successes and challenges. The challenges are being overcome, and as you are acutely aware, finding and achieving innovative ways of funding e-government is very difficult. Curtailing stovepipe or purely single-agency-oriented development, while still promoting innovation and productivity improvements, requires a real vision and a solid execution plan.

Fortunately also, the successes are many, and in general, I see that State and provincial governments are leading the charge, for several reasons. They have more transactional processes, such as license renewal and property tax payments. They have somewhat smaller systems than the Federal and national governments, and the most successful ones have senior leadership in the form of a chief executive or a CIO who is sponsoring and visibly behind the e-government efforts.

Some of the most successful implementation are also taking place at the national level. In the United Kingdom, for example, the Inland Revenue, the equivalent of our Internal Revenue Service, is undertaking a massive rejuvenation of the tax system, and they are already implementing some of the improvements. They have developed a National Gateway to government and have implemented the ability for citizens to self-assess and pay their taxes over the Internet, directly to the government, without an intermediary.

Our own portal, FirstGov.gov, is an excellent start but now needs to be expanded to encompass citizens' transactions with agencies.

Without going into a lot of detail, I put together a short list of top 10 lessons learned for e-government, and I want to highlight just four of those.

The first one is that implementing successful e-government requires sponsorship and visibility from the top, senior leadership and championing.

Second, we need to ensure citizens' privacy and security with good information assurance capabilities, and we need to build this into the architecture before privacy and security become a problem; we cannot wait.

Third, many existing business processes will need to be reengineered—but do not just reengineer—reinvent wherever possible and look at new ways of doing business.

Finally, provide incentives for citizens and businesses to use the new e-government processes. Incentives will enable the move to the new methods.

In conclusion, as this important piece of legislation moves through the legislative process, I leave you with two thoughts. E–Government modernization is the use of technology to transform government from the silo organizations that many of us have talked about to a seamless organization, or this one-stop shop. But it is centered around citizens' needs and focused on productivity improvements.

Finally, the success of e-government modernization is not only experienced in building and operating our websites. It is in the transformation of government processes, wrapped in the security of a robust infrastructure supporting and enabling that transformation.

I thank you for your time and attention. ITAA and EDS both look forward to working with you and answering any questions that you might have.

Chairman LIEBERMAN. Thanks, Mr. Ingram; well-said. And thanks to you and the members of the association for the input that you have given the sponsors of the bill as we have gone along.

Ms. McGinnis, welcome back. We look forward to your testimony.

TESTIMONY OF PATRICIA McGINNIS,[1] PRESIDENT AND CHIEF EXECUTIVE OFFICER, COUNCIL FOR EXCELLENCE IN GOVERNMENT

Ms. MCGINNIS. Thank you very much, Mr. Chairman and Senator Thompson, for inviting me to be here today to talk about this very important issue.

As you know—well know, because there has been a lot of involvement from the Committee and the staff—the Council for Excellence in Government worked in partnership with 350 leaders from business, civic groups, the research community and government to develop a blueprint for e-government, which we released last February, and I think you all have copies of it. It, of course, can be viewed on our website.

We call the report "Electronic Government: The Next American Revolution" because we believe so strongly that information technology and the Internet have the potential not only to revolutionize the way that government operates but also to put ownership back in the hands of all Americans.

This is not only about e-government; it is also about "e-the people," a play on words which I think has a lot of meaning if you think about it.

Two recent Council opinion polls conducted by Peter Hart and Bob Teeter over the last year show that Americans today recognize the potential of electronic government, even those who are not online, amazingly. A large majority, about three-quarters, says that developing e-government should be a high priority for the new President. Even the 44 percent of Americans who believe that government is ineffective—these are the cynics—are bullish about e-government and say that tax dollars should be invested in it. But by a margin of 2 to 1, the public says that privacy and security are its top priorities, so we have to deal with those issues.

[1] The prepared statement of Ms. McGinnis appears in the Appendix on page 130.

The people's vision of e-government goes beyond efficiency in services to the opportunity to become more involved and to hold government officials accountable. It surprised us that more people would rather see candidates' voting records on-line than renew their driver's licenses on-line.

The dot-gov revolution is just beginning——

Chairman LIEBERMAN. That is unsettling. [Laughter.]

They ought to do both on-line.

Ms. MCGINNIS. It might have something to do with privacy and security, but I think it also has to do with this accountability issue.

Even at this early stage in the dot-gov revolution, there are lots of examples of productive use of the Internet by government. You heard about a lot of them in the last panel. The growth in student financial assistance applications—up to 5 million this year—is amazing and quite a growth. Taxes can be filed on-line not only with the IRS but in many States. Procurement on-line is growing at the Federal and State levels, as are regulations on-line. You know that the Department of Transportation has all of its regulations on-line at this point.

These examples of e-government all fall into two categories—government to citizens, G to C, and I would put that maybe even a little differently—agency by agency, one agency at a time to citizens—and also government to business, G to B, one agency at a time to businesses.

What is missing from this? Government to government. At this point, there is very little cross-agency or intergovernmental collaboration on-line, and this is a very significant problem.

The e-government fund in this bill recognizes, as does the President's budget, that we need to invest in collaboration across agencies, levels of government, and with the private sector in order to break down these very formidable stovepipes that now give us e-government agency by agency, and that is fine if the service or information you need happens to be organized that way. That is not true for most people and for most businesses.

The answers may lie in more powerful search engines building on the FirstGov start portals or on-line exchanges that can integrate and offer a range of services based on need and eligibility. The innovative know-how to accomplish this vision of e-government exists in the public and private sectors, but it has to be harnessed in a new way.

The bill, S. 803, now before you addresses the important issues required for e-government to succeed. The details of the provisions are not exactly the same as the recommendations we make—you can look at all of our recommendations—but we both address the same dimensions—leadership, strategic investment, a skilled e-government work force, access, education, and privacy and security.

I think you may find, as we did in developing this blueprint over a period of about 14 months, that the process of engaging the key players in government, business, and the other communities to refine this legislation will build ownership and commitment that are necessary to make it work in the end.

I am delighted that the administration is so eager and willing to work with this Committee to fashion successful legislation.

I want to highlight three of our specific recommendations for your consideration. One is creating a public-private council that would bring the best thinking of private entrepreneurs and a cross-section of Federal, State, and local leaders to the e-government enterprise. S. 803 calls for a number of forums that engage these different communities. I would suggest one conversation, bringing them all to the table.

Second is establishing a Congressional Office of Electronic Government to help members of the House and Senate connect more effectively with the public and to advise not only members but committees on using e-government to achieve policy goals. Senator Thompson and Senator Lieberman launched the first ever Senate website to gather ideas and comments used to develop this legislation. That ought to be commonplace, and there are many more powerful uses of e-government in the Congress.

Third is organizing public forums around the country to engage people, including those on the wrong side of the digital divide, in the design and implementation of e-government.

There is a lot to do. Together, I think we can seize this opportunity to make e-government a reality, and I thank you very much for your leadership and the opportunity to be here today.

Chairman LIEBERMAN. Thank you, Ms. McGinnis. That was very interesting and helpful information.

Mr. Wright, we appreciate your patience, and we look forward to hearing from you now.

TESTIMONY OF HON. JOSEPH R. WRIGHT,[1] FORMER DIRECTOR AND DEPUTY DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET, AND VICE CHAIRMAN, TERREMARK WORLDWIDE, INC.

Mr. WRIGHT. Thank you, Mr. Chairman, and Senator Thompson.

I appreciate you including an old war horse from the prior management improvement wars at this hearing. I have got to say that I spent many, many hours in this particular room during the 1980's, and I just want to know why you let Sean O'Keefe go for 2 or 3 months without having to come back.

Chairman LIEBERMAN. An oversight.

Mr. WRIGHT. I have prepared testimony that I would like to submit for the record and will just highlight some of the points.

Chairman LIEBERMAN. Fine. It will be entered in total.

Mr. WRIGHT. Thank you very much.

I believe that e-government is a national priority, as I stated, for several reasons. First, it is occurring anyway in the private sector as well as in the State and the local governments, the associations, and citizens are coming to expect it. As Pat McGinnis said—and I congratulate the Council for coming out with a report as early as they have in the administration; I think they are one of the first to do this—but one of the Council's findings was the Hart-Teeter survey, which said that citizens are beginning to expect the same performance from their government because they are getting it from the private sector.

[1] The prepared statement of Mr. Wright appears in the Appendix on page 135.

So the pressure is going to start coming in, "on us," if I may still use that term, because at this stage, it is going to be not only pressure for improved services, but it is going to be public pressure, and it is going to be political pressure. So I think the timing of this is very, very good.

Second, the reason why it is occurring anyway to some extent is because there is already an extraordinary amount of money being spent in the IT area. I have $77.6 billion in expenditures here, while I know the number that you are used to seeing is $40 to $45 billion. The difference is the intelligence community; we normally do not include the IT work in the intelligence community in this IT total. So let us back down to the $40 to $45 billion. Of that number, you have probably heard that on e-government, you have about $1.5 billion to $2 billion being spent. You add portals and some modems, and you are going to have another $1.5 to $2 billion being spent. Now you are up to about $3 billion. But while you have that $40 to $45 billion growing at about 4 to 5 percent every, single year, the e-government piece that OMB has been able to identify is growing at about 30 percent a year. So you are going to have a dramatic increase in spending that is basically spending, as my fellow panelists here have said, on a stovepipe, or agency and program, basis.

We heard a wonderful example here in the Department of Education. That is a very impressive demonstration of a citizen-oriented stovepipe.

So the money is being spent anyway, but what is it being spent on for the most part—and I am saying this from my old home, the Office of Management and Budget—is for agencies to further automate their incompatibilities. But the problem is that our citizens and our businesses are not incompatible. They are a single entities who are coming in and making a request of his or her government. And it is going to be tough to get our agencies to think in those terms. They will say those terms, but will they share files? Will they share compatibility? Will they share budgets, which is really what drives program priorities in this town.

I have gone into some of the stages that I think are important in developing e-government. Some of my fellow panelists have already talked about some of the States which are doing a very good job on this. I agree. I think that Washington State has done a terrific job. The State of Massachusetts has joined the group but was not included in prior statements. They just announced an e-government strategy which to me sounds exactly like what we are trying to do here. It is intentions-based rather than agency-based; citizen-centric; a portal to break through the stovepipes; break across traditional agency boundaries. I think that is what we all want to do.

I was in a presentation the other day, Mr. Chairman, in New York City, where I live right now, where Mayor Guliani surprised me. He had a group of mayors come in to see what New York City has done in the whole area of e-government. And to hear the mayor of a large city speak to the people who are coming in to get licenses for business and tell them that now, with all those licenses, you can come in to one location; to hear about how they are allocating law enforcement assets to where the problems are, using e-government and information services, to make a substantial difference, to

be able to improve the way it will get jobs for people who need them. I have got to tell you I was very impressed, and I am sure we can see that in many of the cities as we go across our country.

Chairman LIEBERMAN. Excuse me. In other words, in New York City now, a business can apply for a series of licenses on-line.

Mr. WRIGHT. Yes, sir—which has not been publicized very well. Again, I live there, and I was not aware of it. A silly example is if you come in, and you want to open a restaurant—as you know, in New York City, you cannot keep up with all the new restaurants that open and close—you have got to go through a whole series of licensing steps. You can now do that on-line with a single application.

Well, if you are the mayor of a city, you want to be able to provide that simply because of the fact that you want to bring the business people into your city. So I would imagine that you are going to see that model being used elsewhere.

You have heard about Britain coming in with e-government. One thing that was not said is that they have a goal of 100 percent of government transactions being on-line by 2005. That is tying in all of their 200 central and 482 local government institutions with all 60 million citizens and 3 million businesses.

Whether that is achieved or not, the planning they will have to go through and the steps they will have to go through to simply allocate the resources to achieve that goal is going to make a dramatic improvement.

Anderson Consulting has said that the United States ranks third behind Canada and Singapore—and I guess now, the United Kingdom. Why? Why are we third, with our resources, and more important, our inventiveness. Most of all, the Internet was invented here, in this country. So it bothers me that we are falling behind others.

In terms of our e-government initiatives right now, you have heard over and over again, and I think the Council also stated in their report, that we have such a low success rate simply because we have not had organized central leadership in this entire area. That is bothersome, because the Federal CIOs have said the biggest problems are not technology, but they are turf wars, and government structure.

The National Electronic Commerce Coordinating Committee also points out that policy issues, not technology, are the main problems governments face as they adopt e-government. Pat McGinnis and the Council said that a barrier to implementing e-government is government-wide leadership—and so on and so on.

The Congress in many ways has done its part by passing the Government Paperwork Elimination Act. Mr. Chairman, you know that there is a deadline of October 2003 to meet the requirements of the act, and you know what the chances are of the agencies meeting that deadline. In some cases, you will care about it a great deal that they did not meet it; in other cases, you will not. But where is the priority list? I have never seen a priority list. I have never seen the Congress lay out a priority list. I have never seen a status in terms of where the agencies are or are not. I have heard of some of the problems, but 2003 is coming pretty fast.

FirstGov.gov was one of the first portals, as you know. We have over 50 million pages on it right now. State and local information is now on it. It is only information. It has to have an improved search engine and it has to have improved security features. There are security programs within the Federal Government that I think are pretty good, and I know that when Social Security tried to open up their files last year, they did have problems with hackers coming in. And I know that the IRS has done a pretty good job in terms of bringing in their e-files system—but that is not on-line, that is not on the Internet. And, for example, GSA and their ACES program looks pretty good. The Postal Service, which we have not heard about today, and their Net Post-Certified Program, also looks pretty good.

The main thing, I think, is that the FirstGov.gov expansion has got to be part of a well-coordinated management effort. And I like what Sean O'Keefe said in terms of including it as part of a total management improvement program. And Senator Thompson, the comments that you made about the Department of Education are exactly what he is talking about. That is, you cannot automate a program that, for whatever reasons, is not working for other reasons.

Again, I am not picking on the Department of Education, either—OMB picks on everybody—but I believe that what Deputy Director O'Keefe said about making e-government a part of the overall management review is very important.

I will finish by saying that, I am delighted that you introduced S. 803. But on the position of the CIO—we should not focus so much on the "boxes" in S. 803 as on the responsibilities. And it is the right move, Mr. Chairman, to have e-government responsibility in the Office of Management and Budget.

This town, whether we like it or not, speaks in terms of the budget. That is the power structure within this town. In the private sector, it is not—but over here, it is. People in Washington do not ask you so much what you are going to do on a program, but how much are you going to spend more than you did last year, and that is a measure of whether you care.

If you do not have the power of the budget, you are not going to have the power of the implementation. Therefore, OMB is the right place to do it. But Mr. Chairman, the person to hold responsible for it is the director of OMB—not a new CIO.

I came before this Committee for years, objecting to breaking out the deputy director of OMB, because I said the deputy for management will not have the power of the budget. But it was done anyway.

Beyond that, there are many parts of S. 803 that I agree with. I do not necessarily agree with your spending levels, but I do believe that a fund is needed. The only thing I would suggest in closing is that it is very prescriptive in too many ways; it adds a lot of committees and councils. I would look at what is already being done. It adds too much spending; I think it is about $250 million in total if you add everything up. It does not say what is already being spent in those areas in many cases, and I think you may find the dollars there.

Finally, I would say that OMB, Mr. Chairman, also has a great flexibility to be able to what I call "reorient" agency funding. That is the nicest word I can use for it. If this is a priority, they can leverage the $100 million over the 3 years that they ask for 5-, 10- and 20-fold. The key is to agree on the goals, to make sure that this Committee, which is the oversight committee of the performance, has a reasonable reporting mechanism to hold the director responsible and to ask OMB to report on the progress on an everyday basis, cutting across administrations.

Thank you, sir.

Chairman LIEBERMAN. Thanks, Mr. Wright, for your very interesting testimony.

I started to interrupt to say that part of our hope here in the way we have constructed this CIO is to focus on the responsibilities and to make sure that we created an office in which the CIO had responsibilities that focused almost entirely on information technology and not one of several as the deputy director for management has.

Mr. Ingram, from the point of view of ITAA, do you have any counsel about the construction—I know you made a few general statements—of the CIO, and I suppose particularly on the question of whether the CIO ought to concentrate primarily on IT issues?

Mr. INGRAM. Yes, sir, I do. First of all, let me relate it back if I could to our corporate structure and how a CIO operates. For many years, we had multiple architectures throughout the corporation—this is EDS now—we had multiple architectures, we had multiple business units. Everybody went their own way, and we had stovepipe systems.

Now we have a CIO at the corporate level who reports to the highest position in the company. When he speaks, we listen, and we follow. It is for several reasons. First of all, he has a position, he has leadership, he owns budget, and he sets priorities. He sets priorities by working with business unit leaders, or in this case, agency heads. But now, through that direction, we have one common architecture around the entire corporation for all of our desktops, all of our PDAs and our Blackberries that we are carrying around and so forth, and we are very consistent.

We have one single format for our web pages and our Internet and intranet sites so that everybody knows the common look and field, and it is easy to navigate. We are sharing data across all of those, and we have one standard architecture for everything. I think that that is the way it should work in this situation also, absolutely.

Chairman LIEBERMAN. Thank you.

Ms. McGinnis, I know that one of the recommendations contained in the Council's e-government blueprint, which is a very impressive document, is the creation of an e-government strategic fund which would receive $3 billion over a 5-year period. And I wanted you to talk to us a bit about how that figure was arrived at and how you would hope that the money would be used.

Ms. MCGINNIS. We used the Y2K initiative as a model for this, and the amount is comparable to that and represents, when you look at this $40 to $45 billion being spent on information tech-

nology, only about 1.5 percent of that per year. So we did not see it as an excessive investment.

I do not think the exact amount is as important as achieving this flexibility in using the money across agencies for collaborative initiatives. If there is a way of tapping into the $45 billion and creating more flexibility, bringing these agencies together to invest in initiatives that will go beyond the boundaries of their agencies, then that is a way of getting at this.

But the notion here is that the E–Government Investment Fund be focused on cross-agency, intergovernmental, and public-private initiatives that address the priorities that were identified in our report and making these systems more interoperable, using the best technology to provide services, addressing issues of privacy and security.

Chairman LIEBERMAN. Let me ask a final and broader question, which is that one of our expressed hopes in going more and more to e-government is not only that it will make the government internally more efficient and make it more convenient for the citizenry, for instance, to apply for licenses for restaurants or to gain access to library services, but that in a broader way, it will help to revive or stimulate the vitality of our democracy. From the point of view of the Council, I wonder if you think this is pie-in-the-sky or if it is a practical possibility that will come from better e-government.

Ms. MCGINNIS. I think it is not pie-in-the-sky. I think it is absolutely essential when you look at the symptoms of our anemic democracy in terms of the number of people, particularly young people, who are voting and participating. And we see in our polling—we saw in this polling, and we have seen in a whole series of polls that we have done with Peter Hart and Bob Teeter over the years—that people do want to be more involved. They see themselves as part of the solution, and they feel rather frustrated that they do not have opportunities beyond going to the voting booth in November in election years, and many are not exercising that opportunity.

So in fact I suggested these public forums. I do not necessarily think that you have to write that into the legislation here; we can just do it. You will find, as we did in our polling and focus groups, that people are very willing to engage and say what they would like to have on-line, how much they think needs to be offered off-line, what is most important to them.

We were quite surprised, and I know that Bob Teeter and Peter Hart were, too, quite surprised, to find that people's vision of e-government goes far beyond this notion of just being able to apply for licenses on-line or get information on-line. They want to be able to communicate with you. They want to be able to communicate with their elected officials at every level and to ask for and get information and have input even into the policy process of the Federal Government and other levels of government.

I think that that is the dimension, that is the definition of excellence in government that we see as equally important to making this all more efficient and operate better.

Chairman LIEBERMAN. That is a very helpful answer. I believe you are right, and I am encouraged by the fact that the pollsters found that kind of attitude among the public.

I want to thank the four witnesses, and I am going to yield to Senator Thompson. I apologize that there is now ongoing a farewell luncheon for a long-time employee of my office, and I would be derelict if I did not go. So I am grateful for your testimony, and I am grateful to Senator Thompson for being willing to wrap up the hearing.

So I now turn the gavel back to Senator Thompson temporarily.

Senator THOMPSON. Do you have that other piece of legislation that we had? [Laughter.]

Chairman LIEBERMAN. Thank you.

Senator THOMPSON [PRESIDING.] Thank you very much, Mr. Chairman.

Several comments have been made that I think have been right on point. Ms. McGinnis, you mentioned in your statement the concern over privacy; we never talk much about that, but that is another hurdle that we are going to have to overcome. The concern that you mentioned that people have is very well-placed.

Congressman Inslee and I passed an amendment to the appropriations bill last year, requiring the Inspector General to report to Congress on how agencies collect and share personal information from the Internet site. The IG compiled data from 51 IGs—three hundred persistent cookies, or information-collecting devices, were found on the website of 23 different agencies. There were hundreds of violations. According to one report, 116 of 206 State Department websites, well over half the Department's sites reviewed, had no privacy statements and therefore no means of advising users of any information collected on the sites.

That is something that we are going to have to deal with. We are not doing a very good job of that so far. I think they are making improvements in that now that the spotlight has been focused on them, but we will have to wait and see.

Mr. Wright, you mentioned the Government Paperwork Elimination Act, and you are absolutely right; it requires Federal agencies by 2003 to provide the public or businesses that deal with Federal agencies the option of submitting or receiving information electronically. But the GAO has recently reported that agency plans for implementing the act do not adequately address the requirements set forth in the legislation. They concluded that OMB will be challenged in providing oversight of agency activities because the implementation plans submitted by the agencies do not document key strategic actions nor do they specify when they will be undertaken. So it is another act they are not going to comply with.

Mr. WRIGHT. Well, Senator Thompson, the Government Paperwork Elimination Act is just part of a huge amount of management legislation passed during the 1990's. I just went through it, and in some ways, I feel a little bit sorry for my successors at OMB. On the other hand, what a great challenge for them. We did not have the Internet in the 1980's, and I can remember the battles that we had to go through—I do not even want to bore you with it—but it was difficult just to get agencies to use credit cards or to just try to get them to use a general ledger system. Now, those are about the most boring subjects in the entire world—but they will fight to the death over it. Or it was difficult to get agencies to use AFT and lockbox systems—but we got that one done because there was quite

a bit of money involved. We also did not have the advantages then that the existing Congress has in your oversight.

Senator THOMPSON. But on the other hand, we keep adding layers of government in all these agencies.

Mr. WRIGHT. Yes, you do.

Senator THOMPSON. We keep adding programs; we keep duplicating and overlapping programs. So the tools are greater, but the problems are greater too, aren't they?

Mr. WRIGHT. Well, I was just looking at the GAO report on all the management improvement legislation, and much of it complements prior legislation and much of it is overlapping. I do not want to make your life more complex, but if this Committee were to combine all these former bills into a single omnibus piece of legislation—that would be an extraordinary service.

Senator THOMPSON. That is a very interesting idea. I have often wondered about that myself. For example, you mentioned the nineties. The Clinger-Cohen Act and the Paperwork Reduction Act, I am informed, placed the responsibility of the things that we are talking about now—maybe they did not realize the significance of it then—but they placed it with the director of OMB. So I sometimes think we spend an awful lot of time rearranging the boxes and putting new slots in place and so on, all in a vain effort to try to vest someone with responsibility or figure out a way of holding them responsible when it has nothing to do with the organizational structure. It is almost like we need a one-line piece of legislation that says the director of OMB is responsible, and he had better do it or else.

Mr. WRIGHT. The problem is the director of OMB is being hit with a budget issue every 15 minutes that must be resolved. Management issues are weekly, monthly, and yearly issues. So therefore, OMB handles the issue that has to be resolved right then.

The Government Paperwork Elimination Act requires OMB to submit a report to the Congress as part of the budget—but in addition, look at all the rest of the reports they have to submit. How in the world is the director of OMB going to pay attention to all of those requirements when they are not combined in a "single" or in a "limited" number that he can focus on?

Senator THOMPSON. So what you are suggesting is that we are overloading that position. Obviously, the budget is always going to be the most important part of it. I have been critical in the last several years that it has been about the only part of it. Management has drifted. The budget is going to have the priority. But after all that is over, with the additional reporting requirements and additional legislation and complication that we put into government now, maybe it has gotten to be an impossibility for one person to handle or even have direct responsibility for all that. And you are suggesting that we simplify at least the management side of that, maybe, by combining or streamlining all this management legislation into something that is more manageable. Is that what you are suggesting?

Mr. WRIGHT. First, I believe that a lot of people have objected to if you want to call it the heavy-handedness of OMB forever. When I was up here and elsewhere testifying, I said that is fine—if you do not want OMB, disband it, but you are going to have to have

another OMB. You are going to have to have somebody who is going to be there to carry out the policies, "of the President" and communicate these through the budget and other terms of the Congress.

I saw the way the National Performance Review was done in the prior administration, and many of those initiatives were very, very good ideas, but they separated it away from the budget. And I knew that that was not going to be long-lasting and the agencies were not going to pay that much attention to it.

So I think that in terms of this legislation, putting it into OMB is the correct thing to do, but it is one more piece of management legislation that is placed on top of another whole group of requirements that the director is going to satisfy in addition to around 20 additional reports with the budget.

Senator THOMPSON. So do you think it makes any difference, really, whether or not we have a CIO as this legislation suggests, or whether we have the newly-created position under DDM, as Mr. O'Keefe described it?

Mr. WRIGHT. A newly-created position reporting to the Executive Office of the President will simply compete with OMB. And I am not saying this out of——

Senator THOMPSON. Even if it is within OMB?

Mr. WRIGHT. Oh, no, not if it is within OMB. I am sorry.

Senator THOMPSON. I think the legislation has it within OMB.

Mr. WRIGHT. Yes. If it is within OMB, I would make it simple. I would not create another deputy to the director. It is tough enough the way it is right now.

I will tell you, Sean O'Keefe is a wonderful man; he is still geared toward the same 15-minute issues hitting him all the time. When you now have the deputy for management coming in and saying, "By the way, we are going to provide management guidance to the agencies on our data call which is going out in a couple of weeks—and I want this to be in it," he is going to be negotiating with Sean O'Keefe in terms of that guidance.

Now you have a third person come in, and what if you have a fourth person come in on the next Congressional imperative? What you are doing is complicating the life of the director of OMB substantially. That is all that I am saying.

I would hold the director of OMB responsible for performance under S. 803 and I would make it as clear as possible. I would simplify all of these prior management reform acts—this Committee could take the lead on that—and make e-government part of that.

Senator THOMPSON. That means we would have to read all of them first. Therein lies the problem. [Laughter.]

Mr. WRIGHT. Yes, sir, that is your problem, and that is why you are a Senator.

Senator THOMPSON. We could go on for a long time here with the other panel members, but it is one o'clock, and I think we should wrap it up.

I really appreciate your being here and making your contribution. I think this has been extremely helpful. Hopefully, we have been able to point out some of the opportunities as well as some of the potential pitfalls, and we can move in the right direction.

The record will be held open for 1 week to accept statements on e-government and S. 803.

We are adjourned.

[Whereupon, at 1:01 p.m., the Committee was adjourned.]

APPENDIX

PREPARED STATEMENT OF SENATOR CLELAND

Mr. Chairman, on the 4th of July thousands of Americans lined up at the National Archives to pay their respects to a 225-year-old piece of parchment. The words contained on that faded medium are the words of our independence as a nation and the ideals that have guided this country for its entire history. The Declaration of Independence, along with the other Charters of Freedom, have now been removed from display at the National Archives to undergo 2 years of treatment and re-incasement to preserve both the fragile medium and the message that we work every day to protect. I understand that when the documents go back on display in 2003 they will be presented in new encasements, more accessible to all Americans, including those with disabilities.

Acessibility of government information is why S. 803, the E-Government Act of 2001, is so very important, Mr. Chairman, and that is why I join you in supporting its vital goals. From the parchment of the 18th century to the electronic records of the 21st, we must preserve and make available the records of our national life and thereby ensure accessibility of government services to the people. The life cycle of e-government records can not end with first time distribution, but must guarantee availability to the people into the decades and centuries ahead. That is why, Mr. Chairman, I wish to take this opportunity to note the vital work of the National Archives and Records Administration (NARA) in that preservation task.

Building an Electronic Records Archives (ERA) is one of the most critical efforts to ensure preservation and access to Government records since the establishment of the National Archives in 1934. The pace of technological progress and the spread of electronic government initiatives make the need for electronic records solutions urgent. Among other problems, this progress makes the formats in which the record are stored obsolete within a few years, threatening to make them inaccessible even if they are preserved intact.

NARA has been working in collaboration with the Georgia Tech Research Institute, the National Science Foundation, Defense Research Projects Agency, United States Patent and Trademark Office, the Army Research Laboratory, and the San Diego Supercomputer Center to find solutions for the preservation and access to electronic records that are sustainable over the long term. Progress in these collaborations enabled NARA to announce in March 2000 that they foresee the possibility of implementing an Electronic Records Archives within a few years. Goals of particular interest to private sector records managers is NARA's commitment to make solutions transferable and scalable to a wide variety of public and private applications.

In addition to the important link with Georgia Tech on this project, Mr. Chairman, Atlanta, Georgia is a proud host to one of the 14 regional archives of NARA. Currently housed in an inadequate WWII warehouse, the Archives has been invited to build a new facility on land contiguous to the campus of Clayton College and State University in Morrow, Georgia. I am working with the College, the Georgia State Archives, and my friend from the 3rd District, Mac Collins, to try to make that a reality. The exciting possibility in reference to the subject of e-government today, Mr. Chairman, is the fact that the most attractive feature of Clayton College and State University to the Archives is their information technology curriculum. This specialty will allow the University to partner with NARA on technology projects that can make the regionally-created e-records more accessible to the American public. Talks are already underway on how these collaborations might be accomplished.

So in conclusion, Mr. Chairman, it is my pleasure to support S. 803, as we take particular note of our responsibility to making the records of our government more accessible to the people. From the Charters of Freedom to the latest records of the Centers for Disease Control or TVA, we must do our part to support the institutions that will ensure accessibility both today and tomorrow.

STATEMENT OF THE HONORABLE SEAN O'KEEFE
DEPUTY DIRECTOR
OFFICE OF MANAGEMENT AND BUDGET
BEFORE THE
UNITED STATES SENATE
COMMITTEE ON GOVERNMENTAL AFFAIRS

JULY 11, 2001

Mr. Chairman and Members of the Committee.

Thank you for the opportunity to appear before the Committee to discuss the Administration's views on our electronic government initiative and to comment on the legislation pending before the Committee. We welcome your interest and the continued opportunity to work with you to strengthen the initiative.

Electronic Government is one of the key elements in the President's Management and Performance Plan. This administration believes e-government must be integrated with the larger picture of management reform that also includes budget and performance integration, strategic management of human capital, competitive sourcing, and improving financial performance. Our strongest view is that the combination of all these initiatives pursued concurrently is far greater than the mere sum of the parts. Each element of the management agenda is dependent on the others to assure maximum advantage. As such, e-government and the employment of information technology tools must be a part of this broader management reform framework. This is the context of our vision for the electronic government initiative.

The Vision

This administration's vision is to champion a citizen-centric electronic government framework that will result in an order of magnitude improvement in the federal government's value to the citizen. The vision is results oriented, market based, and citizen centered, as outlined in the President's Budget. To accomplish this vision we must refocus resources to assure that information technology facilitates agency administration efficiencies, but most importantly, to maximize citizen access. We must simplify business processes to maximize the benefit of technology, resulting in processes that will be faster, cheaper, and more efficient. We must manage information flows and link them across agencies and the Federal government so that we can find and use what we collect now and in the future.

If we can do all these things we will go a long way to fulfill the President's vision of an electronic government framework that truly harnesses the modern tools of the information age. Specifically, we must focus on the following:

1. Citizen Centric Strategy

   E-government must be judged on the value it provides to all Americans. Simply going "on-line" is not useful unless it is built around the needs of the users inside and outside of government. The question is how to make government easier, quicker, cheaper, and more responsive. Our initiatives will address four broad groups:

   - Individuals: We are focussed on building easy to find one-stop-shops for citizens-- creating single points of easy entry to access high quality government services.

   - Businesses: We must reduce burden on businesses through the use of the Internet. This is not about building government websites, but rather about being able to communicate with businesses in the language of e-business. We cannot make business report the same data to multiple agencies because government fails to reuse the data appropriately or fails to take advantage of commercial electronic transaction protocols. This can serve to streamline the myriad reporting requirements as well as facilitate a more efficient means for business to do business with the government.

   - Intergovernmental: We must make it easier for states to meet reporting requirements, especially for block grants, and provide the valuable information the federal government must have to measure the performance and results of national programs.

   - Intragovernmental: We must automate internal processes to reduce costs for federal government agency administration by using best practices in areas such as supply chain management and financial management.

2. Simplifying Processes

   Making it easy for citizens to get service is constrained by complicated government procedures. This Committee has highlighted the need for agencies to fix core management problems before investing in information technology solutions. As information flows are managed, consolidated and linked, and before new information technology is applied, it becomes imperative that we re-engineer processes to eliminate redundancy and take advantage of technology – to unify and simplify the process rather than merely automating what has occurred to date. Such a dramatic change in organizations can be difficult but it is the best way to become more efficient.

3. Bridging Islands of Automation

   Chronic management problems in government have resulted from operation in isolation. For example, logistics, procurement, and property disposal functions are integral parts of the same supply chain, but have traditionally been managed as separate functions. Information collection, data mining and analysis, information dissemination, and information preservation have not been seen as part of the same information life cycle. The problems of isolation are only magnified when automation is attempted. Indeed, the IT architectures of the past decade have

facilitated isolation such that a branch can operate as its own island, complete with databases and computer power that would have required an extensive data center 15 years ago. We must look to the best practices of business and public management to link these islands into a unified chain.

4. Information Architecture and Knowledge Management

To reap the benefits of e-government, information must be viewed as a resource. We have always invested in information processing, but information itself must be considered as the investment. This Committee has championed this philosophy for many years and this administration embraces it. In addition, we must start managing our information across our programs and agencies to improve our decisions and our efforts at program evaluation; moving to knowledge management will lead to better service, faster and at lower costs. But to do this requires data standards and a plan to guarantee the systems can interact -- an information architecture that recognizes the results that investing in information has on agency business processes. These two key features of information management -- knowledge management and an information architecture -- are inherently interrelated processes and must be considered core efforts of any agency movement to electronic government.

Implementation of the Vision

All of this can come together in a strategy to make the government a "click and mortar" enterprise, where on-line applications that serve businesses (G2B), inter- and intra-governmental needs (G2G), and ultimately citizens (G2C) are made more accessible, effective and efficient. In adopting a "click and mortar" model we must use the best practices of industry with regard to customer relationship management, supply chain management, enterprise information management, and management of change.

OMB's new Associate Director for Information Technology and E-Government, Mark Forman, will lead this strategy, focusing on how information is supplied to the government, managed at an enterprise level within and across agencies, and ultimately supplied to citizens in a way that is linked to agency missions and performance goals.

Funding

Agency investment in information and IT must work toward this vision. The President's Budget is clear about our plans to use capital planning to improve performance, achieve outcomes from investments that match agency strategic priorities, and provide real benefits to the public. As major corporations have adapted to the digital economy, business cases and IT capital planning have been critical elements of their transition. These elements will be the core of our transition as well. This Committee has been a leader in promoting IT capital planning and the need for IT projects to have strong business cases, and OMB pledges its full support to these efforts as well.

Many have expressed specific concerns about the funding required to meet the goals and changes of e-government. Given the problems we have had in capital planning over many years, it is inconceivable that we do not have the room to find money to start e-government projects in our current expenditures if we simply stop funding what is not working. Last year's Federal IT Budget portfolio totaled approximately $40 billion and included over 600 major projects; this year we estimate that almost $45 billion will be spent on major IT projects, infrastructure, architecture and planning. As we prepare for the fiscal year 2003 budget submission to Congress, our plan is to discontinue IT investments that are not relevant to agency or multi-agency missions, or are behind schedule, over budget or not delivering intended benefits or efficiencies. The e-government framework must be based on performance.

At the same time, the Administration agrees with the premise of S. 803, that separate agency appropriations for e-government make it difficult to fund cross-agency projects. As such, a $100 million "e-government fund" is proposed in the President's Budget, with $20 million proposed for FY 2002, to help leverage innovative interagency projects. If the Congress enacts appropriations for this purpose, the fund would support multi-agency e-government initiatives that are currently difficult for any one agency to bear. The fund will leverage cross-agency work in e-government that serves citizens and businesses, and could drastically improve citizens' ability to access federal services and federal online information. The fund would provide for collaborative e-government activities, supporting missions and goals that affect multiple agencies without introducing interagency funding conflicts. Our ultimate goal is to rationalize and interrelate the $45 billion currently budgeted for IT. This government-wide fund must tie to IT capital planning and performance standards that are linked to strategic goals and outcomes.

In sum, our proposed e-government fund provides sufficient seed money to begin the effort to establish the larger e-government framework previously described. We believe that the President's funding request is the appropriate amount to begin leveraging current IT spending to make better use of existing agency investments in IT.

S. 803

We welcome this committee's focus on e-government, as it is consistent with many of the same points in the Administration's e-government vision and funding plan. We would like to work with this Committee on crafting legislation that could drive real change in this area. However, while we believe that there are many positive aspects of S. 803, there appears to be a philosophical difference between S. 803, as introduced, and the President's vision. We see IT and e-government not as a programmatic end, but as a tool to enable the President's vision through enabling open access, efficient government operations, and effective decision-making.

In our judgment, it is crucial that we reverse the trend of stove-piping the IT community from the management work that needs to be accomplished in all sectors of government. We look forward to working with you to ensure that any legislation does not treat e-government as a series of discrete information technology issues. We also look forward to working with this Committee to integrate information technology with broader management and program goals. As stated earlier,

this administration views e-government as part of overall management reform, integrated with the other parts of the management agenda in a way that moves government performance forward.

Specific areas of concern that we would like to further discuss with this Committee include:

- **Performance Goals.** We are not sure the bill advances, in any measurable way, the results we are expecting from the "President's Management and Performance Plan." To be effective, legislation on electronic government must contain performance standards. E-government is a means to meet agency strategic objectives, but its value must be judged by the agency's ability to meet those objectives. S. 803 sets out to promote electronic government but requires performance standards to measure the bottom line in terms of agency efficiency and effectiveness.

- **Creation of Federal CIO.** The President believes that the OMB Deputy Director for Management should be the governmentwide CIO because all management challenges are intertwined. This move ensures senior level commitment to IT and information resource management issues. It also guarantees linkage to the budget process, and it assures management attention by agency heads while preserving their authority, and responsibility to the President, to direct their agencies. Similarly the Administration would have concerns with any legislation that would transfer the computer security standard-setting functions of the Secretary of Commerce under the Computer Security Act, as amended by the Clinger- Cohen Act of 1996 (40 U.S.C. 1441). These are the core computer security functions entrusted to the National Institute of Standards and Technology (NIST) as an expert standards and technology agency unconnected with defense or law enforcement agencies. We would not support shifting those functions, or re-ordering the relative functions of OMB and the Secretary of Commerce as to computer security standards.

  As I mentioned earlier, we have created the post of Associate Director for Information Technology and E-Government reporting to the Deputy Director for Management who will work to fulfill the President's vision of using information technology to create a citizen-centric government. As the senior federal e-government executive, he will be responsible for ensuring that the federal government takes maximum advantage of digital technology and best practices to improve quality, effectiveness, and efficiency. He will also lead the development and implementation of federal information technology policy. He will ensure that e-government strengthens the ability of agencies to address customer needs while being attentive to the unique missions of agencies. In deploying e-government he will ensure that the privacy of citizens is protected. One of the post's first jobs is to put together an e-government strategy for the Federal government. We will work with this Committee in developing this strategy and its direction.

- **Proliferation of Forums.** The bill proposes that OMB creates and leads numerous distinct councils, forums, and boards. OMB could currently create any of these on an as needed basis. The administrative costs to maintain all of these groups would be high and their benefit would not be consistent. In addition, their continued presence would take away attention from the work that needs to be done to automate government processes and would often duplicate exiting authorities.

- **Reports.** The current version of legislation also has numerous reporting requirements for OMB and the agencies. It is unclear what problems will be solved by establishing more management reporting requirements rather than more efficiently utilizing the extant information. We seek to establish accountability standards linked to measures of performance for electronic government and will work with this Committee to formulate such measures.

The bill also includes a number of provisions with which we agree. We have been actively pursuing several similar objectives to include the improvements being made at FirstGov, development of a Federal Public Key Infrastructure to provide for interoperability in using digital signatures for agency programs, promotion of geospatial information standards, and issues of access for persons with disabilities in implementing Section 508 of the Rehabilitation Act. We concur that these are important public policy initiatives. Most importantly, the bill highlights an e-government fund similar to that currently proposed by the Administration. The support of this Committee on e-government -- particularly in focusing attention on the need for appropriations that support interagency activities -- is most welcome.

Conclusion

The Federal Government can secure greater services at a lower cost through electronic government. By integrating e-government as part of our management agenda, we can best achieve the promise of electronic government.

The President's e-government initiatives, coupled with the important legislation this committee has championed including the Clinger-Cohen Act, GPEA, GISRA and the PRA, provide sufficient authority for us to make the transformation to an e-government. We look forward to working with this Committee in this effort. Consistent with our strategy, we would also welcome working with this Committee on e-government initiatives that are consistent with the philosophy discussed this morning.

Mr. Chairman, thank you for your time. We look forward to working with Congress and this Committee to reach our shared goal of an e-government framework.

TESTIMONY
OF
ANNE K. ALTMAN
MANAGING DIRECTOR - U.S. FEDERAL
IBM CORPORATION
BEFORE THE
U.S. SENATE
GOVERNMENTAL AFFAIRS COMMITTEE
ON
THE E-GOVERNMENT ACT OF 2001
JULY 11, 2001

Good morning, Chairman Lieberman, Senator Thompson and members of the Committee. My name is Anne Altman and I am the Managing Director of US Federal for the IBM Corporation. I have responsibility for IBM's Federal Business, delivering services, solutions, hardware and software. Thank you for inviting me here today to talk with you about IBM's views on e-government and the recently introduced E-Government Act of 2001. This bill will help speed the transformation of the federal government from its current form to a more contemporary knowledge-driven government that can improve services for its citizens and position the United States to lead.

This morning I would like to focus my testimony in three areas: IBM's own transformation and its relevance to the federal government, general policy issues and choices public officials must address as they manage the transformation to e-government, and finally IBM's view of the provisions of S. 803.

IBM TRANSFORMATION

IBM is the world's largest information technology company with 80+ years of leadership in helping businesses and governments innovate. Our business ranges from fundamental research, to semiconductors and other technologies which comprise information technology hardware, software and services. IBM software offers the widest range of applications, middleware and operating systems for all types of computing platforms, and our services enable customers to take full advantage of the new era of e-business. Today, we have over 320,000 employees in more than 160 countries around the globe.

For the past 8 years IBM has been changing to better address the needs of our customers, to break down barriers between operating units - frequently known as stovepipes or silos - and to integrate the vast quantities of data and people that reside within the worldwide organization. We seek to achieve cost efficiencies while doing all three. The federal government with its hundreds of disparate IT systems, lack of interoperability and thousands of locations has many of these same challenges.

The Problem

IBM's transformation began in 1993 when we had reached a crisis point. Our financial condition was very poor and our market value had plunged. To save our company and restore profitability, we had to reevaluate every facet of our organization. At the time, IBM was a maze of complexity. We had nearly 400,000 employees doing business in more than 160 countries. We went to market as 20 different businesses, each with its own fulfillment, manufacturing, accounting and payroll systems, its own IT structures and marketing strategies. Unnecessary redundancy was everywhere. Our combined portfolio included more than 5,000 hardware products and 20,000 different software offerings.

This complexity was not only difficult for us to manage; it also made IBM a confusing organization for our customers. There was no point of integration that brought our vast resources together on the customer's behalf. Not surprisingly, IBM was also a highly inefficient organization. Our expense-to-revenue ratio was 40 percent above our major competitors, and development cycles for our major hardware products often lasted four years or longer. We maintained a diverse set of IT organizations, with more than 100 different IT officers. Many of them had the title "CIO," yet they supported different architectures, technologies and data standards for the individual business units or geographies. There was little integration of systems, vast inconsistencies and a good deal of redundancy.

IT Reorganization

In order to survive, we had to do a better job of integrating our global enterprise. The first step was to restructure our IT environment and redesign our IT management system to create efficiencies, improve our ability to communicate, and free up funds to attack other areas in the overall transformation process. To regain control over our IT environment, we consolidated 155 data centers into just 28 (with a target of six); replaced 31 segregated networks with a single integrated global network; appointed a single CIO responsible for transformation and defining consistent architectures and standards across IBM; and restructured our IT management system to ensure that our IT strategy and investments were consistent with our overall business strategy. Along the way, we reduced IT costs by 25 percent annually, freeing dollars for reinvestment elsewhere. We reduced labor costs in the data centers by 28% and moved employees to customer facing responsibilities where they could generate revenue. Our hardware bill dropped 55% and the cost of raised floor facilities dropped by 67%.

System performance also improved. Our IT deployment team has placed measurement probes in more than 600 locations throughout our global network to measure server performance and traffic and ensure quality. Recently we have achieved server availability of 99.5 percent, average response times of less than two seconds, and dial-in availability exceeding 99 percent.

e-Transformation

The most important part of our transformation commenced when we decided to make a corporate commitment to becoming an e-business in 1998. We realized that we could not effectively sell e-business to our customers if we did not become a premier e-business ourselves. To do this, we had to integrate internet technology into our core business processes. We had to fuse business and IT strategy. As a result, we are now able to move with more speed, agility, efficiency and intelligence. However, to become a fully integrated e-business, we had to radically alter our structure and break down internal barriers within the company. We had to rebuild IBM to adapt to continuous change and use a foundation of

simplified and integrated business processes. Of all the lessons learned in our transformation, this is the most important point. **We had to break down the walls between our operating units, or silos, and become a single, integrated organization with seamless connections between our employees and between our company, our suppliers, our customers and our business partners.**

Today, that core principle underlies all of IBM's internal operations. We created just one IBM face to the customer, all the way from the creation of ideas through research, to our components business, to our work in the highest end of supercomputing. The transformation has strengthened relations within the company and with customers. But this type of change was not easy. It required the organization to change management concepts and long established practices and replace a collection of separated business units with an organization that is integrated.

Business Transformation - CIO Position (BT/CIO)

One area vital to the transformation process was the selection of our CIO and responsibilities of the position. Our management expected the CIO to be responsible for the company's technical leadership including:

Providing leadership for IT investments in new technologies & innovations
Providing leadership for corporate IT initiatives
Developing global IT strategies and goals
Defining IT architecture, infrastructure, standards, guidelines and processes
Developing and managing the deployment of the IT infrastructure worldwide
Optimizing the investment in IT infrastructure worldwide
Evaluating, selecting and negotiating enterprise-wide service agreements
Developing and ensuring compliance with overall IBM service-level requirements

Additionally, the CIO is responsible for business transformation across the whole of IBM. The BT/ CIO has a strategic leadership function and is in effect an agent of cultural change. This requires a tight communication and control structure. IBM business units and cross-organization business processes had to be coordinated during transformation to avoid duplication or incompatible IT systems across the key processes or between business units.

The BT/CIO function works with business process executives and business transformation executives across the business units globally to create and manage an integrated application architecture and ensure compliance with corporate standards and processes. This function provides the tools, standards, processes, and audit services. The BT/CIO function is also responsible for enterprise-wide application and standards selection and deployment. The BT/CIO places particular focus on transforming core business processes and leveraging knowledge and information.

With change being managed by the BT/CIO, managers had to transfer the daily operations of business systems to a centralized group out of their personal control. Initially this raised anxiety, created doubt, and heightened the sense of risk. It was a major cultural change for an institution that had been comfortable as the world changed around it.

But the results were worth it. Let me give you some examples. IBM did $23 billion in business

over the Net in 2000. That is up from $3 billion two years ago. Last year, we handled 99 million self-service customer inquiries and transactions over the Web, up from 14 million in 1998. In procurement, we have moved from $7 billion in 1998 to $43 billion in 2000. This allowed us to do 96% of our invoicing in a paperless manner. The savings from Web-based transactions are impressive, as we save 70% of the cost of a service transaction cost when it is done over the Net. **Let me repeat that. We save 70% of the cost of a service transaction when we perform it over the Net as opposed to the old paper or manual format.** All of this has resulted in a savings of $377 million in 2000 in the procurement area alone, but also a huge $2.4 billion in cost avoidance. These are not insignificant sums. For a company with $88B in revenue, this is 2.7% of revenue. Apply this percentage savings to the budget of a federal agency, such as the Department of Commerce budget of $8.7 billion in FY 2001 and the opportunities for savings could be $234 million. Applied across all Federal agencies, the potential for savings is enormous.

IBM's transition was driven from the top down, with strong CEO and other senior executive leadership. The resulting changes could not have been achieved without sustained leadership, commitment and accountability. Our company now is one of the leading e-business companies in the world. Our e-business focus on services, software and hardware has allowed us to prosper in an ever more competitive IT environment. These changes have fundamentally altered how we address customer needs, how we do business and how we approach building an IT infrastructure.

THE NEW NETWORKED ECONOMY

In today's networked economy, the way in which Americans and others around the globe interact with government has changed dramatically. The Internet has emerged as a powerful means for conducting all types of transactions in government and business:

Transactions among employees within government -- to improve how services are provided, how ideas and knowledge are shared, how teams are formed, how work gets done;

Transactions between a government and its suppliers and partners, to reduce cycle time, increase speed, efficiency and reduce costs;

Transactions between a government and its citizens to facilitate easier access to information and transacting business.

This is only the beginning in this next phase of e-transformation. We hope the lessons learned from our transformation and our experience with more than 20,000 customers can help you and other government leaders obtain similar operating results. The goal should be to build a truly integrated government, capable of efficiently interacting with itself, its citizens and the other entities with which it deals.

Examples of e-Government

We are seeing a number of governments embracing e-business strategies and transitioning to e-governments because they recognize that improvements in government efficiencies and services to constituents affect economic competitiveness and quality of life.

Let me mention a few brief examples.

1. Maryland Department of Labor, Licensing & Regulation
Allows over 250,000 licensed professionals in the state to renew the licenses from a single Web site. Over 50% of renewals are done via the e-government application. Time to renew has been reduced from four weeks to one day. The contractors paid for system development and will be paid back with transaction fees.

2. US Department of Commerce - BuyUSA
Developed to stimulate economic development by assisting U.S. small and medium businesses to compete and grow in the global economy. It is an innovative e-marketplace linking U.S. businesses with buyers and partners around the world. It allows foreign companies, pre-qualified by the U.S. Commercial Service, to view U.S. company catalogs and company background information.

3. New York State Governor's Office of Regulatory Reform
Helps businesses wishing to establish in the State or change their purpose to better understand the process and specific permits for their specific businesses. It allows a Web-based dialogue which determines the permits required for each business and creates a customized kit. A single payment is made which is automatically apportioned to the appropriate state agencies/departments - invisible to the user. Over 1,100 permits from 36 state agencies are available. Permit requests are up twofold, creating 4,500 additional jobs in the state. In addition, training costs for state employees to support the businesses have been reduced 90%.

GETTING TO e-GOVERNMENT

While these and other examples are encouraging, since they demonstrate the value in moving to e-government, the key question remains - how does one move the Federal government, as a whole, to this transformation? To be successful, the government should develop a plan that addresses the following fundamental choices: leadership, integration, infrastructure, human resources, privacy, security and resistance to change.

Government decision makers must play a crucial role in creating a framework and, most importantly, the urgency that drives the transition to e-government. The private sector can provide leadership in aspects of technology, strategy and services deployment, and can help apply its experience to the public sector. However, it will be strong leadership, and policy decisions and practices within government itself that will move the change process forward. Governments around the globe are identifying the following policy issues as critical success factors in transformation.

Leadership - A fundamental issue is how to create an organizational structure that best enables strong, visible and accountable leadership committed to the full definition of e-government. The two most important things when designing this policy are to put someone in charge and to set up a government-wide implementation process. The President must provide a clear personal imprint and champion the widespread benefits of e-government to agency leadership. The President must appoint an e-government leader with the stature, authority,

funding and accountability to drive change. This official must focus constantly on implementation.

Committed IT leadership will play a central role in overall government efforts to transform. Leadership choices include requiring agencies to adopt interoperability as a fundamental part of their IT strategy and enabling agencies to learn from each other's implementation. Since e-government projects often affect multiple agencies or departments, effective leadership must ensure adequate funding for multi-agency/department projects. Also crucial is a measurement system to insure accountability and progress toward goals.

Integration - e-Government triggers a chain reaction throughout the rest of the government structure: across constituent delivery systems, data bases, suppliers, among agencies, and with logistics, inventory, distribution. All these core business processes must be integrated so they work together to deliver maximum value through improvements in speed, cycle time and constituent responsiveness. These processes are not only being transformed. They are being connected, fused together and integrated within the government.

An important and difficult e-government issue for CIOs concerns the governance models of organizations. Historically, business processes were stand alone. But since the real benefits of e-government come from integration, government leaders must reconceptualize their management systems and organizational models to build a fully integrated enterprise and they must create the policy to enable it.

Infrastructure - The fundamental concern for government should be the creation of an information infrastructure that is based on truly open standards. e-Government infrastructure is built on heavy-duty software and heavy-duty hardware, such as servers, storage systems and user devices. It is "end-to-end" infrastructure. At one end are all the suppliers, partners, constituents, agencies, licensing boards, all outside a government's firewalls. At the other end, is an explosion of devices seeking access to the government network. In this environment, standards-based computing and interoperability are critical. Proprietary systems typically do not link easily to new applications and can be artificial gates, limiting system performance. This is particularly true as data sources become even more varied. In our experience, open protocols, open interfaces and open file formats are all elements which lead to interoperability.

The model for developing applications also is very important. The application framework should allow systems to extend government-wide easily and take full advantage of data, wherever it is located. Applications should readily connect into the underlying framework, or readily disconnect. Every step of infrastructure development includes a choice: going with a proprietary system or a solution built on open industry standards. The policy choice for government leaders is whether the systems that get designed, developed and procured are open, interoperable, and based on cross-industry open standards or whether they are to be closed, proprietary and isolated. The former enables connectivity for millions of people and businesses, wherever they are, using billions of pervasive devices. The latter ensures ongoing, parallel, system-by-system investments with neither connectivity, interoperability nor extensibility guaranteed. A number of governments have already concluded that the ideal framework is an open-source infrastructure which allows interoperability. We believe procurement regulations should explicitly allow for open-source alternatives.

Human Resources - Demand for a quality IT workforce is rising. In fact, the Federal government is competing with industry for the same technically skilled workers. The entire

knowledge-based economy requires highly educated workers who continually build and enhance skills throughout life. The policy choices for Federal government leaders involve creating programs to attract, hire and retain these people. Agencies must assess their skill needs, develop plans for future hiring, upgrade existing training programs and develop creative incentives for retaining workers.

The needs in this area are even more compelling in light of the retirements in the federal workforce that are expected to accelerate in the next 5 years. Some job categories are expecting to lose one third of all employees according, to the GAO. Legislators and agencies need to carefully assess how these trends will affect the Federal IT workforce and take steps to balance the impacts.

Specific policy options include funding competitive pay or even premium pay for IT employees, improving hiring speed, establishing reward and recognition programs, and creating flexible, entrepreneurial workplaces. As the Federal government urgently needs managers for large-scale, IT-intensive projects, agencies should consider leading-edge projects as recruiting incentives, i.e., "space shot," cool projects to attract the best and brightest. Another policy choice is to integrate comprehensive electronic distance learning programs to allow employees to advance their skills wherever and whenever they choose.

An entirely different human resources policy choice for the Federal government would be the use of e-sourcing services or outsourcing. Agencies need not build and manage their own e-government infrastructure. Instead, they can access processing, storage, applications, systems management and security services over the Net using e-sourcing. This approach means that agencies pay only for what they use. The advantages are compelling: new applications can be deployed faster, scale up is faster for new workloads and benefits flow more quickly from new computing innovation and expertise. E-sourcing is flexible, allowing governments to start with a single service or application and grow from there. In an environment which is constrained by human resources and is risk averse, this can become a very viable e-government policy choice.

Further Choices - Other fundamental policy choices for government are not opportunities to leverage growth as much as they can be potential inhibitors, if not managed thoughtfully. Globally, governments are beginning to select approaches which balance risk and opportunity.

Privacy - Government provides organizations a powerful new capability to capture and analyze massive amounts of information, so they can serve individual constituents more effectively. Yet this very capability troubles some people, who see it as a means to disclose or exploit their personal information. These are legitimate and very real concerns, and they must be addressed if e-government is to reach its full potential. At its core, privacy is not a technology issue. It is a policy issue. Public officials must ensure that their actions support rather than hinder the development of a constructive dialogue between government, industries and individual citizens. A framework should enable individuals to express their privacy preferences and encourage users of personal information, whether government, industry or non-profit organizations, to offer services in a manner consistent with the preferences expressed.

Consumers will embrace e-government only to the extent that they trust the marketplace and government to respect their privacy. Government and industry both have responsibilities. Industry needs to demonstrate its commitment to privacy by managing its own conduct and making adherence to voluntary Codes of Conduct and /or legislation a corporate priority. Government must enforce existing laws to maintain a proper balance between consumers'

reasonable expectations of privacy and the benefits afforded by a free and fair flow of information. Government has a particular responsibility to manage information about both its own employees and its constituents, and to ensure that its own privacy policies are successfully implemented. With the growing sophistication of tools to access and manipulate data, the provision of access to public records is a key issue.

Security - Online security must be an integral part of deployment of e-government solutions. Government policy makers must select and implement policies that enable government to be viewed as trustworthy and able to deliver services and safeguard information reliably. This pertains especially to its extensive holdings of personal data. Security failures can have far-reaching economic and political consequences. Policy makers should guide their organizations to a coordinated cybersecurity approach, which cuts across department lines. A comprehensive security framework should define how to assess and manage network risks and specify different levels of security commensurate with the identified risks. Future security platforms will utilize self-detecting and self-healing networks. The government and private sector should consider a cooperative effort in this area to speed their development. In such a cooperative effort, we expect open-source development methodologies to prove beneficial. Open- source software, with an active community, is inherently more secure in that it renders all algorithms explicit and, by its nature, disallows "black boxes," "back doors" and "Trojan horses."

Departments and agencies must do baseline security risk assessments as required by the Government Information Security Reform Act (GISRA). Beyond this, government must recognize that security needs to be updated constantly and must incorporate new solutions such as continuous system monitoring, access management, and enhanced use of strong encryption. This is day-in and day-out commitment, and agency managers must be accountable for assuring appropriate cybersecurity as part of their mission stewardship responsibilities.

Building Support and Overcoming Resistance to Change - For a variety of reasons, valid, invalid, cultural, legislative or mission oriented, government is generally more averse to risk than the private sector. Change in government can be more difficult. Thus it becomes critical to gain the commitment of key constituencies early if support of e-government is to grow within an organization. Highly visible pilot projects which bring change in incremental stages reduce exposure and risk, create buy-in, showcase success, raise the bar among peers, and create pull. For example, some governments choose to showcase pilot projects which integrate new and old data bases into a common architectural structure, to demonstrate continuity with legacy systems and reduce resistance. To ease fears of change, policy makers should create a dynamic, forward-thinking road map for the future with an integrated framework and a true customer focus, yet implement it on a project-by-project basis.

THE ELECTRONIC GOVERNMENT ACT OF 2001

IBM would like to applaud Senator Lieberman and the cosponsors of S. 803 for proposing this legislation. We believe that legislation can have a very positive impact in moving the federal government toward a transformation. Governments will shape the future of the digital economy by their pace of change and the innovation they display in providing services to citizens and businesses. Other nations are embracing the move to e-government and the US must not lag behind. S. 803 will ensure that e-government is a visible priority in the Federal Government. We would like to comment specifically on three aspects of the legislation: the Federal CIO, the interoperability provisions and the E-Government Fund.

1. Federal CIO

The organization of the Federal CIO is important, but the most critical issue is whether the individual can provide strategic leadership and be an agent for change. Our own experience with IBM's CIO showed us that this position requires a broad vision and the ability to act in various capacities. We believe a Federal CIO must provide strong, credible and visible leadership and have the sustained support and attention of the senior leadership in the Administration. IBM believes moving forward quickly on inter-agency cooperation will require top-down, aggressive leadership to change the established practices. We agree that specifically identifying functional objectives for the "Federal CIO" responsibilities and for the CIO Council in the statute will create greater focus on measurable outcomes.

2. Interoperability

We strongly support the legislative recognition that standards for interoperability are fundamental. Given the breadth and sheer size of government legacy systems, interoperability is absolutely fundamental for these distinct systems to share information. We would suggest that the bill go further by including specific interoperability goals and by referencing the value of, and need for, "open source software" as identified in the President's Information and Technology Advisory Council (PITAC) report from September 2000. The PITAC report highlighted "open source" as being critical to the development of software research and called on the Federal government to make fundamental software research an absolute priority for Federal Investments in high end computing. The PITAC concluded that the open source model merited investigations because " it provided a unique approach through public, private and academic partnerships and that open source software offers potential advantages over the traditional proprietary development model." We strongly agree with this perspective. In our experience, interoperability is predicated on the existence of truly open standards, and open source has proven to be one particularly effective way of establishing open standards.

3. E-Government Fund

Finally, the 'E-Government Fund' within OMB for interagency and pilot projects is extremely important. Pilot projects help overcome resistance to change; they reduce risk; they build success in measured steps and they create momentum. IBM supports a fund to promote interagency cooperation on IT projects, as suggested in S. 803, also in the PITAC's report, Transforming Access to Government Through Information Technology dated September 2000 and the report of the Council for Excellence in Government, E-Government the Next American Revolution dated February 2001. The operational demands on any agency's own funds may prevent creative projects without such an extramural source. We do not know the exact level of funding required, but the amount included in the bill appears to be the minimum required to have an impact.

We also support two unique features of the funding proposal. The first allows agencies to share in the savings of a particular IT project and redirect those savings to other IT projects within the agencies. This provides needed incentives to save funds, as they were previously required to be returned to the Treasury. A second important aspect enables OMB to utilize the fund without regard to fiscal year limitation. We think this will encourage funds to be allocated on the value of the project and not an artificial time line.

CONCLUSION

The Federal Government must catch up with both the private sector and many governments around the world. It is behind. It needs to adopt processes and practices to facilitate the transformation to e-government. IBM is concerned that there is a growing gap in e-transformation between the public and private sectors. The Federal Government must move beyond the traditional notion of government to lead the nation to economic growth and prosperity in the networked world. The choices of policy makers will determine if government can serve as a stimulant to economic growth, or as an impediment. Visionary thinking and strong commitment to change are required. Most important is execution, based on milestones and accountability.

Chairman Lieberman, Senator Thompson and members of the committee, thank you for this opportunity to present IBM's views. We stand ready to work with you and your staff to further an issue that is vital to our government and economy in America today.

TESTIMONY OF DR. COSTIS TOREGAS
PRESIDENT, PUBLIC TECHNOLOGY, INC.

COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

"S-803 bill on E-Gov: an opportunity for the federal system of government to modernize"

July 11, 2001

My name is Costis Toregas, and I am president of Public Technology, Inc. (PTI). I appreciate the opportunity to provide testimony on the important topic of "E-Gov" or "Electronic Government". PTI is the non profit Research and Development local government organization, and our membership of innovative cities and counties has been innovating with the definition, development and deployment of E-Gov for much of the decade of the nineties. PTI is also the technology arm for the National League of Cities (NLC), the National Association of Counties (NACo) and the International City/County Management Association (ICMA) and has been assisting all local governments better leverage the opportunities inherent in the E-Gov strategies through seminars, publications and surveys.

Although S803 is comprehensive and addresses a variety of issues, I will contain my remarks to the topic of E-Gov. PTI's CIO Donald Evans has provided testimony to the Subcommittee on Technology and Procurement Policy of the US House of Representatives Committee on Government Reform, which places on the record PTI's thoughts about the office of the federal CIO, and I will not duplicate this. (April 3, 2001 Enterprise-wide Strategies for Managing Information Resources and Technology: Learning from State and Local Governments)

The experience of local governments in E-Gov (for detailed approaches to E-Gov in the local government space, please see http://www.pti.org/links/e_government.html) can be summarized in a small number of Guiding Principles which I believe have merit for the federal government as well. Among them are

1. **E-Gov encompasses the improvement of *service delivery* to the citizen, the creation of *economic activity* and the safeguarding of *Democracy*. Each of these dimensions is important in its own right and must be addressed in any E-Gov investment.**
2. **E-Gov must be oriented towards the citizen. The citizen does not care what level of government or agency provides the needed service, therefore the inter agency and inter governmental dimensions are essential.**
3. **E-Gov demands an E-citizen. Before we can call an E-Gov program successful, it**

must be made available to all citizens, not just those who can afford to pay or can find the electronic infrastructure available today.

4. E-Gov provides an opportunity to re-engineer the way government operates. Merely automating existing services is inadequate and does not match the potential of this promising technology
5. E-Gov is an opportunity to establish viable and sustainable partnerships between the private and public sectors under which each side provides capacity in areas of competitive advantage.

When these Guiding Principles are matched against the elements of S803, several opportunities for decisive, modernizing action can be found. Amongst them are the following:

E-Gov is an opportunity to create a national, not federal agency system for citizen service and engagement. Therefore all resources (human, fiscal and managerial) should be used as a mechanism to harmonize federal, state and local investments in the application of IT. The $45 billion federal investment in IT, when matched with the $65 billion investment at the state and local level could produce a significant pool of resources with which to construct a truly citizen-centric system.

In order to develop a truly citizen-centric system, one must know what the citizen wants. Local governments are in a position to know in more detail the desires and needs of the citizen, as they interact with them on a daily basis. It may be wise, therefore, to identify the priorities of the citizens of the United States in E-Gov, and then develop a set of priorities around them. Such a citizen-first approach may suggest a strategy different from a uniform effort across each and every agency initially. Instead of addressing E-Gov across all agencies and departments simultaneously, it may be wise to concentrate funding around areas in which citizens attach a high priority, learn from the experiences and then scale the successful efforts to a national system.

Pilots which explore the inter agency and inter governmental potential of E-Gov should be given priority. *Horizontal* systems provide applications that unify different agencies; *vertical* systems emphasize the intergovernmental dimension of systems. What E-Gov provides is the opportunity to create ***diagonal*** systems that are oriented towards the citizen. And in order to move them forward, it is suggested that pilots (or perhaps challenge grants) be used. Organized around federal, state and local agencies with a shared responsibility to deliver service, create economic activity and/or promote democracy, these pilots can establish Protocols which can then be used in spreading the benefits of E-Gov to our entire federal system of government.

The development of truly "diagonal" systems for E-Gov would require front end coordination by all three levels of government, but could produce significant cost savings and service improvements once implemented. Using an architectural approach coupled with standardization on digital certificates/signatures could enable most government-to-government transactions to take place electronically eliminating thousands upon thousands of man-hours of labor and faster turnaround of standard transactions. Such an approach could also improve government to business transactions again with considerable savings.

The expertise in information technology (IT) of the Chief Information Officers and other technology experts should be matched with the programmatic capacity of line government employees expert in the specifics of each governmental area when constructing E-Gov solutions. The challenge of ensuring not only technological but programmatic excellence must be approached from the human perspective and aggressively managed.

The digital divide between the haves and have nots is real today. Both at the personal level, as well as the geographic one, there are disparities for access which must be addressed at the national level, and S803 is a good place to start with an investment in not studying this onerous divide but creating bridges for the citizens.

We made a major investment as a nation in preparing for the Y2K "bug". The lessons PTI, as well as other major national institutions learned and promulgated to our constituencies is that technology opportunities must be dealt as management issues, not technology ones with a strong role for elected officials providing leadership. E-Gov is yet another opportunity for the capacity of technology to be shaped and organized efficiently around societal concerns, with elected officials playing a key role in its definition.

The technology of GIS (Geographic Information Systems) is mature enough today to provide an interoperable platform around which different agencies and levels of government can collaborate and provide seamless service. The experience of local agencies has been strong and positive around this defining role for geography. Today there is an effort to organize those experiences around the Local Leaders for GIS, and also to reflect local initiatives in FGDC, the Open GIS Consortium and other similar efforts. We need to ensure that GIS is central to any E-Gov effort, and that the strong experiences of local governments are incorporated in attempts to standardize and define requirements for GIS interoperability.

There is currently no intergovernmental vehicle which can assist in the definition and execution of E-Gov strategies at the national level. Individual agencies are left to fend for themselves, and intergovernmental, as well as interdepartmental cooperation is usually penalized, not incentivized. S803 should address this void by organizing a truly representative, Intergovernmental Panel which reflects the voices of elected, general management and technology leaders from all 3 levels of government and which has the authority and financing necessary to launch pilots, as well as encourage the full scale deployment of diagonal E-Gov systems to benefit all citizens. Beyond actual direct financing authority, such a Panel could provide a mechanism under which existing funding for programs currently authorized could be enhanced or reduced according to the program's ability to satisfy the E-Gov initiative.

PTI and its membership of 100 innovative cities and counties stands ready to assist in the creation of a truly national E-Gov effort. Much in the local government experiences in E-Gov is readily transferable to the federal level. Cities like Seattle, Des Moines and San Carlos, and counties like Montgomery County, Dade County and Fairfax County are providing on-line access today which push the citizen-centric model to the limits already. We know what has been successful, what has failed, and why. Many local government CIO's have been successful in eliminating the barriers inside our own organizations that may have kept us from being as effective as we should be. We have convinced our peers to subsume their egos to become part of an enterprise that presents a single face to our citizens. These lessons can be helpful in constructing a federal E-Gov strategy, and local officials are ready to contribute and participate in its definition.

STATEMENT OF ALDONA VALICENTI
PRESIDENT, NASCIO – REPRESENTING
CHIEF INFORMATION OFFICERS OF THE STATES
BEFORE THE
COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

JULY 11, 2001

Mr. Chairman, and distinguished Members of the Committee:

I am honored to appear before you today, representing the chief information officers of the states, to discuss the E-Government Act of 2001, as well as to offer some perspectives on how the experience of the states can be useful to the Federal Government as it prepares its own strategic approach for electronic government services. The Federal Government has a great opportunity at present to learn from the states - the laboratories of democracy - and to evaluate its own efforts to date, and to develop a comprehensive approach for the creation of a truly citizen-centered, electronic government that enhances the delivery of public services to citizens with greater efficiency. If done with thought and foresight, this approach should strengthen the relationship between the citizen and his or her government.

NASCIO is supportive of many of the elements of S. 803, and we commend you, Mr. Chairman, for your leadership and continued attention to the issue. For our purposes, I will comment on provisions of the bill as they fit into NASCIO's considerations of the critical elements of a comprehensive approach to e-government. These critical elements are:

- Executive leadership and commitment - creation of a "center of gravity" for federal e-government operations
- Integration across agencies and program stovepipes
- Creation of a regular, meaningful intergovernmental consultation process
- The will to invest in IT to achieve goals, including cost savings
- Focus on a citizen-centric approach to service delivery

Executive leadership and commitment - creation of a "center of gravity"
NASCIO has testified to the Congress to its support for the creation of a dedicated Federal CIO position. NASCIO sees, among the many critical roles of the position, the need for central focus of leadership, and one Federal point of contact to interface with the states on information technology issues. More generally, the CIO is, as the Kennedy School of Government has stated, a "center of gravity" around which information technology, the great enabler of our modern age, revolves. This is proving true for private industry, and academia as well as for government. A majority of the states have created a state-wide, or enterprise-wide, office responsible for the development, application, and management of information resources technology, and in many cases, that office reports to the Governor. As a result, NASCIO has pointed out the strengths of

a CIO model with direct access to the state executive. This model, as the General Accounting Office pointed out in its September 2000 report on the issue, gives the CIO the high visibility and prestige necessary to work across agencies, and to be a full member of the executive management team. One concern of this approach is that a Federal CIO, separate from the Office of Management and Budget, would lose the leverage that comes with direct authority over budgets. The proposed structure in S. 803, by leaving the Federal CIO function within the Office of Management and Budget, does not invest the position with the visibility of a separate, high-level office that we have seen work so well in many states, but it does maintain this budgetary leverage. The Bush Administration has pursued a similar approach, with the very recent appointment, within OMB, of an associate director for information technology and e-government, responsible to the Deputy Director for Management, who retains the responsibilities of the federal CIO. Under all these models, NASCIO recognizes that the value of a Federal CIO is directly related to the office's infusion with the appropriate authority to integrate IT resources, and this empowerment is the most critical factor in that office's success.

Integration across agencies and program stovepipes

Any successful, enterprise-wide approach to electronic government requires the ability of the CIO to be able to set standards and enforce compliance across agencies. In my own experience in Kentucky, I saw first hand how critical this function is. Legislation was created that provides me, as the Commonwealth CIO, with 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 authorized the CIO to grant or withhold approval of IT projects, and is accountable for oversight with regard to IT services and procurement. The CIO also approves and prioritizes capital planning information technology items across the Commonwealth. In addition, the Commonwealth CIO chairs an Enterprise Architecture and Standards committee to ensure that IT systems can be integrated and compatible. These authorities enable me to move the statewide enterprise toward integration and commonality, and to reap the benefits of increased efficiency, reduced redundancy, reduced costs, and greater service to citizens.

Creation of a regular, meaningful federal interagency and intergovernmental consultation process

We also support the Act's provisions which establish the CIO Council, consisting of representation from CIO's of all major federal agencies, and empowered to be the principal interagency forum for improving agency practices related to all aspects of federal government information resources. Again, drawing from my own experience in Kentucky, the Commonwealth CIO chairs a Governance Team, composed of CIOs from all branches of state government, who discuss and coordinate on IT issues, policies, directions, and investments.

We are particularly encouraged by the provisions of S.803, which require the establishment of regular forums with leaders in information resources management in state, local and tribal governments, including NASCIO (referenced in the bill language by

our prior name, the National Association of State Information Resource Executives). It is difficult to overestimate the importance NASCIO places on consultation and coordination between federal and state authorities on information technology policy and programs. We must emphasize that nearly all legislation has a technology impact and often, the states are the implementers of change in federal policy. Appropriate and full prior consultation has the potential to drastically reduce the unintended, but often of great impact, consequences of new federal policies and regulations that are implemented at the state and local level. I'll take a moment to review some of the major federal-state IT coordination issues that we have identified. Probably the issue with the largest near-term impact, the Health Insurance Portability and Accessibility Act (HIPAA), has a mixed record on federal-state coordination. While this was a very much-needed piece of legislation, during the development, comment and passage of the Act, policymakers perceived HIPAA to be largely a health care, information privacy and information security issue - and not also as a technology and implementation issue. As a result, realistic implementation understandings were not reached, and under the current implementation scheme, compliance dates will be difficult, if not impossible, for multiple states to meet. This situation could have been avoided with greater consultation, from the beginning of the legislative process through the development of the regulations to implement the Act. Other systems where greater consultation and cooperation would enhance efficiency and service are the transfer system and interstate compact for child support, and the information technology approval process at the Department of Health and Human Services. Greater federal-state coordination in areas such as these, and in future initiatives, could provide dramatic efficiencies in service to our nation's neediest citizens.

There are also some very significant success stories in federal-state coordination on IT issues - the one that everyone knows, of course, is the Y2K problem, and it is one that points out the great strengths of having a centralized, empowered point of contact around which industry and government alike could organize to deal with the problem. Another strong example of successful cooperation is the Department of Justice's National Information Architecture. This effort is designed to create a national governmental information architecture, to facilitate the flow of information across all governmental levels, and to increase information accuracy, timeliness, and completeness with a reduction in associated expenses. The Department of Justice, NASCIO, and the states have worked together successfully to create the basic elements of this system, and its success has attracted interest from other federal agencies.

As a first step in what we hope will be a consistently growing consultative mechanism, NASCIO has recently been given the opportunity to have a representative of NASCIO attend and participate in, on a limited basis, the current Federal CIO Council. NASCIO believes this is a critical development in increasing intergovernmental Federal-State communications and coordination on IT issues.

The will to invest in IT to achieve goals, including cost savings
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. As part of the re-engineering process, 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.

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.

NASCIO is supportive of the creation of the Interagency Information Technology Fund, and are encouraged by the level of annual funding the Act calls for. We would recommend that these funds also be specifically targeted for innovative intergovernmental projects, such as the aforementioned National Information Architecture program of the Department of Justice, that have the promise setting a framework for future and meaningful integration between federal agencies and states.

Focus on a citizen-centric approach to service delivery
NASCIO believes that citizens must see themselves as the owners of their government, and electronic government can be used to convey that ownership to the people. This will require citizen-centric design, personalization options, visibility through marketing, and access for all. Nearly every state in the Union has created an on-line "portal", defined by the National Governors Association as "an umbrella web site or a starting point that provides users with links to the information they want". These sites are organized around functional lines, designed to give citizens easy access to the services they require without having to navigate through various government levels.

As part of Kentucky's effort to move in this direction, the Commonwealth developed a "KyDirect" portal to provide government services and the ability to purchase goods and services on-line. KyDirect allows for access by the citizens of Kentucky to an ever-growing number of on-line actions and services:

- 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

As a result of Kentucky's and other state's experiences with centralized portals, we support the legislation's call for building on the FirstGov website launched last year by the General Services Administration. NASCIO worked with FirstGov to link all 50 states to the FirstGov portal, which occurred with the unveiling of the updated site only two weeks ago, and NASCIO is working with FirstGov to determine our next steps.

At the end of my discussion, I will return to this issue of portals, and state experiences with them, to point out some of the remarkable success some of my state CIO colleagues in other states have achieved with their portals. Specifically, in addition to a snapshot of the portal page for my own Commonwealth of Kentucky, we'll take a brief look at the portal pages for Pennsylvania, Washington State, and others.

Conclusion

Mr. Chairman, I appreciate the opportunity to testify before you and your distinguished colleagues on the E-Government Act of 2001, and to provide to you the perspective of the state chief information officers on the evolution of e-government. We find much to agree with, in principle, in S. 803, and we are pleased at the emphasis on centralized leadership, increased funding for innovative programs, on regular forums for intergovernmental consultation and cooperation, and on building and improving upon the FirstGov federal portal. Again, NASCIO views the Federal Chief Information Officer as an essential focus for leadership and a central contact point for coordinating federal and state technology efforts. In closing, I encourage all of you to consider the experience of the states, and in particular, of the state chief information officers, as a resource as you continue to consider the critical issue of how best to provide services to our citizens through electronic government. Thank you.

Future Service Delivery

Citizens tell us:

- I want to do it *Myself*
- I want to do it on *My Schedule*
- I want it to be *Fast & Easy*

ConneCTicut

State of Connecticut

Governor
John G. Rowland
Welcomes You
State Tax Info

ConneCT kids
Visit the featured links Below...

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Connecticut Digital Library opens its doors

Moving to the State of Connecticut?

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Weather

ConneCT™

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Executive | Judicial | Legislative

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Answers

Search | A to Z | FAQs

Of Special Interest

Licenses/Permits | Towns/Cities

Tourism | Commerce | Education

About Connecticut

What's New

Photo Gallery

Tennessee

Tennessee Anytime
Sounds Good To Me

Search Go

Home Directory Site Map Help Center How Do I.....? Most Visited Sites

Business
Communities and Citizen Services
Education
Employment
Facts and Records
Government
Health and Social Programs
Justice and Law Enforcement
Travel and Recreation

Online Services
Media Center

Tennessee's eGovernment Services
- Renew driver license or change address
- TennCare Eligibility Verification
- See All Online Services

State Budget
- State of Tennessee Budget Summary
- General Assembly Budget Summary
- Contact Your Legislators

Your State News Source
- 22nd Annual Folk Life Festival
- Nursing Home Assistance Terminates
- "Women in Outdoors" Event

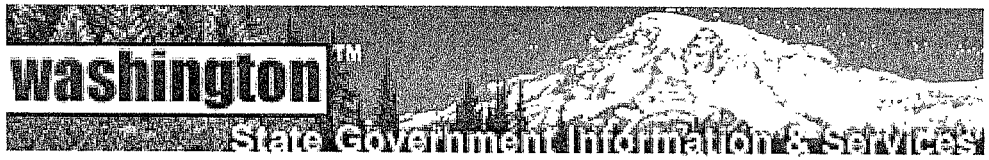
The Governor's Reading Initiative
Teaching Our Children to Read Better

FIRSTGOV
Your First Click to the U.S. Government
One-stop access to all online U.S. Federal Government resources

Governor
Don Sundquist

"Welcome to the starting point for the information highway in Tennessee. Enjoy visiting our site. Stop by often. You'll soon see why

Washington's *Access Washington*



- Featured Sites
- Public Services
- Business
- Education
- Government
- Online Services
- Employment
- Index

Public Affairs Directions
THE INNOVATION ECONOMY
Washington State Legislature

ASK George

Search Washington government web sites. Just type your question!

More search tools

TODAY on ACCESS WASHINGTON

Fishing, hunting licenses for sale online

Other State News:

- Locke: transportation fix cannot wait
- Litter crews take to the streets, parks
- Public views sought on motorized decoys

State Emergency Information - Drought, Fire Danger, Energy, Quake

SPOTLIGHT on SERVICE

- for services
- Transact Washington
- with your credit card
- of birth, death, marriage and divorce
- Construction, plumbing or electrical
- for unemployment benefits
- at a State Park
- A guide to services at DSHS
- or an employee
- in Washington state (required)
- State conviction records
- Excise, industrial or unemployment insurance
- Commuting and travel information
- or other unclaimed property
- to state agencies

MORE ONLINE SERVICES

Jobs/Work
State Agencies
Vital Records
Lottery Results
Licenses
Traffic Watch
Recreation
Services Index
Resource List
Consumer Help
WA Law Search
State Facts
Visit Washington
Email lists
Governor
Legislature
Courts

Apple Bytes

Mt. Rainer is Washington's tallest mountain at 14,410 feet. Its glaciers cover about 36 square miles of the mountain's surface.

More bytes.

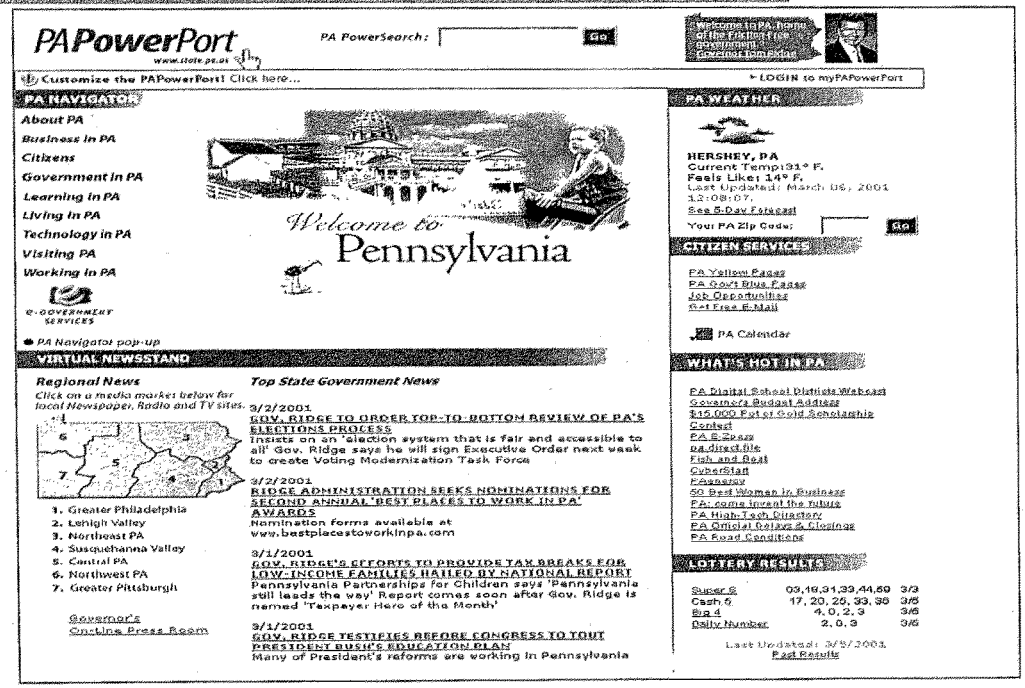
CHECK IT OUT...

LOTTERY EVERYBODY Wins

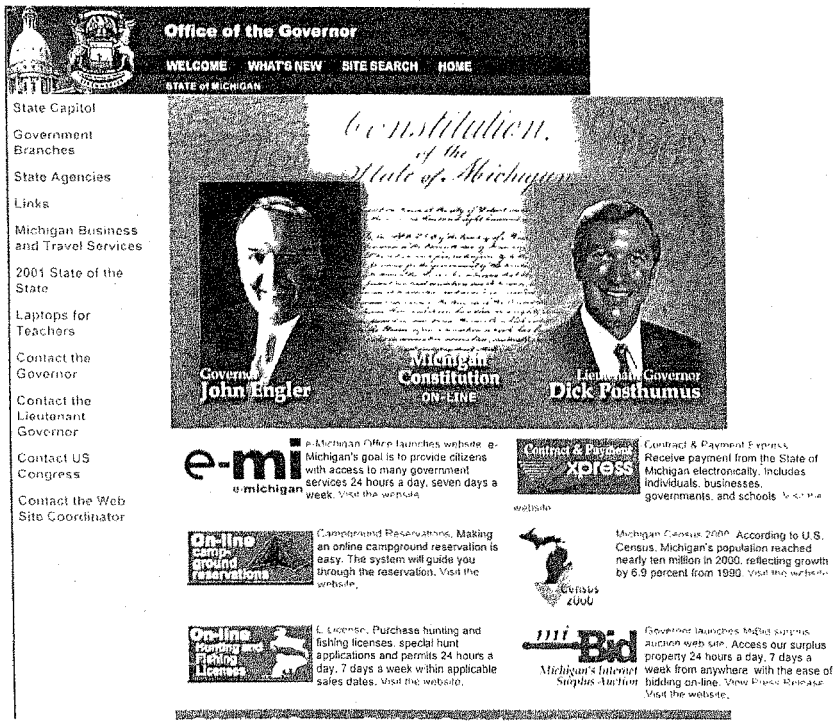
WASHINGTON TOURISM

KIDS

Pennsylvania's *PA PowerPort*



Michigan


Office of the Governor
WELCOME WHAT'S NEW SITE SEARCH HOME
STATE of MICHIGAN
State Capitol
Government Branches
State Agencies
Links
Michigan Business and Travel Services
2001 State of the State
Laptops for Teachers
Contact the Governor
Contact the Lieutenant Governor
Contact US Congress
Contact the Web Site Coordinator
Constitution of the State of Michigan
Governor John Engler
Michigan Constitution ON-LINE
Lieutenant Governor Dick Posthumus
e-mi
e-michigan
e-Michigan Office launches website. e-Michigan's goal is to provide citizens with access to many government services 24 hours a day, seven days a week. Visit the website.
Contract & Payment Express
xpress
Contract & Payment Express. Receive payment from the State of Michigan electronically. Includes individuals, businesses, governments, and schools. Visit the website.
Online Campground Reservations
Campground Reservations. Making an online campground reservation is easy. The system will guide you through the reservation. Visit the website.
Census 2000
Michigan Census 2000. According to U.S. Census, Michigan's population reached nearly ten million in 2000, reflecting growth by 6.9 percent from 1990. Visit the website.
Online Hunting & Fishing Licenses
E-License. Purchase hunting and fishing licenses, special hunt applications and permits 24 hours a day, 7 days a week within applicable sales dates. Visit the website.
mi Bid
Michigan's Internet Surplus Auction
Governor launches MiBid surplus auction web site. Access our surplus property 24 hours a day, 7 days a week from anywhere with the ease of bidding on-line. View Press Release. Visit the website.

North Carolina's *Your Service*

Governor's Page | NC Agencies | About NC @ Your Service | Visit NC | Home

NC @ your service
www.ncgov.com

Welcome to the North Carolina Government Portal, the people's gateway to government services. Come inside, and see what we have to offer!

Governor Michael F. Easley

Local Gov't | Kids' Pages | About NC | Gov't Officials | News Releases | NC Calendar

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FEATURED ITEMS:

NC @ Your Service! Store | Statewide E-Procurement

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Weather

Asheville, NC	64-86 F	
Charlotte, NC	68-88 F	
Raleigh, NC	68-88 F	
Wilmington, NC	72-86 F	

NC Media

NC Newspapers
NC Magazines
NC TV Stations
NC Radio Stations

Citizen | Business | State Employee

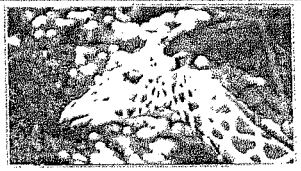


Image Courtesy, *NC Zoo*

Citizen

- NC Legislature
- State transportation map
- Find out your tax refund status
- Find a job using America's Job Bank
- Prepare your child for college

Business

- Statewide Vendor Registration NEW!
- NC E-Procurement Service
- Check company name availability
- Search for open North Carolina bids
- Get general business license information

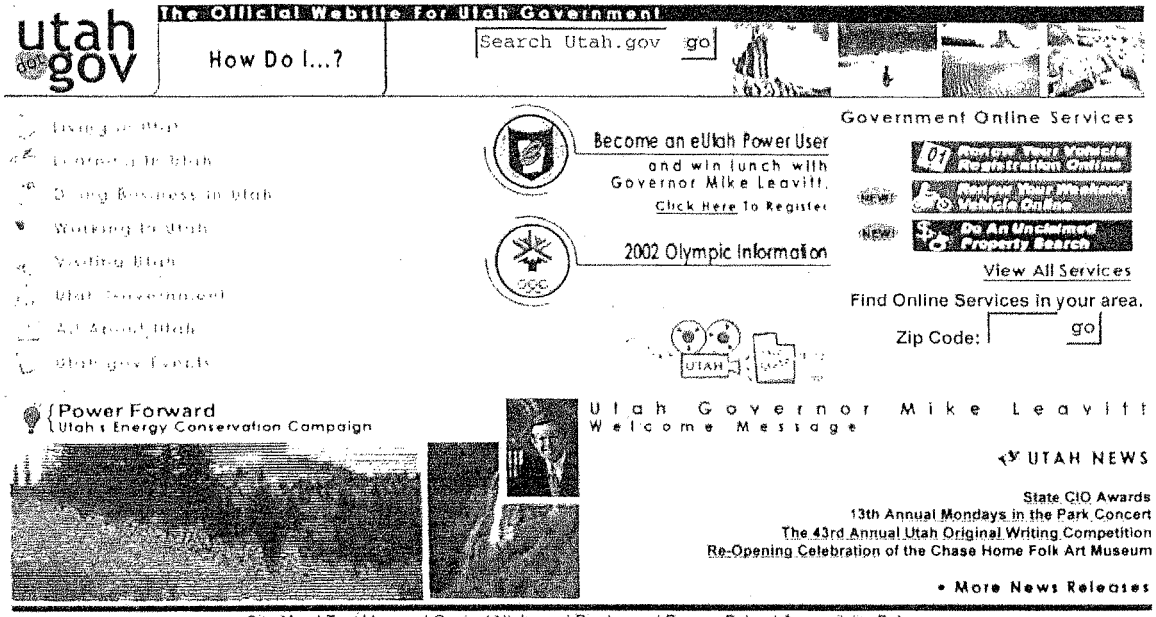
State Employee

- State Jobs
- Find state employee telephone number
- Find state employee e-mail address
- View 401(k) balance
- State U S Savings Bonds Campaign

Did You Know...

You can obtain a duplicate vehicle registration card through the state's web site using the Click @ DMV service.

Utah


utah.gov
The Official Website for Utah Government
How Do I...?
Search Utah.gov
go
Become an eUtah Power User
and win lunch with
Governor Mike Leavitt.
Click Here To Register
2002 Olympic Information
Government Online Services
NEW!
NEW
View All Services
Find Online Services in your area.
Zip Code:
go
Power Forward
Utah's Energy Conservation Campaign
Utah Governor Mike Leavitt
Welcome Message
UTAH NEWS
State CIO Awards
13th Annual Mondays in the Park Concert
The 43rd Annual Utah Original Writing Competition
Re-Opening Celebration of the Chase Home Folk Art Museum
• More News Releases
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KyDirect
Electronic Government Direct to You

The Official State Government Site for the
Commonwealth of Kentucky

Text-only Version

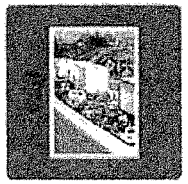
Search KY

Search the Kentucky (*.ky.us) domain for any word or phrase. Help

Shortcuts to Kentucky Information

- Agriculture
- Applications, Forms, Licenses
- Business
- Consumer Protection
- Education, Training
- Employment, Jobs
- Government Directory
- Public, Human Services
- Publications, Research, Maps
- Tax Information
- Technology
- Tourism, State Parks
- Transportation, Highways

- KyDirect MarketPlace
- KyDirect for Employees



Traffic Center (Kentucky Transportation Cabinet)

A clearinghouse for Kentucky's maps, travel conditions and construction reports.

Governor Paul E. Patton's Home Page

KY Events and Announcements

as of April 23, 2001

KyDirect for Employees

* GOT announces a web site developed for the employees of the Commonwealth of Kentucky in cooperation with the Personnel Cabinet to present web resources from the various agencies and organizations that provide services to employees.

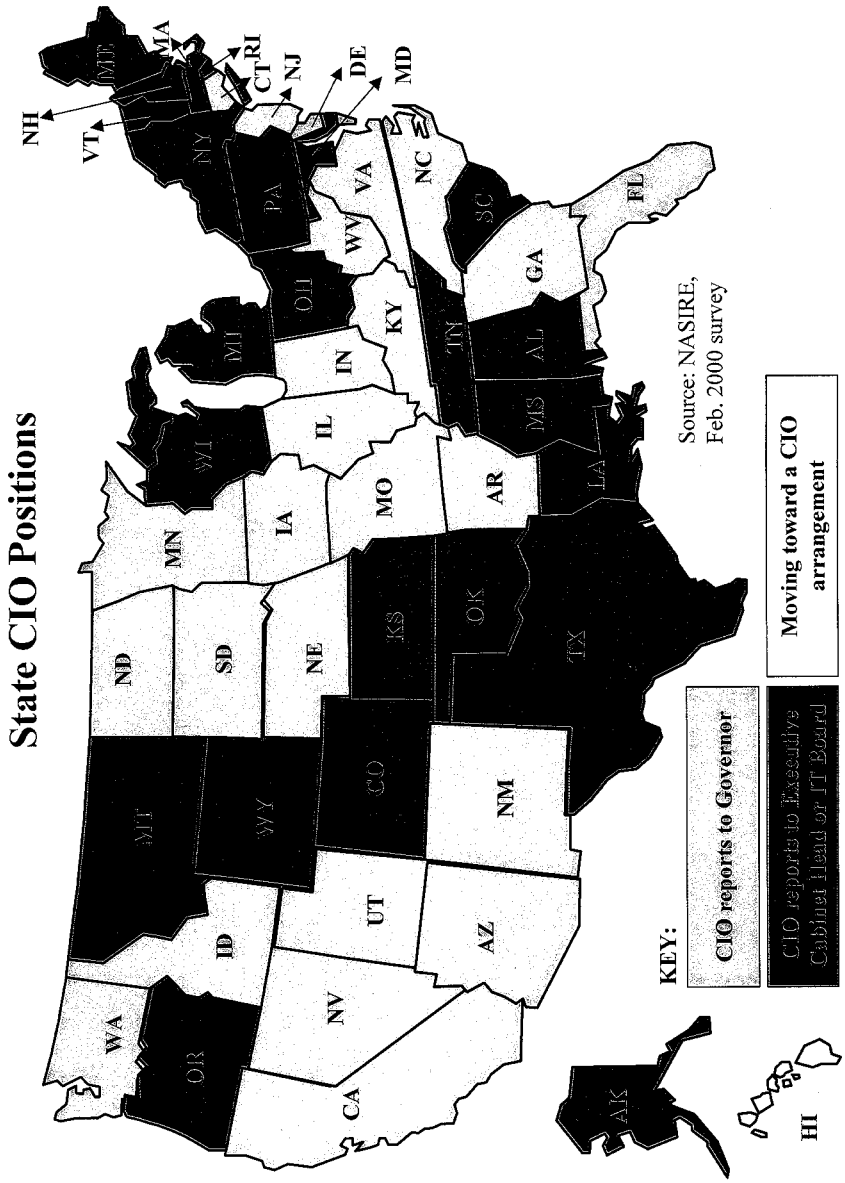
Can't Find It?

- Search Directories, Lists, and Indexes
- More Featured Sites

About Our Site:

- Privacy, Security Notice
- Disclaimer
- Please fill out our Survey
- Email Us
- Add/update a link to your site
- Software, Plug-in Links
- Search the Web

Our site best seen with a JavaScript-enabled browser level 4.0 or above and 800x600 monitor resolution.


State CIO Positions
KEY:
CIO reports to Governor
CIO reports to Executive Cabinet Head or IT Board
Moving toward a CIO arrangement
Source: NASIRE, Feb. 2000 survey
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
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TX
MN
IA
MO
AR
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WI
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AL
OH
WV
VA
NC
SC
GA
FL
PA
NY
NH
VT
ME
MA
RI
CT
NJ
DE
MD
AK
HI

Statement of Greg Woods
Chief Operating Officer, Student Financial Assistance
U. S. Department of Education
to the
Senate Government Affairs Committee

I'm Greg Woods, Chief Operating Officer of Student Financial Assistance at the Department of Education. Thank you for inviting me here today to tell you about our e-commerce strategy and its successes.

The context for this story is a new kind of government organization – the Performance Based Organization. Congress made us the first PBO three years ago. The heart of the PBO idea is a contract—it is held accountable for results and given control over the things that determine those results. Congress wanted the organization to run on a business-like basis.

Congress picked SFA to be the first PBO because of its history of service interruptions and the program's perennial appearance on GAO's high-risk list. To get SFA to run more like a good business, we've had to change nearly everything – the way we're organized, the way we measure progress, the way we make budget decisions and manage money – and everything about the computer systems. You've asked me about Web technology. But I wanted to point out that Web technology is just part of a major retooling of the whole system.

Congress told me to improve service and cut cost —and to do it by modernizing the tangle of old computer systems. Most of my career, I ran technology companies -- so that was a natural for me. And Secretary Paige has made systems modernization one of the six major goals in his "Blueprint for Management Excellence", his plan for correcting management problems and restoring the confidence of both Congress and the America public in the Department.

We designed a modern, e-commerce architecture that uses the power of the Internet and the magic of back-office computer solutions proven by banks like Bank of America and Wells Fargo. It lets us quickly provide integrated customer services on the Web, even as we phase out the old, stovepipe systems.

We have lots of award winning web products and lots of firsts. But to make the Web work as a viable business solution, you must also integrate it with a whole process. Look at the three phases of the life of a student loan – the application, making the loan itself, and repayment:

First we give students and parents a PIN number, so they can do all their business with us securely on-line. Once we get them as e-customers, we want to keep them as e-customers.

Their first business is completing the application for aid, known as the FAFSA. We have a great Web version of the FAFSA. A few years ago practically nobody filed via the Web. But customers vote with their mouses, and this year 2.1 million customers have already filed electronically, and we anticipate that half of our applicant population will have done that by year-end. The counter on my slide shows we average 1.1 visits per second.

To get a loan, people have to sign a promissory note. This was the toughest piece of litter to pick off the information highway. Thanks to the GPEA and the e-sign legislation, now they can even sign online. This just went live last week. This feature is the first of its kind in government, and probably in the world. Private lenders can use our system to make their student loans. Our e-signature, promissory note process — with its inherent checks, balances, and records — actually provides lower risk than the old paper notes.

Next, we keep Direct Loan borrowers in the electronic fold with a Web site that services their loans.

They can:

- See their account status – including FFEL loans
- Change payment schedules
- Opt for automatic debit payments
- Get deferrals or forbearances
- And more

Customers using this site climbed to 3.5 million this year.

We have similarly reengineered processes for our business transactions with schools and lenders. And it is all tied to another of Secretary Paige's priorities—to complete modernization of our financial system so that we can produce auditable reports that you and I both need.

We know that schools, students and bankers like our products, because in just one year, our customer satisfaction scores went from 63.8 on the ACSI index—way below those of the private financial services firms—to just one point behind them. Next year, I hope we can pass them.

But we have to save money, too. Our customer base is growing and our budget isn't. Does e-commerce really save money? Well, yes--but it is not that simple – I know from my business experience that you can't just automate the current system and assume you've saved money.

Look at the FAFSA—the application for student aid:

- If you look at the application itself compared to the paper, you'll conclude that the Web cost is about half the paper one. But not so fast.
- When we looked at the total system, we found paper everywhere. Printing and mailing signature pages. Printing and mailing PIN numbers. Printing and mailing the results of the Web application. And, even with millions more applicants using the Web, schools were still ordering the same number of paper application forms– 35 million of them. And we found Web applicants were making lots of phone

calls to our 1-800 line – with simple questions being handled by our most expert customer service representatives. When we looked at the total system we found that we saved very little.

We already revamped the phone system, so most of the calls get handled by a voice response unit, rather than an operator. We're getting the paper and mailing out of the Web process, and we're working with schools to cut back on the number of paper FAFSAs we print. When that's done, I'm guessing my Web application costs no more than one-third the cost of the paper version.

The lesson: E-commerce is a powerful weapon in the battle of the budget. But you can't win from the air. It's strictly trench warfare.

Thank you for listening to our story.
Thank you for the e-sign and GPEA legislation.
Thank you for making SFA a performance based organization – for giving me and the whole SFA team the chance to show that government can deliver service and financial performance equal to the best in business.

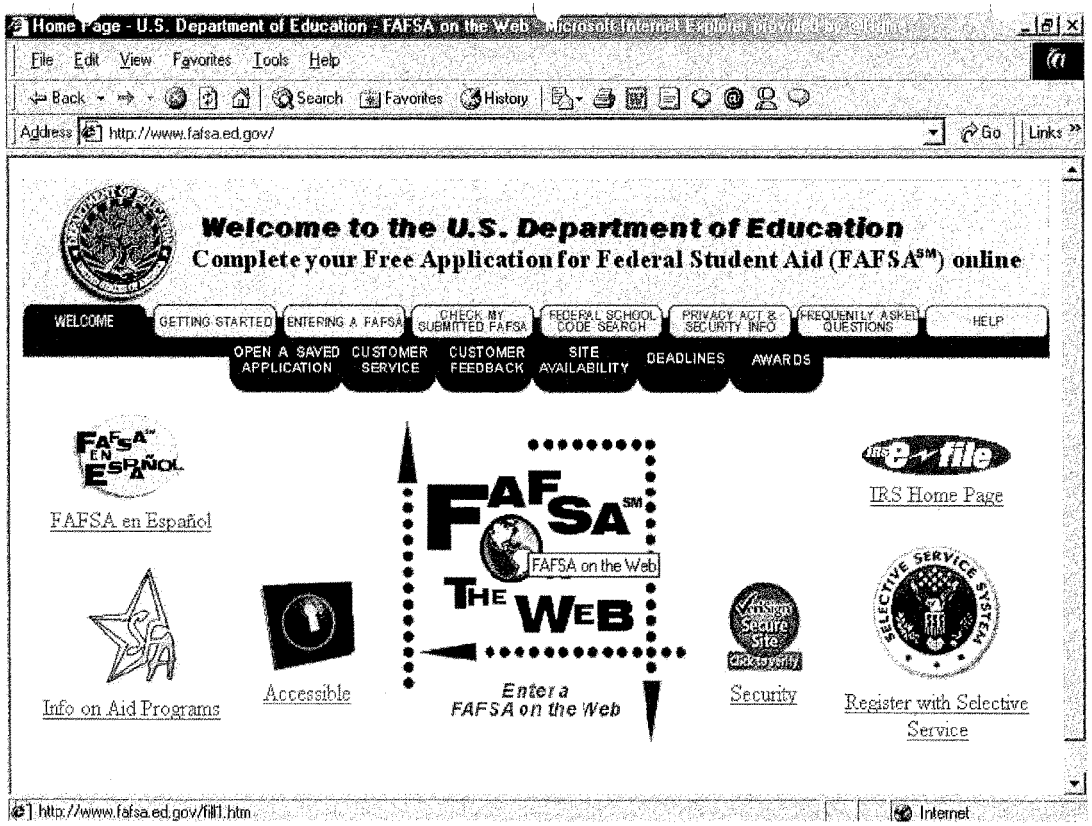
Student Financial Assistance

Greg Woods

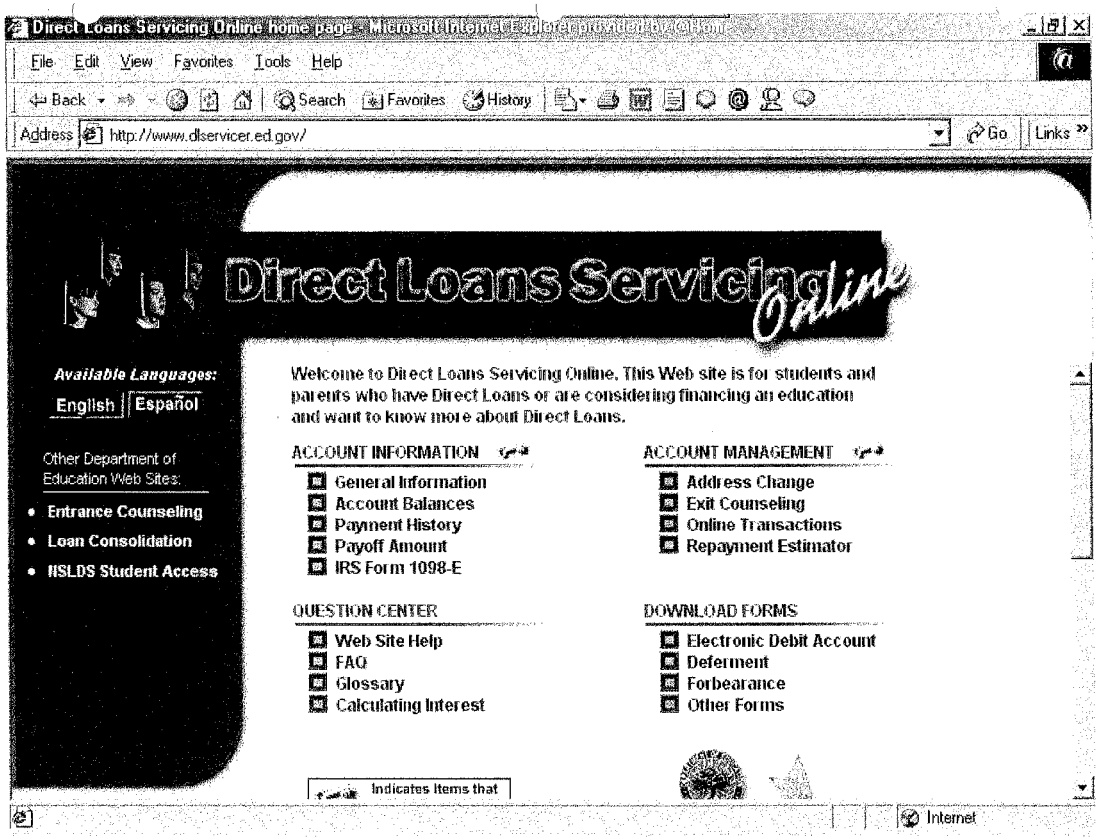
Chief Operating Officer

We help put America through school

Higher Education Amendments of 1998
Sec. 141
PBO Contract
(A) Accountable for results
(B) Control over processes

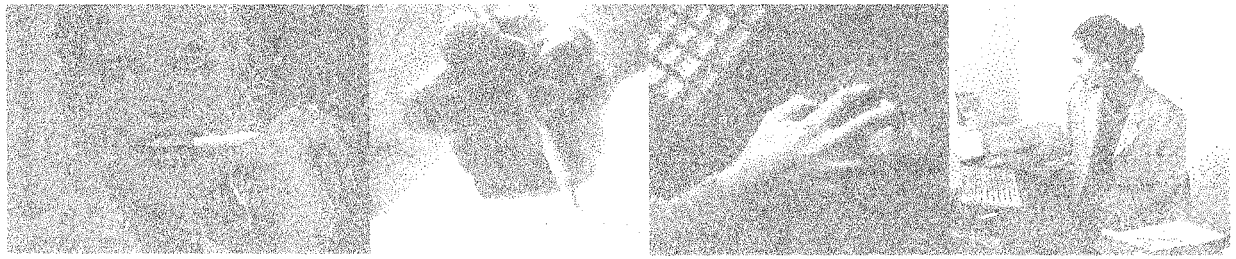

Home Page - U.S. Department of Education - FAFSA on the Web - Microsoft Internet Explorer provided by Sprint
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://www.fafsa.ed.gov/
Go Links
Welcome to the U.S. Department of Education
Complete your Free Application for Federal Student Aid (FAFSA℠) online
WELCOME
GETTING STARTED
ENTERING A FAFSA
CHECK MY SUBMITTED FAFSA
FEDERAL SCHOOL CODE SEARCH
PRIVACY ACT & SECURITY INFO
FREQUENTLY ASKED QUESTIONS
HELP
OPEN A SAVED APPLICATION
CUSTOMER SERVICE
CUSTOMER FEEDBACK
SITE AVAILABILITY
DEADLINES
AWARDS
FAFSA en Español
FAFSA on the Web
THE WEB
Enter a FAFSA on the Web
IRS Home Page
Info on Aid Programs
Accessible
Security
Register with Selective Service
http://www.fafsa.ed.gov/fill1.htm
Internet

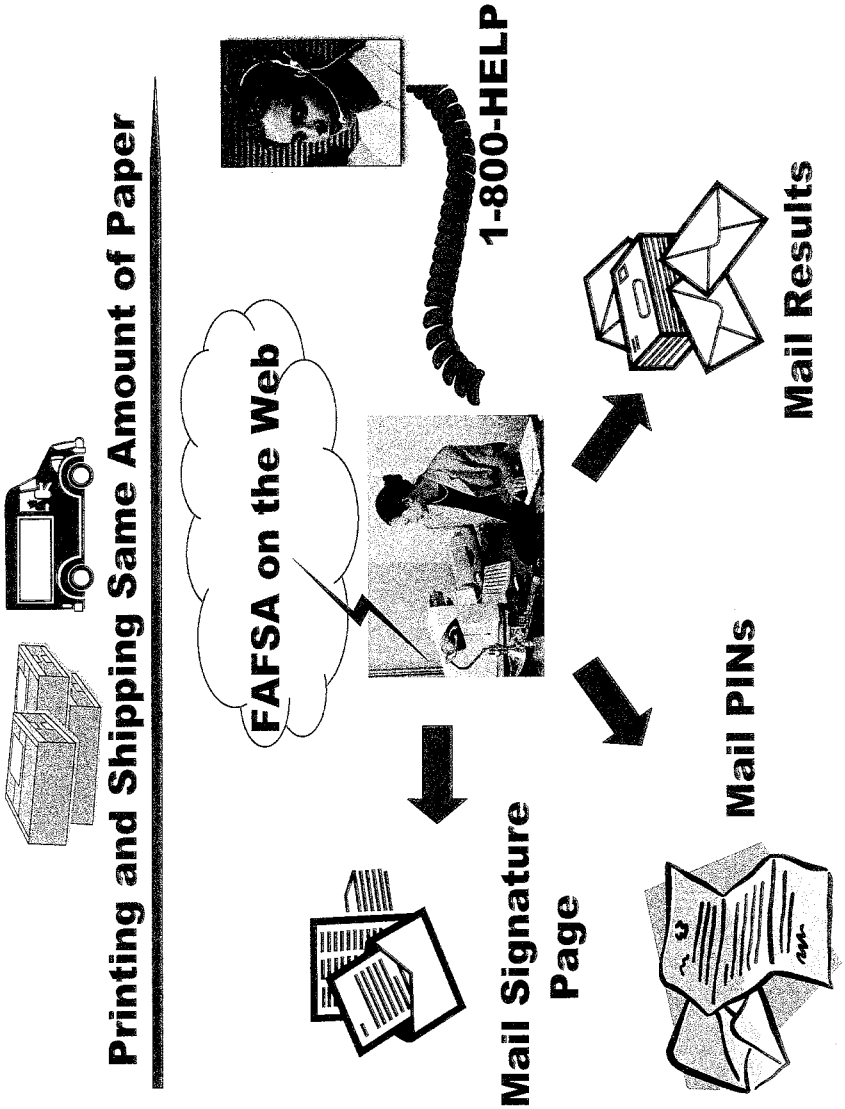

Direct Loans - Welcome to Electronic Master Promissory Note - Microsoft Internet Explorer
File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://dlenote.ed.gov/index.shtml
Links
Direct Loans
MASTER PROMISSORY NOTE
ENTRANCE COUNSELING
FAQs
SITE ASSISTANCE
CONTACT US
About the MPN
What You Need
What to Expect
Complete Your MPN
Receive a MPN
PRIVACY POLICY
ADDITIONAL RESOURCES
Done
Internet zone


Direct Loans Servicing Online Home page - Microsoft Internet Explorer provided by Your
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://www.dlservicer.ed.gov/
Go Links
Direct Loans Servicing Online
Available Languages:
English Español
Other Department of Education Web Sites:
Entrance Counseling
Loan Consolidation
NSLDS Student Access
Welcome to Direct Loans Servicing Online. This Web site is for students and parents who have Direct Loans or are considering financing an education and want to know more about Direct Loans.
ACCOUNT INFORMATION
General Information
Account Balances
Payment History
Payoff Amount
IRS Form 1098-E
ACCOUNT MANAGEMENT
Address Change
Exit Counseling
Online Transactions
Repayment Estimator
QUESTION CENTER
Web Site Help
FAQ
Glossary
Calculating Interest
DOWNLOAD FORMS
Electronic Debit Account
Deferment
Forbearance
Other Forms
Indicates items that
Internet

FAFSA on the Web

Half the cost of paper

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Statement of
Sharon A. Hogan
University Librarian
University of Illinois at Chicago

On behalf of the
American Library Association
American Association of Law Libraries
Association of Research Libraries

Before the Senate Committee on Governmental Affairs
on S. 803, *The E-Government Act of 2001*
July 11, 2001

Good morning. I am Sharon Hogan, University Librarian at the University of Illinois at Chicago. I am also Chair of the Committee on Legislation of the American Library Association (ALA) and the Committee on Information Policies of the Association of Research Libraries (ARL.) I am very pleased to appear this morning on behalf of the American Association of Law Libraries (AALL) as well as ALA and ARL in support of S. 803, the *E-Government Act of 2001*. The library community has a strong interest in federal information policy and collectively, our associations represent thousands of libraries and librarians across the Nation.

Today we will focus our comments on the key provisions of S. 803 that enhance public access to government information. There are many other important provisions in the legislation, and our associations stand ready to continue to work with you and your staff on all provisions as the bill is further refined.

Librarians working with and for the American public know first-hand, on a daily basis, the importance and impact that government information has on the health and lives of all Americans, on the economic well being of our Nation and on the preservation of our democracy. Public, school, academic, law and research libraries, including the more than 1300 Federal Depository Libraries across the country, provide access to and assist the American public in finding and sorting through this tremendous amount of critically important Federal government information on all subjects and in many formats.

Our public, school, academic, law and special libraries across the Nation are key access points for the American public and already are and should be members of e-government teams at the federal, state and local levels. Libraries, including Federal Depository libraries, assist thousands of Americans on a daily basis in locating and using the government information they need as well as connecting our public with government services and/or agency personnel. The American public relies on librarians, who are the knowledge experts and who understand the complexities and importance of organizing information by building directories and catalogs, and of preserving information. In the

electronic environment, libraries function in several important roles in e-government including:

- Providers of information through their collections, the organization and cataloging of information, and other functions;
- Public access points for access for connecting to the Internet and providing local information and community services, and in closing the digital divide for those without access to the latest technology;
- Educators and intermediaries by providing the necessary tools and expertise to assist and inform the public in accessing government information through physical and virtual collections and services;
- Partners with other government agencies in the development of the infrastructures, policies and information collections in all formats;
- Partners with the government in recognizing the need for continuous, permanent public access to government information.

Our democracy is based on the public's right to have access to information by and about their government. Government has an affirmative obligation to disseminate and provide broad public access to its information, to guarantee its authenticity and integrity, to ensure that government information remains in the public domain, and to ensure its continuous, permanent availability and preservation. There is also a Federal responsibility to adequately fund these functions for the public good.

During the past decade, Federal agencies, Congress and the courts have moved increasingly to rely on the Internet as the preferred system of public information access and dissemination. It is estimated that Federal entities today provide public access to more than 30 million web pages. This number will continue to grow exponentially. The public searches through the web sites of their elected representatives and congressional committees as well, to learn about the latest legislative proposals and their Members' position on issues of importance to them. The courts also are moving towards a fuller electronic environment that will provide access to opinions, dockets and even Electronic Case Files.

There are many agency success stories exemplifying good practices for public access to Federal government information. And yet, with all the growth towards a fuller electronic environment, the government's financial investments in technology, and the individual progress in many agency programs, overall progress governmentwide from the **users'** perspective has been slow, uncoordinated and without a clear vision for the future. But the move to an e-government has not been accompanied by the development of a comprehensive policy framework focusing on the life-cycle of electronic government information. Access in many cases has been disorganized and untimely. Lack of adequate funding has further eroded information access and compromised a reasonable transition to electronic dissemination, which affects all branches of government - Federal agencies, Congress, and the courts. We cannot have an effective e-government without effective access to government information.

A strong and positive framework is absolutely necessary to ensure that the public will have seamless, continuous and permanent access to important electronic information. The *E-Government Act of 2001* addresses the need to increase the visibility of the many unresolved challenges of e-government and to develop a coordinated approach to make optimum use of digital technologies for the benefit of our citizenry. Without sound and reasonable information policies supported by adequate funding for the life-cycle of government information, e-government cannot move forward. A system that is already overwhelmed due to the lack of financial support will need an investment in adequate funding to succeed.

As we come together this morning to comment on S. 803, I would like first to commend the Committee on Governmental Affairs for initiating over a year ago a virtual public square for comment through the committee's web site that encouraged citizen participation in the development of this legislation. That open process exemplifies e-democracy and e-government at work. Sen. Thompson and Sen. Lieberman - we appreciate your joint vision and leadership in creating *e-Government: An Experiment in Interactive Legislation.*

This successful initiative provided a broad public forum through which the American public was given the unique opportunity to comment on issues of concern to them about e-government. S. 803 reflects many of the concerns and the issues raised during this dialog "to make the government more Internet-Friendly." There is little doubt that the American public would be well served if more congressional committees and members were to emulate this successful model in participatory government.

I would also like to recognize the diligent efforts of your Staff Counsel Kevin Landy in working with a broad array of stakeholders to develop this legislation. It has been a pleasure for us in the library community to work with Mr. Landy on key provisions of the Act. We look forward to continuing to work with you as you refine and perfect this important legislative effort.

Mr. Chairman, when you and Sen. Conrad Burns and your other cosponsors unveiled S. 803 on May 1, 2001, our associations were pleased to have the opportunity to voice support for your efforts intended to improve public access to government information and services. This morning I would like to address three specific issues regarding the e-Government bill that are especially important from our perspective but especially focus on the access issues.

First, S. 803 articulates important purposes and goals of e-government, and establishes a new Office of Information Policy for the Executive Branch that will bring greater coordination and guidance to agencies.

Second, S. 803 includes important provisions that recognize the government's responsibility for the entire life-cycle of electronic government information, creating

new policies and procedures to assist agencies in improving access to important information and services.

Third, in introducing S. 803, Sen. Lieberman called it a "work in progress." As you continue efforts to improve this legislation, we believe it is important to recognize the current statutory responsibilities of key agencies, and the important role of individuals within agencies who have specific responsibilities in the life-cycle of electronic government information.

First, access to government information is a basic right of all Americans, young or old, rich or poor, in our largest cities or most remote rural areas. It is also the government's affirmative obligation to provide the public with no-fee access to government information created and maintained with their tax dollars. This principle is fundamental to the open and participatory government that Congress and the library community have long affirmed. In order to meet this principle, the government must provide adequate funding for information technology, permanent public access and preservation. Our democracy is based on the absolute right of all citizens, with nobody left behind, to know what actions their government is taking, to hold government accountable and to be able to participate in the workings of their government. This governmental obligation should include assuring access for those on the "other side" of the Digital Divide including those without electronic access and those with disabilities. Reaching these three goals through the exciting opportunities brought about by e-government will lead to greater public trust and confidence in our government.

Our Nation's libraries play a uniquely important role in this process. Your constituents have equitable no-fee access to Federal government information, created with their tax dollars, through the collections and services provided by their local library. From its earliest days, Congress wisely recognized the importance of the public's right and need to have access to the information created by the Federal government. The *Annals of Congress*, precursor to today's *Congressional Record*, were first published in 1789 to provide citizens with an official record of the debate and deliberations of their representatives in Congress.

Our Founding Fathers determined that an open and free government would guarantee a strong, vibrant and lasting democracy. Our challenge in the electronic age is to affirm these principles and recognize that the time has come to provide a policy framework to optimize and coordinate policies for electronic government information and services. S. 803 is an important effort to develop an efficient model to harness the strengths and benefits of the electronic environment more effectively to improve public access.

The findings and purposes of S. 803 are important for recognizing several shortcomings in the current model of electronic dissemination by Federal agencies. Numerous studies have concluded what many frustrated users of government information, including librarians, know for a fact—that locating the government data or document one needs is often exceedingly frustrating because "finding tools" are inadequate and not

comprehensive. This problem is complicated by the fact that web-based government information that one might have accessed a month or year ago may have disappeared from an agency web site into a black hole. While many agencies do a great job of posting important electronic documents to their web site, there is often no recognition of the value of that information to the public and the need for it to be available for continuous future use and for preservation.

We agree that there is currently a lack of coordination, cooperation, guidance or a means to oversee and measure agency compliance with many existing statutes. In the executive branch, the lack of enforcement for such policies as A-130, the lack of adequate funding for agencies, and the lack of coordination to guide agencies towards efficient use of technology to improve the public's access to information and services have become barriers between our citizens and their ability to easily locate and use government information. Policies and procedures are needed to assist agencies in becoming more efficient and effective in their dissemination responsibilities, and to ensure agency compliance with current statutes and the need for government accountability. Adequate funding must also be provided to support current functions as well as the transition to a more fully digital and electronic system.

S. 803 raises the visibility and improves coordination among agencies with respect to information policy issues. It establishes a new position of Federal Chief Information Officer in charge of a new Office of Information Policy at OMB. This proposal merits long overdue attention because it encompasses consideration of the challenges of e-government and provides coordination that will result in a strong framework for new and existing policies. The coordinating role of the Federal CIO is vital to ensure that agencies develop front-end solutions for the entire life-cycle of electronic information and services.

Generally, those who serve in the position of agency CIO come with strong backgrounds in technology, in IT procurement and in cyber security issues but they lack an understanding of the agency's responsibilities for public access. The CIO Council has focused its energies on important issues such as Y2K, cybersecurity, and privacy. The Council now needs to focus on the equally important responsibilities for the life-cycle of agency information. S. 803 will promote collaboration, consultation and teamwork between those who manage technology and those who manage information. A systematic and common sense approach that implements comprehensive life-cycle management of information policies is absolutely necessary to develop e-government. Again, the emphasis should be on access and coordination, not merely or strictly centralization.

Second, our organizations strongly believe that the Federal government is responsible for ensuring the entire life-cycle of electronic information, from creation to permanent public access and preservation. For many years now, we have testified before other committees within Congress that the Federal government must carry out these responsibilities in the electronic environment and must develop governmentwide policies and procedures to assist agencies in all three branches.

Librarians and information scientists--not information technologists—are the specialists in establishing cataloging, classification, indexing and metadata standards for government information products. Cooperative international bodies set current cataloging and classification standards using the combined knowledge of information professionals as a resource. The Library of Congress, the Government Printing Office, the national libraries, and other governmental agencies already cooperate with professional library organizations to create internationally recognized cataloguing standards such as MARC cataloguing records, AACRII, GILS and Dublin Core. In addition to the work of these agencies and organizations, it should also be recognized that information technology standards that facilitate the integration of information technology are a separate issue from descriptive information science standards. Each is important in implementing an e-government proposal. The standard-setting bodies, however, are separate and need to be differentiated.

With the rapid and pervasive growth of electronic government information, one of the greatest challenges for users is simply identifying and locating the database or source that they need. In today's distributed electronic environment, there is a critical need for increased and enhanced coordination. In fact, an increased electronic environment requires greater coordination to bring all participants together on issues such as standards and guidelines.

I would like to highlight some specific provisions of the legislation:

- **Sec. 215 "Accessibility, usability and preservation of Government information.**

We believe that an important benefit of the approach advanced in this legislation will be to bring together more closely within the planning and policy functions how an agency manages its information technology resources and the flow of information within agencies as well as to and from the public. In this way, agencies can engage in life-cycle planning, and ensure that technology plans are consistent with agency responsibilities for providing public access to their information resources.

It is critical to recognize the responsibility of the Federal government to provide for permanent public access to and preservation of electronic government information. Without a coordinated national program to systematically capture, preserve, and maintain ongoing access to electronic government data, important information is lost every day as files come and go from agency Web sites and computer servers. The information becomes inaccessible and thus useless to the American public whose tax dollars have supported its creation. We believe that changes are necessary to correct the inadequacies in current law and to ensure permanent access to electronic government publications for future generations. We believe that this system of permanent public access can be accomplished through a comprehensively coordinated program that includes Federal agencies, the Superintendent of Documents, the National Archives and Records Administration, the Library of Congress and other national libraries, depository libraries,

and other library partners.

I would like briefly to describe two such successful partnerships. The first is at my institution, the University of Illinois at Chicago. The U.S. Department of State Foreign Affairs Network (DOSFAN) is a collaborative effort between the State Department's Bureau of Public Affairs, the University of Illinois at Chicago Library and the Federal Depository Library Program to provide permanent worldwide access to foreign policy information. (www.dosfan.lib.uic.edu/) When the collaboration began in 1993, DOSFAN official press briefings became available to the public for the first time. The site includes current and authenticated information, including the State Department's dispatches and advisories, information on human rights issues, consulate and embassy information, and information about travelling or living abroad. The site provides an easy way for citizens to submit questions or opinions about U.S. foreign policy through several email lists and contact points.

And the second is the Federal agency "Cybercemetery" maintained at the University of North Texas (http://www.library.unt.edu/govinfo/research/research.html), another federal depository library, under a Memorandum of Understanding with the Government Printing Office (GPO). The "Cybercemetery" is a unique archive that provides the only continuous public access to information from defunct government agencies and special commissions. The web site was created in 1997 after the closing of the Advisory Commission on Intergovernmental Relations (ACIR), and since then the publications and working documents of eight other defunct government bodies have been added. During the first month that the "Cybercemetery" was expanded to include the publications of the National Partnership for Reinventing Government (NPR), approximately 187,000 users accessed information from the NPR. The "Cybercemetery" was developed to provide continuous public access to valuable government information that is not otherwise available. The University of North Texas Libraries is to be commended for stepping in to fulfill what we believe is the government's responsibility for continuous permanent public access to important government information.

- **Sec. 205 Federal Courts and Sec. 206 Regulatory Agencies.**

We are very pleased that, based on comments from the public during the past year, S. 803 contains important provisions to improve access to information from the Federal courts and regulatory agencies. While much progress has been made throughout the court system to use the Internet for improved public access, including the creation of the official Supreme Court web site last year, Sections 205 and 206 provide an explicit framework for the courts to follow in creating and maintaining content on their web sites. We fully support these provisions, with the caveat that we believe that the courts and regulatory agencies should not be given a permanent opt-out. We ask that you strengthen the opt-out provisions so that there is an annual statement of progress each year and that there be a set timeframe for compliance. In addition, while the public has no-fee access to electronic information from agencies and Congress, the same cannot be said for public access to the courts' fee-based PACER system. We therefore fully support Sec. 205(e) that repeals current statutory language permitting the Administrative Office of the U.S.

Courts to charge fees to access PACER, and we urge Congress to appropriate adequate funding for this purpose.

And third, as you have noted, Chairman Lieberman, S. 803 is a "work in progress." The foundation for an effective e-government across all three branches of government already exists and can be expanded successfully without creating new institutions. Rather, many existing Federal government policies, services and resources should be maintained, enhanced, properly funded and integrated into the vision that the *E-Government Act of 2001* proposes.

To strengthen provisions of this legislation that are most important to achieving your goal of enhancing citizen access to government information, it is very important to recognize the current statutory responsibilities of key agencies, such as the National Archives and Records Administration (NARA) that has statutory responsibility for the preservation of government records and the Government Printing Office (GPO) that has successfully fulfilled the mandate of the *GPO Electronic Information Access Enhancement Act* (P.L. 103-40) to build the award-winning *GPO Access* system. This legislation should more clearly involve the many Federal entities already providing access to government information. We would like to see a clearer recognition of these institutions, including the Library of Congress and the national libraries.

For example, we would like to suggest that the legislation recognize the Institute of Museum and Library Services (IMLS) and the Federal Library and Information Center Committee (FLICC) as well. The IMLS plays an important role in funding digital projects that use the latest sophisticated technologies to improve access to valuable state and federal government information. Through the agency's National Leadership Grants, IMLS has funded 20-25 digital library projects each year, bringing together libraries, museums, archives and historical associations to create valuable collaborative projects.

In addition, the IMLS is working closely with the National Science Foundation to address the challenge of integrating large digital collections across many different institutions. Based on the knowledge and expertise of the IMLS in cutting-edge technologies and their important national coordinating role, we believe the agency should have a statutory role in the development of the Online National Library. In addition, with its fingers on the pulse of our nation's libraries, the IMLS is naturally suited to play an important role in the further development of Community Technology Centers, including libraries, to enhance citizen access to government information and services.

It is also important that the legislation recognize the broad array of Federal agency personnel who need to work together to successfully implement provisions of S. 803. While CIOs play an important role in issues related to technology per se, they often don't have a strong background in information dissemination, nor are they always aware of the agency's responsibilities for public access. Agency records managers, web masters, privacy officers, public affairs staff, and agency librarians should all be working together to ensure that the agency is fulfilling its responsibility for the life-cycle of web-based

information.

We must also develop mechanisms to ensure the authority and integrity of information available on agency Web sites. Users must be assured that the information they locate is, in fact, official. Protecting one's privacy is another challenge of e-government and users must also be assured that government does not intrude into personal privacy and that all appropriate privacy policies and practices are adhered to by all segments of government. And, ultimately, you will need to address how the different branches of government will coordinate their lifecycle management of government information.

The Federal Library and Information Center Committee (FLICC), an interagency council of 55 information managers from all three branches of the U.S. Government, would be a tremendous asset in helping coordinate agency personnel to work together to fulfill the new responsibilities mandated by S. 803. The Committee was established in 1965 by the Library of Congress and the Bureau of the Budget (now the Office of Management and Budget) to foster excellence in federal library and information services through interagency cooperation. FLICC carries out its mission by promoting efficient and effective information services, coordinating the sharing of available resources, and providing training and educational opportunities for federal information professionals. FLICC also serves as a forum for discussion of federal library and information policies, programs, and procedures to help inform the Congress, federal agencies, and others about these issues. We recommend that you recognize the expertise of agency librarians by carving out a role for FLICC in this legislation.

In conclusion, while these are very exciting times in many ways because technology offers many promises of improved public access, we must put into place government wide policies and practices that will make the vision of e-government a reality. In order to harness the Internet to enhance public access—the laudable goal of S. 803—it is incumbent upon the government to fulfill its responsibility for the entire life-cycle of electronic government information. Effective public access for the American people is the first step toward effective e-government.

The *Electronic Government Act of 2001* includes important provisions that will result in improved public access, and we share its vision. We believe that collaborative approaches and governmentwide policies across all three branches are necessary to implement the most effective system of e-government. We are committed to working with you to improve this important legislation so that the American public benefits fully from e-government. Thank you very much.

ORGANIZATIONAL BIOGRAPHIES

THE AMERICAN ASSOCIATION OF LAW LIBRARIES (AALL)

The American Association of Law Libraries is a nonprofit educational organization with over 5,000 members nationwide. Our members respond to the legal and governmental information needs of legislators, judges, and other public officials at all levels of government, corporations and small businesses, law professors and students, attorneys, and members of the general public.

THE AMERICAN LIBRARY ASSOCIATION (ALA)

The American Library Association is a nonprofit educational organization of over 60,000 librarians, library educators, information specialists, library trustees, and friends of libraries representing public, school, academic, state, and specialized libraries. ALA is dedicated to the improvement of library and information services, to the public's right to a free and open information society--intellectual participation--and to the idea of intellectual freedom.

THE ASSOCIATION OF RESEARCH LIBRARIES (ARL)

The Association of Research Libraries is a not-for-profit organization representing 122 research libraries in the United States and Canada. Its mission is to identify and influence forces affecting the future of research libraries in the process of scholarly communication. ARL programs and services promote equitable access to, and effective use of, recorded knowledge in support of teaching, research, scholarship, and community service.

Testimony of Barry Ingram, Vice President EDS Global Government Industry Group on behalf of the Information Technology Association of America (ITAA)

Thank you for the opportunity to testify before you today on this important topic. My name is Barry Ingram, and I am Vice President for EDS' Global Government Industry Group. EDS is the leading global services company and provides strategy, implementation and hosting for clients managing the business and technology complexities of the digital economy. I personally have over 37 years of experience in information technology ---over 20 of those years working with governments --- and have led many innovative e-government initiatives locally, nationwide and globally for EDS.

This morning, I am representing the Information Technology Association of America (ITAA), which is the nation's leading trade association for the information technology industry. ITAA represents over 500 member companies across the United States which produce products and services in the IT industry. The Association plays a leading role in public policy issues of concern to the IT industry including taxes and finance policy, intellectual property, telecommunications law, and critical infrastructure protection. ITAA has a broad-based membership ranging from the smallest IT start-ups to industry leaders in the software, services, systems integration, telecommunications, Internet and computer consulting fields -- ITAA has been a longtime proponent of electronic government, and, as you know, helped to provide input on principles used early on to develop this legislation. ITAA has worked at all

levels of government to improve efficiencies and showcase the benefit to the citizen. We are particularly eager to generate the same interest and progress in e-government at the Federal level that we have witnessed at the state and local level. We believe "The E-government Act of 2001" contributes in a meaningful way to those goals.

E-government holds the real potential to enable a citizen-centric transformation of our government. Utilized effectively, e-government efforts can bring a 24x7 service capability to meeting the needs of citizens, while improving government efficiency, accountability, and transparency, helping to produce a more results-oriented government. ITAA's leading edge member companies have already migrated the private sector to Internet e-business technologies and applications and we look forward to your commitment that the Federal government will engage the private sector to achieve the e-government goals set forth in your legislation.

Therefore, Mr. Chairman, ITAA applauds you, Senator Burns, and the colleagues that have officially joined you in introducing "The E-Government Act of 2001." Your leadership and vision in forwarding a strong e-government proposal is both highly welcomed and timely. We are particularly pleased with the importance the legislation places on the need for a well-funded e-government innovation fund, and with the emphasis on the existence of someone at the highest level who has the responsibility and the authority to move the Federal government into the e-government sphere. It is crucial for this person to have the means (budget and staffing) to implement and

oversee these efforts for the enterprise and we hope that these resources can be made available in the 2002 budget.

I travel around the globe, and work with many companies and governments on e-government projects. When I say "e-government, however, I do not mean only Internet-related efforts, but also any effort where governments are using newer technologies to improve their business processes and provide enhanced services to citizens, businesses, government employees or other governments. If we limit our thinking to only the Internet-related efforts, we are limiting the scope of the possible.

In these efforts, I have seen a mixture of successes and challenges. The challenges are being overcome. As you are acutely aware, finding and achieving innovative ways of funding e-government is difficult. Curtailing stovepipe or purely single-agency oriented development, while still promoting innovation and productivity improvements requires a vision and an execution plan. Sharing of essential information across government to improve productivity and improve citizen services is often counter to citizens' privacy requirements, but can be done.

Fortunately, the success are many, and, in general, I see that state and provincial governments are leading the charge--- for several reasons: They have more transactional processes, such as license renewal and property tax payments; they have somewhat smaller systems than the Federal and national governments; and the most

successful ones have senior leadership in the form of a chief executive or CIO who is sponsoring and visibly behind the e-government efforts. Funding is also being made available to the enterprises for these activities and a common architecture across the entire enterprise is being enforced. This effectively stops development of non-leverageable stovepipe systems and results in increased productivity and sharing of systems. Some state and local governments are also using incentives for savings to be reinvested in other needed activities in those agencies where they have achieved the savings.

Some of the most successful implementations are also taking place at the national level. In the UK for example, the Inland Revenue, the equivalent of our Internal Revenue Service, is undertaking a massive rejuvenation of the tax system, and they are already implementing some of the improvements. They have developed a National Gateway to Government and have implemented the ability for citizens to self-assess and pay their taxes over the Internet- directly to the government, without an intermediary. Our own portal, FirstGov.gov, is an excellent start, but now needs to be expanded to encompass citizens' transactions with agencies. Simply put, e-government efforts can help clients and users of government services achieve superior value in the digital economy. E-government initiatives are where the "new ideas" are; where trust is built and sustained between the government and the consumers of government -- its constituents --; and where the value is delivered to the client/customer. Well thought-out e-government efforts foster more e-government

initiatives and ideas -- and this synergy creates a demand for more e-government capabilities -- a shared and common goal. Your "E-Government Act of 2001" contributes greatly toward this endeavor.

Without going onto a lot of detail, let me put forward a short "Top Ten" list of **lessons** learned for e-government.

1. Implementing successful e-government requires sponsorship and visibility from the top- senior leadership and championing.
2. Cross-agency government standards are essential- across departments, agencies, and governmental levels—in order to most effectively share and reuse applications, information, and capabilities.
3. Bringing services on line raises expectations – technologies and infrastructures need to be robust- we cannot build new high-performance systems on shaky foundations.
4. Build in rapid scalability- when it works- they will come—and at a speed and volume that must be anticipated.
5. Ensure citizens' privacy and security with good information assurance capabilities—build this into the architecture before privacy and security become a problem.
6. Many existing business processes will need to be re-engineered, but don't just reengineer-- reinvent wherever possible and look at new ways of doing business.

7. Provide incentives for citizens and businesses to use the new e-government services—incentives will enable the move to the new methods.

8. Counter services also need to be preserved and improved with e-government innovation—the Digital Divide will be with us for a long time, so we have to maintain current capabilities. They can be bolstered, however, with the same new technologies and improved business practices.

9. Heavily promote new on-line services—we must market the newer capabilities to the citizens and to other government agencies. Make them aware of new capabilities, services and improvements.

10. Adopt new and innovative funding methods and develop new partnership models with the private sector.

In conclusion, as this important piece of legislation moves through the legislation process, I leave you with two thoughts

- E-Government modernization is the use of technology to transform government from "silo" organizations to a seamless organization (one-stop shop), centered around citizen needs and focused on productivity improvements.
- The success of e-government modernization is not only experienced in building and operating web sites - it is in the transformation of government processes--wrapped in the security of a robust infrastructure supporting and enabling that transformation.

Thank you for your time and attention. ITAA and EDS both look forward to working with you as we go forward and I welcome any questions or comments you may have.

Statement of
Patricia McGinnis, President and CEO, Council for Excellence in Government
before the
Committee on Governmental Affairs
United States Senate
July 11, 2001

Thank you, Mr. Chairman, and other members of the committee, for inviting me to participate in this important hearing on S.803, the E- Government Act of 2001. I congratulate you and this committee for your leadership in promoting e-government as a way of transforming government, both the way it operates and the way it connects with the people it serves.

This is not only about e-government. It is also about e-the people. The internet links people not only to one another and to e-commerce, but to the public marketplace of ideas, initiatives, innovation, transactions, and results.

At the Council for Excellence in Government, we think of our ambitious mission in terms of excellent performance and results, and also in terms of the American people's understanding, participation, and trust in government.

If you ask what has the greatest potential to improve the performance of government and connect it to people in a meaningful way, the answer is clearly electronic government.

The Council for Excellence in Government has assembled an E-government initiative in partnership with 350 leaders from government, business, civic groups, and the research community. Together, we developed a blueprint for E-government which we released in February.

Our report is called *Electronic Government: The Next American Revolution* because we believe strongly that the Internet has the potential not only to revolutionize the way government operates but also to put ownership of government truly in the hands of all Americans. (Copies of the report have been made available to all committee members and can be viewed online at www.excelgov.org). According to a Hart/Teeter opinion poll sponsored by the Council for Excellence in Government, most Americans think in terms of *the* government, not *our* government and most Americans, especially young people, do not think of government as "of, by, and for the people."

For the next generation of leaders—who are the young people of today—the Internet is a part of their connective beings. Sixty percent of adults in the U.S. are on-line; 75% of 12-17 year olds are on-line.

Unfortunately, young people do not see much of a role for government in their pursuit of life, liberty, and happiness. What for young Thomas Jefferson was a great experiment in representative democracy is for young people today boring and irrelevant—"whatever." They don't vote much. Only 17% of 18-24 year olds voted in

the 1998 election (28% is the estimate for 2000), compared to 50% in 1972, when 18 year olds were given the right to vote.

Besides not voting, the best and the brightest are also not choosing government service. But they are choosing to change the world through new technology and communications. This presents an important opportunity for e-government to attract young people to a bold, new enterprise and connect people of all ages to the public policy arena.

Two recent Council opinion polls, conducted by Hart/Teeter over the last few months, show that Americans today recognize the potential of electronic government.

- A large majority (73%) says that developing e-government should be a high priority for the new president.

- Even 44% of the public who say government is ineffective are bullish about e-government and say tax dollars should be invested in e-government.

- But by a margin of 2-1, the public wants to proceed carefully down the road to e-government, saying privacy and security are their top priorities.

- The public's vision of e-government goes beyond efficiency and services to the opportunity to become more involved and to hold government and elected officials more directly accountable for their actions and results. It was surprising that access to candidates' voting records online was rated more favorably (77%) than renewing drivers' licenses online (53%).

The vision of our e-government blueprint is government truly of, by, and for the people—where they no longer have to wait in line between eight and five on weekdays, but where they can *be* online anytime, anywhere—not only to get information but to complete transactions with government, receive services, talk with elected representatives, eventually even to vote.

We envision a government that organizes and offers its information and services around the needs of people rather than the organization of government agencies.

There are several important guiding principles for e-government:

- It has to be easy to use, accessible to everyone, private and secure, and innovative.

- We have to invest in public-private, interagency, and intergovernmental partnerships to design, implement, and manage truly effective e-government.

- And we have to eliminate the digital divide providing not only access but also education to those who need it.

Our recommendations focus on leadership, the strategic investment of working capital, a skilled e-government workforce, collaboration between government and business, creative approaches to privacy, security, and interoperability, and access and education.

The dot.gov revolution is just beginning. Even at this early stage, there are many examples of the productive use of the internet by government.

- In 2000, more than two million applications for financial aid received by the Department of Education were filed online.
- Taxes can be filed on line with the IRS and in many states (for example, Virginia, California, and Kentucky)
- Drivers can renew their licenses and car registrations, and pay tickets online in many states.
- Procurement online is growing at the federal and state levels.
- The Department of Transportation posts all of its regulations online for information and comment.

These examples of e-government all fall into the categories of Government to Citizens (G to C), and Government to Business (G to B). What is missing? Government to Government (G to G). At this point there is very little cross agency or intergovernmental collaboration on line and this is a significant problem.

The Congress has set an ambitious goal for the federal government (through the Government Paperwork Elimination Act) to offer all of its services and transactions online by 2003. This is a challenge that should be taken seriously by setting priorities based on customer needs and impact to get services and transactions on line in an integrated, user friendly way. This will require collaboration across agencies which serve the same customers and effective partnerships with other levels of government and the private sector.

The development of S. 803, the E-Government Act, is an example of e-government in action. Just over a year ago, Senator Thompson and Senator Lieberman launched the first ever Senate website to gather and exchange ideas about what should be in this legislation.

That contributed significantly to the bill now before you, which addresses the important issues required for e-government to succeed. Although the details of its provisions are not exactly the same as the recommendations in our blueprint for e-government, it focuses on the essential elements of leadership, strategic investment, a skilled e-government workforce, access, and education, and privacy and security. It calls for government on line in dimensions ranging from basic information, regulatory proceedings, and the courts, to research and development to be offered to the public.

This legislation provides an excellent framework for discussion and negotiation to significantly advance e-government. I think you may find, as we did in developing our blueprint for e-government, that the process of engaging key players in government, business, and the civic and research communities to refine this bill will build the ownership and commitment necessary to break down the barriers to e-government.

Leadership must come not only from OMB and the CIO Council but from the President, the cabinet, the Congress, governors, mayors, state legislators, and the judiciary. All must embrace e-government as a tool to improve government performance and revitalize our democracy.

I commend three of our specific recommendations to you for consideration:

1. Creating a public-private council that would bring the best thinking of private entrepreneurs and a cross section of federal, state, and local leaders to the e-government enterprise.

2. Establishing a Congressional Office of Electronic Government to help members of the House and Senate connect more effectively with the public and to advise members and committees on using e-government to achieve policy goals.

3. Organizing public forums around the country to engage the public, including those on the wrong side of the digital divide, in the design and implementation of e-government.

The E-government Fund in this bill recognizes, as does the President's budget, that we need to invest in collaboration across agencies, levels of government, and with the private sector. That will break down the organizational stovepipes that now give us e-government within agency systems only—systems that are not interoperable or easy to use unless you are seeking information or service from only one agency.

Because the $45 billion now devoted to information technology is appropriated agency by agency, the stovepipes are formidable. The challenge is not only to provide an adequate e-government fund to foster collaboration, but to provide incentives for agencies to collaborate in the use of their much larger IT budgets.

The potential long term savings of e-government are enormous. For example, in Arizona, the cost of vehicle registration renewals has dropped from a $7 paper process to $1.50 on line. At the Social Security Administration, phone transactions on their award winning toll free number that now cost $10 could be reduced to 10 cents on line. Just think what the potential cost savings are across virtually every function of government at every level.

We applaud the provisions in S. 803 that allow share-in-savings contracting in which the contractor could be paid a portion of the savings and the agencies would be allowed to keep a portion for additional investments in information technology.

The offering of services, transactions, and information to the public, businesses and other customers of government in a truly user friendly way will require breakthroughs that are not likely to occur unless given high priority, adequate funding streams, and accountability for results.

The answers may lie in more powerful search engines, portals or on line exchanges that can integrate and offer a range of services based on need and eligibility. The innovative know-how to accomplish this vision of e-government exists in the public and private sectors. It must be harnessed in a new way.

We conclude our report by saying, "Leaders in the public and private sectors must, together, seize this opportunity to take bold, decisive action to make electronic government a reality. The people are ready. We can do this together."

Thank you Mr. Chairman, for the opportunity to be here today.

Testimony on E-Government and S.803
By
Joseph R. Wright

Mr. Chairman and Members of the Committee, I am Joe Wright, former Deputy Director and Director of the Office of Management and Budget (OMB) for President Ronald Reagan. During that time, I was given the responsibility to oversee the President's management improvement efforts in the 1980's. I also chaired the two interagency groups that coordinated these efforts—the President's Council on Management Improvement and the President's Council on Integrity and Efficiency. I had the pleasure of testifying many times before this Committee on the results of those efforts; and submitted a "Management Report" along with the Presidents budget every year to the Congress.

In total, I've spent over 15 years in the service of the Federal government including OMB and the Departments of Agriculture, Commerce and Defense. Since that time, I have been in the private sector and have recently been involved as Chairman or as a member of the Board of Directors on IT and Internet-related companies. Several of these companies have been developing e-government services for the US Federal government.

Today, I appear before the Senate Committee on Governmental Affairs to discuss e-government and S.803, the e-Government Act of 2001. E-Government is the use of technology to enhance the access to, and delivery of, government services to benefit citizens, businesses, employees, and other agencies. E-Government applications can be divided as follows: Government to Citizen (G2C) and vice versa; Government to Business (G2B) and vice versa; Government to Employee (G2E); and Government to Government (G2G). Today, I will comment on the state of e-government at the Federal, state and local levels, and requirements for effective e-government implementation. Additionally, I will my share my views of S.803.

E-Government is a National Priority

E-Government is important for a number of reasons. The US economy has rapidly moved toward the use of the Internet, dramatically increasing productivity, information flows, and service levels in the last 10 years. While the US government represents at least 25% of the GDP, it has lagged seriously behind the private sector in the development of information technologies that leverage the Internet. The public sector has not placed the same priority on this technology to date because it hasn't had to. But that is changing.

First, constituents are demanding enhanced, easy-to-use online services from their government. A recent survey conducted by the Momentum Group found that more than 60% of citizens and 80% of business users had used the Internet to access government services or information.[1] More than two-thirds of Americans believe it should be a high or medium priority for government to invest tax dollars in making more information and services available over the Internet.[2] This level of constituent demand is being driven largely because citizens have come to expect superior levels of customer service from the private sector, and those expectations are now being mirrored on constituent-public sector interactions as well.

Second, governments have spent incredible amounts of money on upgrading information technology. In fact, $77.6 billion was spent last year on information technology projects by the Federal government.[3] Unfortunately, without established technology leadership at the Federal level, this has resulted in agencies implementing e-commerce systems and strategies that are

[1] Momentum Research Group, "Benchmarking the eGovernment Revolution: Year 2000 Report on Citizen and Business Demand" (Research Brief, 26 July 2000), 3.
[2] Hart Teeter, "E-Government: The Next American Revolution" (Research Brief prepared for the Council for Excellence in Government, September 2000), 2.
[3] BB&T Capital Markets Equity Research: "Business-to-Government/Government-to-Consumer Internet" (Research Brief, 22 August 2000), 9.

proprietary and perpetuate the traditional "stovepipe" architecture of information systems. Without a coherent e-government strategy, continuing investments in information technology will result in Federal agencies further automating their own incompatibilities.

Finally, e-government will help save taxpayer dollars. President Bush's budget projects $100 billion in savings from e-commerce over 10 years. This kind of savings is within reach. For example, e-government applications such as tax filings, license and permitting applications, and fee and fine collection systems save between $3 and $5.35 *per transaction* vs. traditional paper-based systems.[4]

With this level of priority associated with e-commerce, governments are making tremendous investments in e-government systems. Government IT spending is projected to increase 4.4% annually between 2000-2005, from $77.6 billion in 2000 to $101.1 billion in 2005. More importantly, the e-government piece of that spending will grow at a 33% rate from $1.5 billion in 2000 to $6.2 billion in 2005. And, Forrester Research estimates that total public sector transaction volumes now exceed $2 trillion, while approximately $450 billion in fines are paid each year. By 2006, Forrester expects that Federal, state, and local governments will collect 15% of fees and taxes online—totaling $602 billion.[5]

[4] Gartner Group, "E-Government Metrics: Cost Savings" (Research Brief, 16 October 2000), 3.
[5] Forrester Research: "By 2006, US Government Will Collect $602 Billion Over The Net, According To Forrester Research" (Press Release, Cambridge, MA, 20 August 2000)
http://www.forrester.com/ER/Press/Release/0,1769,390,FF.html

The Four Stages of E-Government: Presence, Interaction, Transaction, and Transformation

Prior to discussing the state of e-government initiatives at the Federal, state, and local levels, it is important to describe the process of evolution of e-government. Gartner Dataquest has developed a four-phased model that describes e-government development as follows:[6]

- Phase 1: Presence—The first phase of e-government development is characterized by the rush to simply have a presence on the Internet to provide general information about government agencies to constituents. Since the early 1990s, Federal, state and local governments have implemented more than 10,000 web sites to inform the public about government agencies.

- Phase 2: Interaction—Web sites in the second phase of e-government development provide search capabilities and downloadable electronic forms and documents that enable constituents to access critical information, but still require a visit to a government office to complete a transaction.

- Phase 3: Transaction—This third stage of e-government is characterized by the empowerment of citizens to conduct and complete entire tasks online by using self-service applications such as tax filing, driver's license renewal, procurement, and permitting and licensing. This is the focus of most current e-government initiatives.

- Phase 4: Transformation—This fourth stage of e-government development is characterized by a redefinition of service delivery from programmatic or agency-based to

[6] Gartner Group, "The Four Phases of E-Government in the Public Sector Market" (Research Brief, 28 August 2000), 2-3.

constituent-centric. This phase will rely upon technologies that have proven successful in the e-business arena, including personalized Web portals, robust customer relationship management (CRM) architectures, e-mail management and routing systems, and advanced content delivery technologies (such as push and wireless). The organization of web sites will become "intentions-based"—government services and applications will be organized by constituent intention (e.g., all services related to education) rather than rigidly organized by the agency actually delivering the service (e.g., Department of Education, Veterans Benefit Administration or the Bureau of Indian Affairs). This will result in the development of "virtual agencies" that exist only in cyberspace, as related services across agencies are united at web sites whose focus is topical (e.g., raising your child) rather than agency-centric. Development of this ultimate e-government is currently in the seed stage and will accelerate over the next five years.

The State of the States: Solidly in the Transaction Phase

In many ways, state and local governments are leading the e-government charge. The reason for this is two-fold. First, state and local governments have more direct citizen contact than the Federal government. Most government services and regulatory requirements involve the filing of an application or report by business and constituents. By 2006, governments at all levels will receive 333 million online submissions. State governments will receive the most, 137 million in 2006, fueled primarily by online business reporting. Of the nearly 14,000 online services applications expected to be available by 2006, the vast majority will come from the nation's 35,000 cities and towns.[7]

[7] Forrester Research

The second major advantage enjoyed by state and local governments is the presence of a singular executive, such as a state governor or city major, who can immediately galvanize diverse stakeholder groups, cut through procurement rules, and force agencies to act. State and local governments are more able to take an enterprise approach to online activities, unlike Federal information technology investments, which typically perpetuate existing stovepipe separation of information systems.

Most states are still in the transaction phase of e-government, focused on the development of online G2B and G2C applications involving electronic filing and electronic payments. However, a few states, most recently Massachusetts, are beginning to enter the transformation phase of development and have made public a strategic vision of web-based information systems and applications that will transform citizen and business interactions with their government. Indeed, Massachusetts has embarked upon an ambitious e-government strategy whose foundation is an intentions-based, citizen-centric portal that provides personalized information about government services. The system is designed to break through traditional stovepipes, and provide relevant information crossing traditional agency boundaries, giving rise to virtual agencies of topically related content united under through Mass.gov portal.

Other Foreign Governments Have Already Made E-Government a National Priority

The British Government recently announced a major initiative to develop "the Government Gateway" which is a new portal that acts as a centralized registration service for all e-government services in the UK. Andrew Pinder has been named the new "e-envoy" for the UK government and described the effort as one of "leveraging the resources of the digital economy to empower the millions of citizens and businesses in the country." He said that the government

portal is part of Prime Minister Blair's new e-government initiative of having 100% of government transactions online by 2005 is designed to connect the 200 central and 482 local government institutions with the UK's 60M citizens and 3M businesses.

Meanwhile, Accenture (formerly Anderson Consulting) stated that the US ranks third in e-government development behind Canada and Singapore. They said that a few good portal sites exist but most have a long way to go to be truly customer-orientated. They further stated that these three countries have completed less than half the work required to develop and provide full-service for e-government. Canada apparently has the most advanced offering for its citizens and its businesses to conduct electronic transactions with the government.

The State of Federal e-Government Initiatives

While state and local governments are pushing into the transformation phase of e-government development, Federal e-government initiatives are focused on the development of transactional applications. Some Federal projects are still in the interaction, or even presence stages. The Federal Chief Information Officers (CIO) Council recently counted 1,300 Federal electronic pilots or programs of which only 463 involved transactions with the government—the rest simply provide information.

This lack of focus on transactional applications is a direct result of the lack of centralized strategy, planning and leadership at the Federal level for e-government development. Projects to date, even when they have been transactional, have been agency-centric, rather than citizen-centric and represent a very small percentage of the business that agencies conduct. Gartner Group estimates that less than 1% of the transactions between governments and constituents are handled online today, despite the development of over 10,000 separate government web sites.

The Federal government must take steps to ensure that the taxpayer's dollar is not wasted. A coordinated approach to developing e-government applications will allow systems to be compatible with one another. This will also ensue that limited resources would not be used to build systems that perform the same basic functions.

The Federal CIOs who are overseeing the coordination of the e-government initiatives have stated that turf wars and government structure are the true hindrances to successful e-government initiatives. Former Commerce CIO Roger Baker stated that: "Money isn't really a problem... there is no plan because there is no central authority to put the plan together and then manage its implementation... so, we all go off and spend our money where we each think it should go, with extremely little coordination." This concern has been expressed by many inside and outside of the government.

The National Electronic Commerce Coordinating Committee also points out that policy issues, not technology, are the main problems governments face as they adopt e-government. At the same time, it is important that standards for technology and information-exchange be established, so that future interagency applications and systems can be developed.

The Council for Excellence in Government also stated that the barriers to implementing e-government are government-wide leadership, funding cross-government programs, integrating program files, overcoming ingrained cultural barriers and enhancing security and privacy.

These problems are compounded by the fact that Federal agencies face a deadline of October 2003, when they must implement the Government Paperwork Elimination Act (GPEA) which requires them, where practical, to offer individuals or businesses the option of submitting information or making transactions electronically. The Act also validates the legality of

electronic documents and digital signatures. In addition, there have been recent reports that Federal agencies are not complying with the Government Performance Results Act (GPRA) and it appears that they will have increasing difficulty in compliance unless a well planned and coordinated e-government program is put in place.

FirstGov.gov: A Sign of Things to Come

FirstGov.gov is one of the most important Federal e-government initiatives. Launched in September of 2000, FirstGov.gov unites access to Federal, and now state and local web sites, providing citizens with a single, integrated point of access to information about government services. The web site consolidates data from thousands of government web sites and provides robust search tools that can handle 100 million searches a day by more than 200,000 simultaneous users. GSA is the contract agency that is overseeing development of the web site.

However, the first phase in the development of the FirstGov.gov web site only allowed for the user to access information—it did not allow for transactions. New agency-centric transactional applications are being developed, and access to these applications is being provided through FirstGov.gov. There are currently no major *interagency* applications—applications that use data across agencies to provide constituents with integrated, useful information and services.

FirstGov.gov lays the foundation for the Federal government's entry into the transformation state of e-government, but a tremendous amount of work and strong leadership are necessary to accomplish this. If the President truly intends to have a citizen-centric government where "agencies conduct transactions with the public along secure web-enabled systems that use portals," then the FirstGov.gov web site needs to be enhanced substantially with a specific plan

to bring on agency programs and services in a centrally directed effort that is well-coordinated throughout the government.

Reactions to S.803 and Recommendations

Mr. Chairman, S.803 is very important for a number of reasons at this time. First, the government and its citizens will directly benefit from e-government, just like industry has benefited from the implementation of information technology. Citizens have come to expect the same levels of service and convenience from the government that they are receiving from businesses as a result of private sector implementations of Internet technologies. Second, if the development of e-government is to occur in a reasonable timeframe, legislation is needed to give the Executive Branch the authority to provide central leadership and coordinate the initiatives for all Federal agencies. Third, this law will send a message to citizens that the government will organize around the needs of the citizens rather than tradition or bureaucracy. The President has already stated in his first "blueprint" to the Congress that he wanted a citizen-centric government. But, as we all know, he needs the support of the Congress to get an initiative as far-reaching as this accomplished.

Mr. Chairman, S.803 calls for the appointment of a Federal CIO. This is a good idea. While I'm not sure that the organization structure described in the legislation is the only organizational solution to accomplish central leadership, I do agree that a successful e-government initiative requires decisive, focused top-level leadership. I also agree that that authority should be closely associated with the budget process and have the full authority of the budget and should be located within the OMB since OMB has an existing organizational structure and is already tasked with balancing program budgets in the Federal arena. Mitch Daniels, the Director of OMB, recently appointed

Mark Forman as the Director of E-Government initiatives for the Federal government who could also be given the additional responsibility of CIO. The reporting relationship within OMB is not as important as the responsibility and authority given to OMB and the CIO. Mr. Chairman, it is clear that having a central point of authority for e-government initiatives is a good idea. And, the decision to place this within OMB is significant, because this office would then have the authority of the budget behind it. It is important that this office have actual authority without creating additional management clutter. I would suggest that this Committee reach an agreement with Mitch Daniels, the Director of OMB, on the right organizational structure and then hold the Director responsible for implementation.

Mr. Chairman, I repeat that legislation regarding e-government is very timely and is needed to stop the "automation of incompatibility" among government information systems and develop a government geared toward the citizen. The design of engineering systems has taught us that the longer one waits (during the design process) the more costly it is to effect change. I am not only talking about the monetary costs, but also the cultural change necessary to convert from programmatic thinking to constituent-centric thinking.

The proposed legislation has many good parts and excellent recommendations, most notably investments in FirstGov.gov, the Interagency Fund, and the establishment of public key standards. However, I believe that the legislation goes into too much detail regarding organizational specifics and implementation recommendations. In order for e-government to be successful, there is no question that a single authority needs to be made responsible for the implementation of this new technology across Federal agencies. And this authority has to be able to make decisions about organization, technology, applications, and investments. The execution of the proposed duties in the legislation should be left to the Executive Branch for

implementation. OMB should define and develop the organization, and make recommendations regarding technology, actual applications and systems, and standards. These efforts should be tightly coordinated between all Federal agencies.

To ensure that OMB's efforts—and our investments in this area—are successful in effecting change and leading us to the transformation phase of e-government, the legislation should provide quantifiable goals that can be measured regarding the e-government systems. These goals should ensure that e-government initiatives are focused on achieving two fundamental goals: 1) maximizing constituent benefit through the delivery of high-impact, high-demand applications; and 2) maximizing cost savings by improving the efficiency of government service delivery. Quantitative standards for timing, budget, impact, utilization, and cost savings must be established, measured, and reported.

Mr. Chairman, we stand at a important time and are considering technology that has the possibility to change the very nature of government service delivery. With the right e-government strategy and legislation, this administration and Congress can leave a legacy that will long be remembered. More importantly, the Federal government should be brought into the 21st century to serve its citizens. I think they are beginning to expect it. Thank you once again, Mr. Chairman, for giving me for the opportunity to address the Committee on Governmental Affairs on e-government and S.803.

II

107TH CONGRESS
1ST SESSION

S. 803

To enhance the management and promotion of electronic Government services and processes by establishing a Federal Chief Information Officer within the Office of Management and Budget, and by establishing a broad framework of measures that require using Internet-based information technology to enhance citizen access to Government information and services, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 1, 2001

Mr. LIEBERMAN (for himself, Mr. BURNS, Mr. BINGAMAN, Mr. FITZGERALD, Mr. DASCHLE, Mr. MCCAIN, Mr. CARPER, Mr. DURBIN, Mr. JOHNSON, Mr. KERRY, Mr. LEAHY, and Mr. LEVIN) introduced the following bill; which was read twice and referred to the Committee on Governmental Affairs

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A BILL

To enhance the management and promotion of electronic Government services and processes by establishing a Federal Chief Information Officer within the Office of Management and Budget, and by establishing a broad framework of measures that require using Internet-based information technology to enhance citizen access to Government information and services, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "E-Government Act of 2001".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Findings and purposes.

TITLE I—OFFICE OF MANAGEMENT AND BUDGET ELECTRONIC GOVERNMENT SERVICES

Sec. 101. Federal Chief Information Officer.
Sec. 102. Office of Information Policy and Office of Information and Regulatory Affairs.
Sec. 103. Management and promotion of electronic Government services.

TITLE II—FEDERAL MANAGEMENT AND PROMOTION OF ELECTRONIC GOVERNMENT SERVICES

Sec. 201. Federal agency responsibilities.
Sec. 202. Compatibility of executive agency methods for use and acceptance of electronic signatures.
Sec. 203. Online Federal telephone directory.
Sec. 204. Online National Library.
Sec. 205. Federal courts.
Sec. 206. Regulatory agencies.
Sec. 207. Integrated reporting feasibility study and pilot projects.
Sec. 208. Online access to federally funded research and development.
Sec. 209. Common protocols for geographic information systems.
Sec. 210. Share-In-Savings Program improvements.
Sec. 211. Enhancing crisis management through advanced information technology.
Sec. 212. Federal Information Technology Training Center.
Sec. 213. Community technology centers.
Sec. 214. Disparities in access to the Internet.
Sec. 215. Accessibility, usability, and preservation of Government information.
Sec. 216. Public domain directory of Federal Government websites.
Sec. 217. Standards for agency websites.
Sec. 218. Privacy protections.
Sec. 219. Accessibility to people with disabilities.
Sec. 220. Notification of obsolete or counterproductive provisions.

TITLE III—AUTHORIZATION OF APPROPRIATIONS AND EFFECTIVE DATE

Sec. 301. Authorization of appropriations.
Sec. 302. Effective date.

SEC. 2. FINDINGS AND PURPOSES.

(a) FINDINGS.—Congress finds the following:

(1) The use of computers and the Internet is rapidly transforming societal interactions and the relationships among citizens, private businesses, and the Government.

(2) The Federal Government has had uneven success in applying advances in information technology to enhance Governmental functions and services, achieve more efficient performance, and increase access to Government information and citizen participation in Government.

(3) Most Internet-based services of the Federal Government are developed and presented separately, according to the jurisdictional boundaries of an individual department or agency, rather than being integrated cooperatively according to function.

(4) Internet-based Government services involving interagency cooperation are especially difficult to develop and promote, in part because of a lack of funding mechanisms to support such interagency cooperation.

(5) To take full advantage of the improved Government performance that can be achieved through the use of Internet-based technology requires new leadership, better organization, improved interagency collaboration, and more focused oversight of agency

compliance with statutes related to information resource management.

(b) PURPOSES.—The purposes of this Act are the following:

(1) To provide effective leadership of Federal Government efforts to develop and promote electronic Government services and processes by establishing a Federal Chief Information Officer within the Office of Management and Budget.

(2) To establish measures that require using Internet-based information technology to enhance citizen access to Government information and services, improve Government efficiency and reduce Government operating costs, and increase opportunities for citizen participation in Government.

(3) To promote interagency collaboration in providing electronic Government services, where this collaboration would improve the service to citizens by integrating related function.

(4) To promote interagency collaboration in the use of internal electronic Government processes, where this collaboration would improve the efficiency and effectiveness of the processes.

TITLE I—OFFICE OF MANAGEMENT AND BUDGET ELECTRONIC GOVERNMENT SERVICES

SEC. 101. FEDERAL CHIEF INFORMATION OFFICER.

(a) ESTABLISHMENT.—Section 502 of title 31, United States Code, is amended—

(1) by redesignating subsections (d), (e), and (f), as subsections (e), (f), and (g), respectively; and

(2) by inserting after subsection (c) the following:

"(d) The Office has a Federal Chief Information Officer appointed by the President, by and with the advice and consent of the Senate. The Federal Chief Information Officer shall provide direction, coordination, and oversight of the development, application, and management of information resources by the Federal Government.".

(b) COMPENSATION.—Section 5313 of title 5, United States Code, is amended by adding at the end the following:

"Federal Chief Information Officer."

(c) MODIFICATION OF DEPUTY DIRECTOR FOR MANAGEMENT FUNCTIONS.—Section 503(b)(2)(D) of title 31, United States Code, is amended by striking "and statistical policy" and inserting "collection review".

(d) OFFICE OF INFORMATION POLICY.—

(1) IN GENERAL.—Chapter 5 of title 31, United States Code, is amended by inserting after section 506 the following:

"§ 507. Office of Information Policy

"The Office of Information Policy, established under section 3503 of title 44, is an office in the Office of Management and Budget.".

(2) TECHNICAL AND CONFORMING AMENDMENT.—The table of sections for chapter 5 of title 31, United States Code, is amended by inserting after the item relating to section 506 the following:

"507. Office of Information Policy.".

(e) PRIVACY ACT FUNCTIONS.—

Section 552a(v) of title 5, United States Code (commonly referred to as the Privacy Act) is amended to read as follows:

"(v) OFFICE OF MANAGEMENT AND BUDGET RESPONSIBILITIES.—The Director of the Office of Management and Budget shall—

"(1) develop and, after notice and opportunity for public comment, prescribe guidelines and regulations for the use of agencies in implementing the provisions of this section;

"(2) provide continuing assistance to and oversight of the implementation of this section by agencies; and

"(3) delegate all of the functions to be performed by the Director under this section to the Federal Chief Information Officer.".

(f) ACQUISITIONS OF INFORMATION TECHNOLOGY.—

(1) RESPONSIBILITIES AND FUNCTIONS.—Section 5111 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1411) is amended—

(A) by inserting "(a) IN GENERAL.—" before "In fulfilling"; and

(B) by adding at the end the following:

"(b) DELEGATION.—The Director shall delegate all of the responsibilities and functions to be performed by the Director under this title to the Federal Chief Information Officer.".

(2) INFORMATION TECHNOLOGY ACQUISITION PILOT PROGRAMS.—Section 5301(a)(1) of the Clinger-Cohen Act of 1996 (40 U.S.C. 1471(a)(1)) is amended by striking "Administrator for the Office of Information and Regulatory Affairs" and inserting "Federal Chief Information Officer"

(g) FEDERAL COMPUTER SYSTEMS STANDARDS AND GUIDELINES.—

(1) PROMULGATION.—Section 5131 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1441) is amended—

(A) by striking "Secretary of Commerce" each place it appears and inserting "Federal Chief Information Officer" in each such place; and

(B) by striking "Secretary" each place it appears and inserting "Federal Chief Information Officer" in each such place.

(2) SUBMISSION.—Section 20(a)(4) of the National Institute of Standards and Technology Act (15 U.S.C. 278g–3(a)(4)) is amended by striking "Secretary of Commerce" and inserting "Federal Chief Information Officer".

(h) INFORMATION TECHNOLOGY FUND.—Section 110(a) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 757(a)) is amended by adding at the end the following:

"(3) The Administrator's decisions with regard to obligations of and expenditures from the Fund shall be made after consultation with the Federal Chief Information Officer, with respect to those programs that—

"(A) promote the use of information technology to agencies; or

"(B) are intended to facilitate the efficient management, coordination, operation, or use of those information technologies.".

(i) ELECTRONIC GOVERNMENT AND INFORMATION TECHNOLOGIES.—

(1) IN GENERAL.—The Federal Property and Administrative Services Act of 1949 (40 U.S.C. 471 et seq.) is amended by inserting after section 112 the following:

"SEC. 113. ELECTRONIC GOVERNMENT AND INFORMATION TECHNOLOGIES.

"The Administrator of General Services shall consult with the Federal Chief Information Officer on programs undertaken by the General Services Administration to promote electronic Government and the efficient use of information technologies by Federal agencies.".

(2) TECHNICAL AND CONFORMING AMENDMENT.—The table of sections for the Federal Property and Administrative Services Act of 1949 is amended by inserting after the item relating to section 112 the following:

"Sec. 113. Electronic Government and information technologies.".

(j) GOVERNMENT PAPERWORK ELIMINATION.—The Government Paperwork Elimination Act (44 U.S.C. 3504 note) is amended—

(1) by redesignating sections 1709 and 1710 as sections 1710 and 1711, respectively; and

(2) by inserting after section 1708 the following:

"SEC. 1709. DELEGATION OF FUNCTIONS TO FEDERAL CHIEF INFORMATION OFFICER.

"The Director of the Office of Management and Budget shall delegate all of the functions to be performed by the Director under this title to the Federal Chief Information Officer."

SEC. 102. OFFICE OF INFORMATION POLICY AND OFFICE OF INFORMATION AND REGULATORY AFFAIRS.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—Section 3503 of title 44, United States Code, is amended to read as follows:

"§ 3503. Office of Information Policy and Office of Information and Regulatory Affairs

"(a)(1) There is established in the Office of Management and Budget an office to be known as the Office of Information Policy.

"(2) The Office shall be administered by the Federal Chief Information Officer established under section 502(d) of title 31. The Director shall delegate to the Federal Chief Information Officer the authority to administer all functions under this chapter, except those delegated to the Administrator of the Office of Information and Regulatory Affairs under subsection (b)(2). Any such delegation shall not relieve the Director of responsibility for the administration of such function.

"(b)(1) There is established in the Office of Management and Budget an office to be known as the Office of Information and Regulatory Affairs.

"(2) There shall be at the head of the Office an Administrator who shall be appointed by the President, by and with the advice and consent of the Senate. The Director shall delegate to the Administrator the authority to administer all functions under this chapter explicitly relating to information collection review. Any such delegation shall not relieve the Director of responsibility for the administration of such functions."

(2) TECHNICAL AND CONFORMING AMENDMENT.—The table of sections for chapter 35 of title 44, United States Code, is amended by striking the item relating to section 3503 and inserting the following:

"3503. Office of Information Policy and Office of Information and Regulatory Affairs.".

(b) PROMOTION OF INFORMATION TECHNOLOGY.—Section 3504(h)(5) of title 44, United States Code, is amended by inserting "direct the Federal Chief Information Officer and the Administrator of the Office of Information and Regulatory Affairs, acting jointly, to" after "(5)".

(c) COORDINATION OF INFORMATION COLLECTION REVIEWS.—

(1) INFORMATION COLLECTION REVIEW.—Section 3502 of title 44, United States Code is amended—

(A) by redesignating paragraphs (6) through (14) as paragraphs (7) through (15), respectively; and

(B) by inserting after paragraph (5) the following:

"(6) the term 'information collection review' means those functions described under section 3504(c) and related functions;".

(2) COORDINATION.—Section 3504 of title 44, United States Code, is amended—

(A) by redesignating paragraph (2) as paragraph (3); and

(B) by inserting after paragraph (1) the following:

"(2) The Director shall ensure that the Office of Information Policy and the Office of Information and Regulatory Affairs coordinate their efforts in applying the principles developed and implemented under this section to information collection reviews."

(d) REFERENCES.—Reference in any Federal law, Executive order, rule, regulation, or delegation of authority, or any document of or relating to the Office of Information and Regulatory Affairs or the Administrator of the Office of Information and Regulatory Affairs, respectively, shall be deemed a reference to—

(1) the Office of Information Policy or the Federal Chief Information Officer, respectively, with respect to functions described under section 3503(a) of title 44, United States Code (as amended by section 103 of this Act); and

(2) the Office of Information and Regulatory Affairs or the Administrator of the Office of Information and Regulatory Affairs, respectively, with respect to functions described under section 3503(b) of such title (as amended by section 103 of this Act).

(e) ADDITIONAL CONFORMING AMENDMENTS.—

(1) RECOMMENDED LEGISLATION.—After consultation with the appropriate committees of Congress, the Director of the Office of Management and Budget shall prepare and submit to Congress recommended legislation containing technical and conforming amendments to reflect the changes made by this Act.

(2) SUBMISSION TO CONGRESS.—Not later than 6 months after the effective date of this Act, the Director of the Office of Management and Budget shall submit the recommended legislation referred to under paragraph (1).

SEC. 103. MANAGEMENT AND PROMOTION OF ELECTRONIC GOVERNMENT SERVICES.

(a) IN GENERAL.—Title 44, United States Code, is amended by inserting after chapter 35 the following:

"CHAPTER 36—MANAGEMENT AND PROMOTION OF ELECTRONIC GOVERNMENT SERVICES

"Sec.
"3601. Definitions.
"3602. Federal Chief Information Officer functions.
"3603. Chief Information Officers Council.
"3604. E-Government Fund.

"§ 3601. Definitions

"In this chapter, the definitions under section 3502 shall apply, and the term—

"(1) 'Council' means the Chief Information Officers Council established under section 3603;

"(2) 'Cross-Sector Forum' means the Cross-Sector Forum on Information Resources Management established under section 3602(a)(10);

"(3) 'Fund' means the E-Government Fund established under section 3604;

"(4) 'interoperability' means the ability of different software systems, applications, and services to communicate and exchange data in an accurate, effective, and consistent manner; and

"(5) 'integrated service delivery' means the provision of Internet-based Federal Government information or services integrated according to function rather than separated according to the boundaries of agency jurisdiction.

"§ 3602. Federal Chief Information Officer functions

"(a) Subject to the direction and approval of the Director of the Office of Management Budget, and subject to requirements of this chapter, the Federal Chief Information Officer shall perform information resources management functions as follows:

"(1) Perform all functions of the Director, including all functions delegated by the President to the Director, relating to information resources management.

"(2) Perform the following functions with respect to information resources management:

"(A) Under section 5112 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1412), review agency budget requests related to information technology capital planning and investment.

"(B) Under section 5113 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1413), evaluate the investments referred to under subparagraph (A) with respect to performance and results.

"(C) Review legislative proposals related to information technology capital planning and investment.

"(D) Advise the Director on the resources required to develop and effectively operate and maintain Federal Government information systems.

"(E) Recommend to the Director changes relating to Governmentwide strategies and priorities for information resources management.

"(3) Provide overall leadership and direction to the executive branch on information policy by establishing information resources management policies and requirements, and by reviewing each agency's performance in acquiring, using, and managing information resources.

"(4) Promote innovative uses of information technology by agencies, particularly initiatives involving multiagency collaboration, through support of pilot projects, research, experimentation, and the use of innovative technologies.

"(5) Administer the distribution of funds from the E-Government Fund established under section 3604.

"(6) Consult with the Administrator of General Services regarding the use of the Information Technology Fund established under section 110 of the Federal Property and Administrative Coordinate Services Act of 1949 (40 U.S.C. 757), and coordinate with the Administrator of General Services regarding programs undertaken by the General Services Administration to promote electronic Government and the efficient use of information technologies by agencies.

"(7) Chair the Chief Information Officers Council established under section 3603.

"(8) Establish and promulgate information technology standards for the Federal Government under section 5131 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1441) based on the recommendations of the National Institute of Standards and Technology, taking into account, if appropriate, recommendations of the Chief Information Officers Council, experts, and interested parties from the private and nonprofit sectors and State, local, and tribal governments, as follows:

"(A) Standards and guidelines for interconnectivity and interoperability as described under section 3504.

"(B) Standards and guidelines for categorizing and electronically labeling Federal Government electronic information, to enhance electronic search capabilities.

"(C) Standards and guidelines for Federal Government computer system efficiency and security.

"(9) Establish a regular forum for consulting and communicating with leaders in information resources management in the legislative and judicial

branches to encourage collaboration and enhance understanding of best practices and innovative approaches in acquiring, using, and managing information resources.

"(10) Establish a regular forum for consulting and communicating with leaders in information resources management in State, local, and tribal governments (including the National Association of State Information Resources Executives) to encourage collaboration and enhance understanding of best practices and innovative approaches in acquiring, using, and managing information resources.

"(11) Establish a regular forum for consulting and communicating with program managers and leaders in information resources management in the regulatory executive branch agencies to encourage collaboration and enhance understanding of best practices and innovative approaches related to the acquisition, use, and management of information resources in regulatory applications.

"(12) Establish a Cross-Sector Forum on Information Resources Management, subject to the Federal Advisory Committee Act (5 U.S.C. App.), as a periodic colloquium with representatives from Federal agencies (including Federal employees who are

not supervisors or management officials as such terms are defined under section 7103(a) (10) and (11), respectively) and the private, nonprofit, and academic sectors, to encourage collaboration and enhance understanding of best practices and innovative approaches in acquiring, using, and managing information resources. The Cross-Sector Forum shall be used for the following:

"(A) To develop innovative models for Government information resources management and for Government information technology contracts. These models may be developed through focused Cross-Sector Forum discussions or using separately sponsored research.

"(B) To identify opportunities for performance-based shared-savings contracts as a means of increasing the quantity and quality of Government information and services available through the Internet.

"(C) To identify opportunities for public-private collaboration in using Internet-based technology to increase the efficiency of Government-to-business transactions.

"(D) To identify mechanisms for providing incentives to program managers and other Gov-

ernment employees to develop and implement innovative uses of information technologies.

"(E) To identify opportunities for public-private collaboration in addressing the disparities in access to the Internet and information technology.

"(F) To develop guidance to advise agencies and private companies on any relevant legal and ethical restrictions.

"(13) Direct the establishment, maintenance, and promotion of an integrated Internet-based system of delivering Government information and services to the public. To the extent practicable, the integrated system shall be designed and operated according to the following criteria:

"(A) The provision of Internet-based Government information and services integrated according to function rather than separated according to the boundaries of agency jurisdiction.

"(B) An ongoing effort to ensure that all Internet-based Government services relevant to a given citizen activity are available from a single point.

"(C) Standardized methods for navigating Internet-based Government information and services.

"(D) The consolidation of Federal Government information and services with Internet-based information and services provided by State, local, and tribal governments.

"(14) Coordinate with the Administrator of the Office of Federal Procurement Policy to ensure effective implementation of electronic procurement initiatives.

"(15) Assist Federal agencies, the United States Access Board, the General Services Administration, and the Attorney General in—

"(A) implementing accessibility standards under section 508 of the Rehabilitation Act of 1973 (29 U.S.C. section 794d); and

"(B) ensuring compliance with those standards through the budget review process and other means.

"(16) Administer the Office of Information Policy established under section 3503.

"(b) The Director of the Office of Management and Budget shall consult with the Federal Chief Information

Officer on each agency budget request and legislative proposal described under subsection (a)(2).

"(c) The Federal Chief Information Officer shall appoint the employees of the Office. The Director of the Office of Management and Budget shall ensure that the Office of Information Policy has adequate employees and resources to properly fulfill all functions delegated to the Office and the Federal Chief Information Officer.

"(d) There are authorized to be appropriated $15,000,000 for the establishment, maintenance, and promotion of the integrated Internet-based system established under subsection (a)(13) for fiscal year 2002, and such sums as are necessary for fiscal years 2003 through 2006.

"§ 3603. Chief Information Officers Council

"(a) There is established in the executive branch a Chief Information Officers Council.

"(b) The members of the Council shall be as follows:

"(1) The chief information officer of each agency described under section 901(b) of title 31.

"(2) The chief information officer of the Central Intelligence Agency.

"(3) The chief information officer of the Department of the Army, the Department of the Navy, and the Department of the Air Force, if chief infor-

mation officers have been designated for these departments under section 3506(a)(2)(B).

"(4) Any other officers or employees of the United States designated by the Federal Chief Information Officer.

"(c)(1) The Federal Chief Information Officer shall be the Chairman of the Council.

"(2)(A) The Deputy Chairman of the Council shall be selected by the Council from among its members.

"(B) The Deputy Chairman shall serve a 1-year term, and may serve multiple terms.

"(3) The Administrator of General Services shall provide administrative and other support for the Council, including resources provided through the Information Technology Fund established under section 110 of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 757).

"(d) The Council is designated the principal interagency forum for improving agency practices related to the design, acquisition, development, modernization, use, operation, sharing, and performance of Federal Government information resources. The Council shall perform the following functions:

"(1) Develop recommendations for the Federal Chief Information Officer on Government informa-

tion resources management policies and requirements.

"(2) Assist the Federal Chief Information Officer in developing and maintaining the Government-wide strategic information resources management plan required under section 3506.

"(3) Share experiences, ideas, best practices, and innovative approaches related to information resources management.

"(4) Assist the Federal Chief Information Officer in the identification, development, and coordination of multiagency projects and other innovative initiatives to improve Government performance through the use of information technology.

"(5) Provide recommendations to the Federal Chief Information Officer regarding the distribution of funds from the E-Government Fund established under section 3604.

"(6) Coordinate the development and use of common performance measures for agency information resources management under section 5123 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1423).

"(7) Work as appropriate with the National Institute of Standards and Technology to develop recommendations for the Federal Chief Information Of-

ficer on information technology standards developed under section 20 of the National Institute of Standards and Technology Act (15 U.S.C. 278g–3) and promulgated under section 5131 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1441), as follows:

"(A) Standards and guidelines for interconnectivity and interoperability as described under section 3504.

"(B) Standards and guidelines for categorizing and electronically labeling Government electronic information, to enhance electronic search capabilities.

"(C) Standards and guidelines for Federal Government computer system efficiency and security.

"(8) Work with the Office of Personnel Management to assess and address the hiring, training, classification, and professional development needs of the Government related to information resources management.

"§ 3604. E-Government Fund

"(a) There is established in the Treasury of the United States an E-Government Fund, which shall be available without fiscal year limitation.

"(b) The Fund shall be used to fund interagency information technology projects, and other innovative uses of information technology. The Fund shall be operated as follows:

"(1) Any member of the Council, including the Federal Chief Information Officer, may propose a project to be funded from the Fund.

"(2) On a regular basis, an appropriate committee within the Council shall review candidate projects for funding eligibility, and make recommendations to the Federal Chief Information Officer on which projects should be funded from the Fund. The review committee shall consider the following:

"(A) The relevance of this project in supporting the missions of the affected agencies and other statutory provisions.

"(B) The usefulness of interagency collaboration on this project in supporting integrated service delivery.

"(C) The usefulness of this project in illustrating a particular use of information technology that could have broader applicability within the Government.

"(D) The extent to which privacy and information security will be provided in the implementation of the project.

"(E) The willingness of the agencies affected by this project to provide matching funds.

"(F) The availability of funds from other sources for this project.

"(3) After considering the recommendations of the Council, the Federal Chief Information Officer shall have final authority to determine which of the candidate projects shall be funded from the Fund.

"(c) The Fund may be used to fund the integrated Internet-based system under section 3602(a)(13).

"(d) None of the funds provided from the Fund may be transferred to any agency until 15 days after the Federal Chief Information Officer has submitted to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Governmental Affairs of the Senate, the Committee on Government Reform of the House of Representatives, and the appropriate authorizing committees of the Senate and the House of Representatives, a notification and description of how the funds are to be allocated and how the expenditure will further the purposes of this chapter.

"(e) The Federal Chief Information Officer shall submit an annual report to the President and Congress on the operation of the Fund. The report shall describe—

"(1) all projects which the Federal Chief Information Officer has approved for funding from the Fund;

"(2) the results that have been achieved to date for these funded projects; and

"(3) any recommendations for changes to the amount of capital appropriated annually for the Fund, with a description of the basis for any such recommended change.

"(f) There are authorized to be appropriated to the Fund $200,000,000 in each of the fiscal years 2002 through 2004, and such sums as may be necessary for fiscal years 2005 and 2006.".

(b) TECHNICAL AND CONFORMING AMENDMENT.—The table of chapters for title 44, United States Code, is amended by inserting after the item relating to chapter 35 the following:

"36. Management and Promotion of Electronic Government Services ..... 3601".

TITLE II—FEDERAL MANAGEMENT AND PROMOTION OF ELECTRONIC GOVERNMENT SERVICES

SEC. 201. FEDERAL AGENCY RESPONSIBILITIES.

(a) IN GENERAL.—The head of each agency shall be responsible for—

(1) complying with the requirements of this Act (including the amendments made by this Act) and the related information resource management policies and information technology standards established by the Federal Chief Information Officer;

(2) ensuring that the policies and standards established by the Federal Chief Information Officer and the Chief Information Officers Council are communicated promptly and effectively to all relevant managers with information resource management responsibilities within their agency; and

(3) supporting the efforts of the Federal Chief Information Officer to develop, maintain, and promote an integrated Internet-based system of delivering Federal Government information and services to the public under chapter 36 of title 44, United States Code (as added by section 103 of this Act).

(b) CHIEF INFORMATION OFFICERS.—The Chief Information Officer of each of the agencies designated under chapter 36 of title 44, United States Code (as added by section 103 of this Act), shall be responsible for—

(1) participating in the functions of the Chief Information Officers Council; and

(2) monitoring the implementation, within their respective agencies, of information technology standards established by the Federal Chief Information Officer, including common standards for interconnectivity and interoperability, categorization and labeling of Federal Government electronic information, and computer system efficiency and security.

(c) E-GOVERNMENT STATUS REPORT.—

(1) IN GENERAL.—Each agency shall compile and submit to the Federal Chief Information Officer an E-Government Status Report on the current status of agency information and agency services available online.

(2) CONTENT.—Each report under this subsection shall contain—

(A) a list and brief description of the agency services available online;

(B) a list, by number and title, of the 25 most frequently requested agency forms avail-

able online, annotated to indicate which forms can be submitted to the agency electronically; and

(C) a summary of the type, volume, general topical areas, and currency of agency information available online.

(3) SUBMISSION.—Not later than March 1, of each year, each agency shall submit a report under this subsection to the Federal Chief Information Officer.

(4) CONSOLIDATION OF REPORTS.—Section 3516(a)(2) of title 31, United States Code, is amended—

(A) by redesignating subparagraph (C) as subparagraph (D); and

(B) by inserting after subparagraph (B) the following:

"(C) Any E-Government Status Report under section 201(c) of the E-Government Act of 2001.".

SEC. 202. COMPATIBILITY OF EXECUTIVE AGENCY METHODS FOR USE AND ACCEPTANCE OF ELECTRONIC SIGNATURES.

(a) ELECTRONIC SIGNATURES.—In order to fulfill the objectives of the Government Paperwork Elimination

Act (Public Law 105–277; 112 Stat. 2681–749 through 2681–751), each Executive agency (as defined under section 105 of title 5, United States Code) shall ensure that its methods for use and acceptance of electronic signatures are compatible with the relevant procedures and standards promulgated by the Director of the Office of Management and Budget.

(b) BRIDGE AUTHORITY FOR DIGITAL SIGNATURES.—The Administrator of the General Services Administration shall support the Director of the Office of Management and Budget by establishing the Federal bridge certification authority which shall provide a central authority to allow efficient interoperability among Executive agencies when certifying digital signatures.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the General Services Administration, to ensure the development and operation of a Federal bridge certification authority for digital signature compatibility, $7,000,000 in fiscal year 2002, and such sums as may be necessary for each fiscal year thereafter.

SEC. 203. ONLINE FEDERAL TELEPHONE DIRECTORY.

(a) IN GENERAL.—

(1) DEVELOPMENT.—The Administrator of the General Services Administration, in coordination

with the Chief Information Officers Council, shall develop and promulgate an online Federal telephone directory.

(2) ORGANIZATION.—Information in the online Federal telephone directory shall be organized and retrievable both by function and by agency name.

(3) TELEPHONE DIRECTORIES.—Information compiled for publication in the online Federal telephone directory shall be provided to local telephone book publishers, to encourage publication and dissemination of functionally arranged directories in local Federal blue pages.

(b) EXECUTIVE AGENCIES.—

(1) IN GENERAL.—Each Executive agency (as defined under section 105 of title 5, United States Code) shall publish an online agency directory, accessible by electronic link from the online Federal telephone directory.

(2) CONTENT.—Each agency directory—

(A) shall include telephone numbers and electronic mail addresses for principal departments and principal employees, subject to security restrictions and agency judgment; and

(B) shall be electronically searchable.

SEC. 204. ONLINE NATIONAL LIBRARY.

(a) IN GENERAL.—The Director of the National Science Foundation, the Secretary of the Smithsonian Institution, the Director of the National Park Service, the Director of the Institute of Museum and Library Services, and the Librarian of Congress shall establish an Online National Library after consultation with—

(1) the private sector;

(2) public, research, and academic libraries;

(3) historical societies;

(4) archival institutions; and

(5) other cultural and academic organizations.

(b) FUNCTIONS.—The Online National Library—

(1) shall provide public access to an expanding database of educational resource materials, including historical documents, photographs, audio recordings, films, and other media as appropriate, that are significant for education and research in United States history and culture;

(2) shall be functionally integrated, so that a user may have access to the resources of the Library without regard to the boundaries of the contributing institutions; and

(3) shall include educational resource materials across a broad spectrum of United States history and culture, including the fields of mathematics,

science, technology, liberal arts, fine arts, and humanities.

(c) AUTHORIZATION OF APPROPRIATIONS.—For the purposes of developing, expanding, and maintaining this Online National Library, there are authorized to be appropriated—

(1) to the National Science Foundation $5,000,000 in fiscal year 2002, and such sums as may be necessary for each fiscal year thereafter; and

(2) to the Library of Congress $5,000,000 in fiscal year 2002, and such sums as may be necessary for each fiscal year thereafter.

SEC. 205. FEDERAL COURTS.

(a) INDIVIDUAL COURT WEBSITES.—The Chief Justice of the United States and the chief judge of each circuit and district shall establish with respect to the Supreme Court or the respective court of appeal or district (including the bankruptcy court of that district) a website, that contains the following information or links to websites with the following information:

(1) Location and contact information for the courthouse, including the telephone numbers and contact names for the clerk's office and justices' or judges' chambers.

(2) Local rules and standing or general orders of the court.

(3) Individual rules, if in existence, of each justice or judge in that court.

(4) Access to docket information for each case.

(5) Access to the substance of all written opinions issued by the court, regardless of whether such opinions are to be published in the official court reporter, in a text searchable format.

(6) Access to all documents filed with the courthouse in electronic form, described under subsection (c)(2).

(7) Any other information (including forms in a format that can be downloaded) that the court determines useful to the public.

(b) MAINTENANCE OF DATA ONLINE.—

(1) UPDATE OF INFORMATION.—The information and rules on each website shall be updated regularly and kept reasonably current.

(2) CLOSED CASES.—Electronic files and docket information for cases closed for more than 1 year are not required to be made available online, except all written opinions with a date of issuance after the effective date of this section shall remain available online.

(c) ELECTRONIC FILINGS.—

(1) IN GENERAL.—Each court shall make any document that is filed electronically publicly available online. A court may convert any document that is filed in paper form to electronic form. To the extent such conversions are made, all such electronic versions of the document shall be made available online.

(2) EXCEPTIONS.—

(A) IN GENERAL.—Documents that are filed that are not otherwise available to the public, such as documents filed under seal, shall not be made available online.

(B) LIMITATION.—

(i) IN GENERAL.—A party, witness, or other person with an interest may file a motion with the court to redact any document that would be made available online under this section.

(ii) REDACTION.—A redaction under this subparagraph shall be made only to—

(I) the electronic form of the document made available online; and

(II) the extent necessary to protect important privacy concerns.

(C) PRIVACY CONCERNS.—The Judicial Conference of the United States may promulgate rules under this subsection to protect important privacy concerns.

(d) DOCKETS WITH LINKS TO DOCUMENTS.—The Judicial Conference of the United States, in consultation with the Federal Chief Information Officer, shall explore the feasibility of technology to post online dockets with links allowing all filings, decisions, and rulings in each case to be obtained from the docket sheet of that case.

(e) COST OF PROVIDING ELECTRONIC DOCKETING INFORMATION.—Section 503(a) of the Judiciary Appropriations Act, 1992 (28 U.S.C. 1913 note) is amended in the first sentence by striking "shall hereafter" and inserting "may, only to the extent necessary,".

(f) TIME REQUIREMENTS.—Not later than 2 years after the effective date of this Act, the websites under subsection (a) shall be established, except that access to documents filed in electronic form shall be established not later than 4 years after that effective date.

(g) OPT OUT.—

(1) IN GENERAL.—

(A) ELECTION.—

(i) NOTIFICATION.—The Chief Justice of the United States or a chief judge may

submit a notification to the Administrative Office of the United States Courts to elect not to comply with any requirement of this section with respect to the Supreme Court, a court of appeals, or district (including the bankruptcy court of that district).

(ii) CONTENTS.—A notification submitted under this subparagraph shall state—

(I) the reasons for the noncompliance; and

(II) the online methods, if any, or any alternative methods, such court or district is using to provide greater public access to information.

(B) EXCEPTION.—To the extent that the Supreme Court, a court of appeals, or district maintains a website under subsection (a), the Supreme Court or that court of appeals or district shall comply with subsection (b)(1).

(2) REPORT.—Not later than 1 year after the effective date of this Act, the Judicial Conference of the United States shall submit a report to the Committees on Governmental Affairs and the Judiciary of the Senate and the Committees on Government

Reform and the Judiciary of the House of Representatives that—

(A) contains all notifications submitted to the Administrative Office of the United States Courts under this subsection; and

(B) summarizes and evaluates all notifications.

SEC. 206. REGULATORY AGENCIES.

(a) INFORMATION PROVIDED BY AGENCIES ONLINE.—To the extent practicable, each agency (as defined under section 551 of title 5, United States Code) shall—

(1) establish a website with information about that agency; and

(2) post on the website all information—

(A) required to be published in the Federal Register under section 552(a)(1) of title 5, United States Code; and

(B) made available for public inspection and copying under section 552(a) (2) and (5) of title 5, United States Code, after the effective date of this section.

(b) COMPLIANCE.—An agency may comply with subsection (a)(2) by providing hypertext links on a website directing users to other websites where such information may be found. To the extent that an agency provides

hypertext links, the agency shall provide clear instructions to users on how to access the information sought within the external website to which the links direct users.

(c) SUBMISSIONS BY ELECTRONIC MEANS.—To the extent practicable, agencies shall accept submissions under section 553(c) of title 5, United States Code, by electronic means, including e-mail and telefacsimile.

(d) ELECTRONIC DOCKETING.—

(1) IN GENERAL.—To the extent practicable, agencies shall, in consultation with the Federal Chief Information Officer, and in connection with the forum established under section 3602(a)(10) of title 44, United States Code (as added by section 103 of this Act), establish and maintain on their websites electronic dockets for rulemakings under section 553 of title 5, United States Code.

(2) INFORMATION AVAILABLE.—Agency electronic dockets shall make publicly available online—

(A) all agency notices, publications, or statements in connection with each rulemaking; and

(B) to the extent practicable, all submissions under section 553(c) of title 5, United States Code, whether or not submitted electronically.

(e) OPT OUT.—

(1) IN GENERAL.—

(A) NOTIFICATION.—An agency may submit a notification to the Federal Chief Information Officer to elect to not comply with any requirement of subsection (d).

(B) CONTENTS.—A notification submitted under this paragraph shall state—

(i) the reasons for the noncompliance; and

(ii) the online methods, if any, or any alternative methods, the agency is using to provide greater public access to regulatory proceedings.

(2) REPORT.—Not later than October 1, of each year, the Federal Chief Information Officer shall submit a report to the Committee on Governmental Affairs of the Senate and the Committee on Government Reform of the House of Representatives that—

(A) contains all notifications submitted to the Federal Chief Information Officer under this subsection; and

(B) summarizes and evaluates all notifications.

(f) TIME LIMITATION.—To the extent practicable, agencies shall implement subsections (a) and (b) not later than 2 years after the effective date of this Act, and subsection (c) not later than 4 years after that effective date.

SEC. 207. INTEGRATED REPORTING FEASIBILITY STUDY AND PILOT PROJECTS.

(a) PURPOSES.—The purposes of this section are to—

(1) enhance the interoperability of Federal information systems;

(2) assist the public, including the regulated community, in electronically submitting information to agencies under Federal requirements, by reducing the burden of duplicate collection and ensuring the accuracy of submitted information; and

(3) enable any person to integrate and obtain similar information held by 1 or more agencies under 1 or more Federal requirements without violating the privacy rights of an individual.

(b) DEFINITIONS.—In this section, the term—

(1) "agency" means an Executive agency as defined under section 105 of title 5, United States Code; and

(2) "person" means any individual, trust, firm, joint stock company, corporation (including a gov-

ernment corporation), partnership, association, State, municipality, commission, political subdivision of a State, interstate body, or agency or component of the Federal Government.

(c) REPORT.—

(1) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Federal Chief Information Officer shall conduct a study and submit a report to the Committee on Governmental Affairs of the Senate and the Committee on Government Reform of the House of Representatives on the feasibility of integrating Federal information systems across agencies.

(2) CONTENT.—The report under this section shall—

(A) address the feasibility of integrating data elements used in the electronic collection of information within databases established under Federal statute without reducing the quality, accessibility, scope, or utility of the information contained in each database;

(B) address the feasibility of developing, or enabling the development of, software, including Internet-based tools, for use by reporting persons in assembling, documenting, and validating

the accuracy of information electronically submitted to agencies under nonvoluntary, statutory, and regulatory requirements; and

(C) address the feasibility of developing a distributed information system involving, on a voluntary basis, at least 2 agencies, that—

(i) provides consistent, dependable, and timely public access to the information holdings of 1 or more agencies, or some portion of such holdings, including the underlying raw data, without requiring public users to know which agency holds the information;

(ii) provides methods for input on improving the quality and integrity of the data, including correcting errors in submission, consistent with the need to archive changes made to the data; and

(iii) allows any person to integrate public information held by the participating agencies;

(D) address the feasibility of incorporating other elements related to the purposes of this section at the discretion of the Federal Chief Information Officer; and

(E) make recommendations that Congress or the executive branch can implement, through the use of integrated reporting and information systems, to reduce the burden on reporting and strengthen public access to databases within and across agencies.

(d) PILOT PROJECTS TO ENCOURAGE INTEGRATED COLLECTION AND MANAGEMENT OF DATA AND INTEROPERABILITY OF FEDERAL INFORMATION SYSTEMS.—

(1) IN GENERAL.—In order to provide input to the study under subsection (c) the Federal Chief Information Officer shall implement a series of no more than 5 pilot projects that integrate data elements. The Federal Chief Information Officer shall consult with agencies, the regulated community, public interest organizations, and the public on the implementation.

(2) GOALS OF PILOT PROJECTS.—

(A) IN GENERAL.—Each goal described under subparagraph (B) shall be addressed by at least 1 pilot project each.

(B) GOALS.—The goals under this paragraph are to—

(i) reduce information collection burdens by eliminating duplicative data ele-

ments within 2 or more reporting requirements;

(ii) create interoperability between or among public databases managed by 2 or more agencies using technologies and techniques that facilitate public access; and

(iii) develop, or enable the development, of software to reduce errors in electronically submitted information.

(3) INPUT.—Each pilot project shall seek input from users on the utility of the pilot project and areas for improvement.

(e) CONSULTATION IN PREPARING THE REPORT AND PILOT PROJECT.—The Federal Chief Information Officer shall coordinate with the Office of Information and Regulatory Affairs, and to the extent practicable, shall work with relevant agencies, and State, tribal, and local governments in carrying out the report and pilot projects under this section.

(f) PRIVACY PROTECTIONS.—The activities authorized in this section shall afford protections for confidential business information consistent with section 552(b)(4) of title 5, United States Code and personal privacy information under section 552a of title 5, United States Code and other relevant law.

SEC. 208. ONLINE ACCESS TO FEDERALLY FUNDED RESEARCH AND DEVELOPMENT.

(a) DEFINITIONS.—In this section, the term—

(1) "essential information" shall include—

(A) information identifying any person performing research and development under an agreement and the agency providing the funding;

(B) an abstract describing the research;

(C) references to published results; and

(D) other information determined appropriate by the interagency task force convened under this section; and

(2) "federally funded research and development"—

(A) shall be defined by the interagency task force, with reference to applicable Office of Management and Budget circulars and Department of Defense regulations; and

(B) shall include funds provided to—

(i) institutions other than the Federal Government; and

(ii) Federal research and development centers.

(b) INTERAGENCY TASK FORCE.—The Federal Chief Information Officer shall—

(1) convene an interagency task force to—

(A) review databases, owned by the Federal Government and other entities, that collect and maintain data on federally funded research and development to—

(i) determine areas of duplication; and

(ii) identify data that is needed but is not being collected or efficiently disseminated to the public or throughout the Government;

(B) develop recommendations for the Federal Chief Information Officer on standards for the collection and electronic dissemination of essential information about federally funded research and development that addresses public availability and agency coordination and collaboration; and

(C) make recommendations to the Federal Chief Information Officer on—

(i) which agency or agencies should develop and maintain databases and a website containing data on federally funded research and development;

(ii) whether to continue using existing databases, to use modified versions of databases, or to develop another database;

(iii) the appropriate system architecture to minimize duplication and use emerging technologies;

(iv) criteria specifying what federally funded research and development projects should be included in the databases; and

(v) standards for security of and public access to the data; and

(2) not later than 1 year of the date of enactment of this Act, after offering an opportunity for public comment, promulgate standards and regulations based on the recommendations, including a determination as to which agency or agencies should develop and maintain databases and a website containing data on federally funded research and development.

(c) MEMBERSHIPS.—The interagency task force shall consist of the Federal Chief Information Officer and representatives from—

(1) the Department of Commerce;

(2) the Department of Defense;

(3) the Department of Energy;

(4) the Department of Health and Human Services;

(5) the National Aeronautics and Space Administration;

(6) the National Archives and Records Administration;

(7) the National Science Foundation;

(8) the National Institute of Standards and Technology; and

(9) any other agency determined by the Federal Chief Information Officer.

(d) CONSULTATION.—The task force shall consult with—

(1) Federal agencies supporting research and development;

(2) members of the scientific community;

(3) scientific publishers; and

(4) interested persons in the private and nonprofit sectors.

(e) DEVELOPMENT AND MAINTENANCE OF DATABASE AND WEBSITE.—

(1) IN GENERAL.—

(A) DATABASE AND WEBSITE.—The agency or agencies determined under subsection (b)(2), with the assistance of any other agency

designated by the Federal Chief Information Officer, shall develop—

(i) a database if determined to be necessary by the Federal Chief Information Officer; and

(ii) a centralized, searchable website for the electronic dissemination of information reported under this section, with respect to information made available to the public and for agency coordination and collaboration.

(B) CONFORMANCE TO STANDARDS.—The website and any necessary database shall conform to the standards promulgated by the Federal Chief Information Officer.

(2) LINKS.—Where the results of the federally funded research have been published, the website shall contain links to the servers of the publishers if possible. The website may include links to other relevant websites containing information about the research.

(3) OTHER RESEARCH.—The website may include information about published research not funded by the Federal Government, and links to the servers of the publishers.

(4) DEVELOPMENT AND OPERATION.—The Federal Chief Information Officer shall oversee the development and operation of the website. The website shall be operational not later than 2 years after the date of enactment of this Act.

(f) PROVISION OF INFORMATION.—Any agency that funds research and development meeting the criteria promulgated by the Federal Chief Information Officer shall provide the required information in the manner prescribed by the Federal Chief Information Officer. An agency may impose reporting requirements necessary for the implementation of this section on recipients of Federal funding as a condition of the funding.

(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated for the development and maintenance of the centralized website and any necessary database under this section, $1,000,000 in fiscal year 2002, $5,000,000 in fiscal year 2003, and such sums as may be necessary for fiscal years 2004 through 2006.

SEC. 209. COMMON PROTOCOLS FOR GEOGRAPHIC INFORMATION SYSTEMS.

(a) IN GENERAL.—The Secretary of the Interior, in consultation with the National Institute of Standards and Technology and other agencies, private sector experts, commercial and international standards groups, and other

interested parties, shall facilitate the development of common protocols for the development, acquisition, maintenance, distribution, and application of geographic information.

(b) FEDERAL CHIEF INFORMATION OFFICER.—The Federal Chief Information Officer shall—

(1) oversee the interagency initiative to develop common protocols;

(2) coordinate with State, local, and tribal governments and other interested persons on aligning geographic information; and

(3) promulgate the standards relating to the protocols.

(c) COMMON PROTOCOLS.—The common protocols shall be designed to—

(1) maximize the degree to which unclassified geographic information from various sources can be made electronically compatible; and

(2) promote the development of interoperable geographic information systems technologies that will allow widespread, low-cost use and sharing of geographic data by Federal agencies, State, local, and tribal governments, and the public.

SEC. 210. SHARE-IN-SAVINGS PROGRAM IMPROVEMENTS.

Section 5311 of the Clinger-Cohen Act of 1996 (divisions D and E of Public Law 104–106; 110 Stat. 692; 40 U.S.C. 1491) is amended—

(1) in subsection (a)—

(A) by striking "the heads of two executive agencies to carry out" and inserting "heads of executive agencies to carry out a total of five projects under";

(B) by striking "and" at the end of paragraph (1);

(C) by striking the period at the end of paragraph (2) and inserting "; and"; and

(D) by adding at the end the following:

"(3) encouraging the use of the contracting and sharing approach described in paragraphs (1) and (2) by allowing the head of the executive agency conducting a project under the pilot program—

"(A) to retain, out of the appropriation accounts of the executive agency in which savings computed under paragraph (2) are realized as a result of the project, up to the amount equal to half of the excess of—

"(i) the total amount of the savings; over

"(ii) the total amount of the portion of the savings paid to the private sector source for such project under paragraph (2); and

"(B) to use the retained amount to acquire additional information technology.";

(2) in subsection (b)—

(A) by inserting "a project under" after "authorized to carry out"; and

(B) by striking "carry out one project and"; and

(3) by striking subsection (c) and inserting the following:

"(c) EVOLUTION BEYOND PILOT PROGRAM.—(1) The Administrator may provide general authority to the heads of executive agencies to use a share-in-savings contracting approach to the acquisition of information technology solutions for improving mission-related or administrative processes of the Federal Government if—

"(A) after reviewing the experience under the five projects carried out under the pilot program under subsection (a), the Administrator finds that the approach offers the Federal Government an opportunity to improve its use of information technology and to reduce costs; and

"(B) issues guidance for the exercise of that authority.

"(2) For the purposes of paragraph (1), a share-in-savings contracting approach provides for contracting as described in paragraph (1) of subsection (a) together with the sharing and retention of amounts saved as described in paragraphs (2) and (3) of that subsection.

"(3) In exercising the authority provided to the Administrator in paragraph (1), the Administrator shall consult with the Federal Chief Information Officer.

"(d) AVAILABILITY OF RETAINED SAVINGS.—(1) Amounts retained by the head of an executive agency under subsection (a)(3) or (c) shall, without further appropriation, remain available until expended and may be used by the executive agency for any of the following purposes:

"(A) The acquisition of information technology.

"(B) Support for share-in-savings contracting approaches throughout the agency including—

"(i) education and training programs for share-in-savings contracting;

"(ii) any administrative costs associated with the share-in-savings contract from which the savings were realized; or

"(iii) the cost of employees who specialize in share-in-savings contracts.

"(2) Amounts so retained from any appropriation of the executive agency not otherwise available for the acquisition of information technology shall be transferred to any appropriation of the executive agency that is available for such purpose.".

SEC. 211. ENHANCING CRISIS MANAGEMENT THROUGH ADVANCED INFORMATION TECHNOLOGY.

(a) IN GENERAL.—

(1) STUDY ON ENHANCEMENT OF CRISIS RESPONSE.—Not later than 90 days after the date of enactment of this Act, the Federal Emergency Management Agency shall enter into a contract with the National Research Council of the National Academy of Sciences to conduct a study on using information technology to enhance crisis response and consequence management of natural and manmade disasters.

(2) CONTENT.—The study under this subsection shall address—

(A) a research and implementation strategy for effective use of information technology in crisis response and consequence management, including the more effective use of tech-

nologies, management of information technology research initiatives, and incorporation of research advances into the information and communications systems of—

(i) the Federal Emergency Management Agency; and

(ii) other Federal, State, and local agencies responsible for crisis response and consequence management; and

(B) opportunities for research and development on enhanced technologies for—

(i) improving communications with citizens at risk before and during a crisis;

(ii) enhancing the use of remote sensor data and other information sources for planning, mitigation, response, and advance warning;

(iii) building more robust and trustworthy systems for communications in crises;

(iv) facilitating coordinated actions among responders through more interoperable communications and information systems; and

(v) other areas of potential improvement as determined during the course of the study.

(3) REPORT.—Not later than 2 years after the date on which a contract is entered into under paragraph (1), the National Research Council shall submit a report on the study, including findings and recommendations to—

(A) the Committee on Governmental Affairs of the Senate;

(B) the Committee on Government Reform of the House of Representatives; and

(C) the Federal Emergency Management Agency.

(4) INTERAGENCY COOPERATION.—The Federal Emergency Management Agency and other Federal departments and agencies with responsibility for disaster relief and emergency assistance shall fully cooperate with the National Research Council in carrying out this section.

(5) EXPEDITED PROCESSING OF SECURITY CLEARANCES.—For the purpose of facilitating the commencement of the study under this section, the Federal Emergency Management Agency and other relevant agencies shall expedite to the fullest extent

possible the processing of security clearances that are necessary for the National Research Council.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Federal Emergency Management Agency for research under this subsection, $800,000 for fiscal year 2002.

(b) PILOT PROJECTS.—Based on the results of the research conducted under subsection (a), the Federal Chief Information Officer shall initiate pilot projects with the goal of maximizing the utility of information technology in disaster management. The Federal Chief Information Officer shall cooperate with the Federal Emergency Management Agency, other relevant agencies, and, if appropriate, State, local, and tribal governments, in initiating such pilot projects.

SEC. 212. FEDERAL INFORMATION TECHNOLOGY TRAINING CENTER.

(a) IN GENERAL.—In consultation with the Federal Chief Information Officer, the Chief Information Officers Council, and the Administrator of General Services, the Director of the Office of Personnel Management shall establish and operate a Federal Information Technology Training Center (in this section referred to as the "Training Center").

(b) FUNCTIONS.—The Training Center shall—

(1) analyze, on an ongoing basis, the personnel needs of the Federal Government related to information technology and information resource management;

(2) design curricula, training methods, and training schedules that correspond to the projected personnel needs of the Federal Government related to information technology and information resource management; and

(3) recruit and train Federal employees in information technology disciplines, as necessary, at a rate that ensures that the Federal Government's information resource management needs are met.

(c) CURRICULA.—The curricula of the Training Center—

(1) shall cover a broad range of information technology disciplines corresponding to the specific needs of Federal agencies;

(2) shall be adaptable to achieve varying levels of expertise, ranging from basic nonoccupational computer training to expert occupational proficiency in specific information technology disciplines, depending on the specific information resource management needs of Federal agencies;

(3) shall be developed and applied according to rigorous academic standards; and

(4) shall be designed to maximize efficiency through the use of self-paced courses, online courses, on-the-job training, and the use of remote instructors, wherever such features can be applied without reducing training effectiveness or negatively impacting academic standards.

(d) EMPLOYEE PARTICIPATION.—Subject to information resource management needs and the limitations imposed by resource needs in other occupational areas, agencies shall encourage their employees to participate in the occupational information technology curricula of the Training Center.

(e) AGREEMENTS FOR SERVICE.—Employees who participate in full-time training at the Training Center for a period of 6 months or longer shall be subject to an agreement for service after training under section 4108 of title 5, United States Code.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Office of Personnel Management for developing and operating the Training Center, $7,000,000 in fiscal year 2002, and such sums as may be necessary for each fiscal year thereafter.

SEC. 213. COMMUNITY TECHNOLOGY CENTERS.

(a) STUDY AND REPORT.—Not later than 2 years after the effective date of this Act, the Secretary of Education, in consultation with the Secretary of Agriculture, the Secretary of Housing and Urban Development, the National Telecommunications and Information Administration, and the Federal Chief Information Officer, shall—

(1) conduct a study to evaluate the best practices of community technology centers that receive Federal funds; and

(2) submit a report on the study to—

(A) the Committee on Governmental Affairs of the Senate;

(B) the Committee on Health, Education, Labor, and Pensions of the Senate;

(C) the Committee on Government Reform of the House of Representatives; and

(D) the Committee on Education and the Workforce of the House of Representatives.

(b) CONTENT.—The report shall include—

(1) an evaluation of the best practices being used by successful community technology centers;

(2) a strategy for—

(A) continuing the evaluation of best practices used by community technology centers; and

(B) establishing a network to share information and resources as community technology centers evolve;

(3) the identification of methods to expand the use of best practices to assist community technology centers, public libraries, and other institutions that provide computer and Internet access to the public;

(4) a database of all community technology centers receiving Federal funds, including—

(A) each center's name, location, services provided, director, other points of contact, number of individuals served; and

(B) other relevant information;

(5) an analysis of whether community technology centers have been deployed effectively in urban and rural areas throughout the Nation; and

(6) recommendations of how to—

(A) enhance the development of community technology centers; and

(B) establish a network to share information and resources.

(c) COOPERATION.—All agencies that fund community technology centers shall provide to the Department of Education any information and assistance necessary for

the completion of the study and the report under this section.

(d) ASSISTANCE.—

(1) IN GENERAL.—The Federal Chief Information Officer shall work with the Department of Education, other relevant Federal agencies, and other interested persons in the private and nonprofit sectors to—

(A) assist in the implementation of recommendations; and

(B) identify other ways to assist community technology centers, public libraries, and other institutions that provide computer and Internet access to the public.

(2) TYPES OF ASSISTANCE.—Assistance under this paragraph may include—

(A) contribution of funds;

(B) donations of equipment, and training in the use and maintenance of the equipment; and

(C) the provision of basic instruction or training material in computer skills and Internet usage.

(e) TRAINING CENTER.—The Federal Information Technology Training Center established under section 212

of this Act shall make applicable information technology curricula available to members of the public through the community technology centers.

(f) ONLINE TUTORIAL.—

(1) IN GENERAL.—The Secretary of Education, in consultation with the Federal Chief Information Officer, the National Science Foundation, and other interested persons, shall develop an online tutorial that—

(A) explains how to access information and services on the Internet; and

(B) provides a guide to available online resources.

(2) DISTRIBUTION.—The Secretary of Education shall distribute information on the tutorial to community technology centers, public libraries, and other institutions that afford Internet access to the public.

(g) PROMOTION OF COMMUNITY TECHNOLOGY CENTERS.—In consultation with other agencies and organizations, the Department of Education shall promote the availability of community technology centers to raise awareness within each community where such a center is located.

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Department of Education for the study of best practices at community technology centers, for the development and dissemination of the online tutorial, and for the promotion of community technology centers under this section $2,000,000 in fiscal year 2002, $2,000,000 in fiscal year 2003, and such sums as are necessary in fiscal years 2004 through 2006.

SEC. 214. DISPARITIES IN ACCESS TO THE INTERNET.

(a) STUDY AND REPORT.—Not later than 1 year after the effective date of this Act—

(1) the Federal Chief Information Officer shall enter into an agreement with a nonprofit, nonpartisan organization to conduct a study on disparities in Internet access across various demographic distributions; and

(2) the nonprofit, nonpartisan organization shall conduct the study and submit a report to—

(A) the Committee on Governmental Affairs of the Senate; and

(B) the Committee on Government Reform of the House of Representatives.

(b) CONTENT.—The report shall include a study of—

(1) how disparities in Internet access influence the effectiveness of online Government services;

(2) how the increase in online Government services is influencing the disparities in Internet access; and

(3) any related societal effects arising from the interplay of disparities in Internet access and the increase in online Government services.

(c) RECOMMENDATIONS.—The report shall include recommendations on actions to ensure that online Government initiatives shall not have the unintended result of increasing any deficiency in public access to Government services.

(d) POLICY CONSIDERATIONS.—When promulgating policies and implementing programs regarding the provision of services over the Internet, the Federal Chief Information Officer and agency heads shall—

(1) consider the impact on persons without access to the Internet; and

(2) ensure that the availability of Government services has not been diminished for individuals who lack access to the Internet.

(e) TECHNOLOGY CONSIDERATIONS.—To the extent feasible, the Federal Chief Information Officer and agency heads shall pursue technologies that make Government services and information more accessible to individuals who do not own computers or have access to the Internet.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $950,000 in fiscal year 2002 to carry out this section.

SEC. 215. ACCESSIBILITY, USABILITY, AND PRESERVATION OF GOVERNMENT INFORMATION.

(a) DEFINITIONS.—In this section, the term—

(1) "agency" has the meaning given under section 3502(1) of title 44, United States Code;

(2) "Board" means the Advisory Board on Government Information established under subsection (b);

(3) "Government information" means information created, collected, processed, disseminated, or disposed of by or for the Federal Government;

(4) "information" means any communication or representation of knowledge such as facts, data, or opinions, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms; and

(5) "permanent public access" means the process by which applicable Government information that has been disseminated on the Internet is preserved for current, continuous, and future public access.

(b) ADVISORY BOARD.—

(1) ESTABLISHMENT.—There is established the Advisory Board on Government Information. The Board shall be subject to the Federal Advisory Committee Act (5 U.S.C. App.).

(2) MEMBERS.—The Federal Chief Information Officer shall appoint the members of the Board who shall include representatives from appropriate agencies and interested persons from the public, private, and nonprofit sectors.

(3) FUNCTIONS.—The Board shall conduct studies and submit recommendations as provided by this section to the Federal Chief Information Officer.

(4) TERMINATION.—The Board shall terminate 3 years after the effective date of this Act.

(c) CATALOGUING AND INDEXING STANDARDS.—

(1) AGENCY FUNCTIONS.—

(A) REPORTS.—Not later than 180 days after the effective date of this Act, each agency shall submit a report to the Board on all cataloguing and indexing standards used by that agency, including taxonomies being used to classify information.

(B) PRIORITIES AND SCHEDULES.—Not later than 180 days after the issuance of a cir-

ecular or the promulgation of proposed regulations under paragraph (3), each agency shall consult with interested persons and develop priorities and schedules for making the agency indexing and cataloguing standards fully interoperable with other standards in use in the Federal Government.

(2) BOARD FUNCTIONS.—The Board shall—

(A) not later than 1 year after the effective date of this Act—

(i) review cataloguing and indexing standards used by agencies; and

(ii) determine whether the systems using those standards are generally recognized, in the public domain, and interoperable; and

(B) not later than 18 months after the effective date of this Act—

(i) consult interested persons;

(ii) analyze and determine agency public domain standards that are not fully interoperable with other standards; and

(iii) recommend priorities and schedules for making such standards fully interoperable.

(3) FEDERAL CHIEF INFORMATION OFFICER FUNCTIONS.—

(A) PROHIBITION OF PROPRIETARY SYSTEMS.—

(i) IN GENERAL.—After the submission of recommendations by the Board under paragraph (2) and public notice and opportunity for comment, the Federal Chief Information Officer shall prohibit agencies from using any system the Federal Chief Information Officer determines to be proprietary.

(ii) WAIVER.—The Federal Chief Information Officer may waive the application of clause (i), if the Federal Chief Information Officer determines there is a compelling reason to continue the use of the system.

(B) INTEROPERABILITY STANDARDS.—Not later than 18 months after the effective date of this Act and after public notice and opportunity for comment, the Office of Management and Budget, acting through the Federal Chief Information Officer, shall issue a circular or promulgate proposed and final regulations requiring

the interoperability standards of cataloguing and indexing standards used by agencies.

(d) PERMANENT PUBLIC ACCESS STANDARDS.—

(1) AGENCY FUNCTIONS.—

(A) REPORT TO BOARD.—Not later than 180 days after the effective date of this Act, each agency shall submit a report to the Board on any action taken by the agency to—

(i) preserve public access to information disseminated by the Federal Government on the Internet; and

(ii) set standards and develop policies to ensure permanent public access to information disseminated by the Federal Government on the Internet.

(B) COMPLIANCE WITH REGULATIONS.—Not later than 1 year after the issuance of the circular or the promulgation of final regulations under paragraph (3), and on October 1, of each year thereafter, each agency shall submit a report on compliance of that agency with such regulations to—

(i) the Federal Chief Information Officer;

(ii) the Committee on Governmental Affairs of the Senate; and

(iii) the Committee on Government Reform of the House of Representatives.

(2) BOARD FUNCTIONS.—

(A) RECOMMENDED STANDARDS.—Not later than 30 months after the effective date of this Act and after consultation with interested persons, the Board shall submit recommendations to the Federal Chief Information Officer on standards for permanent public access to information disseminated by the Federal Government on the Internet.

(B) CONTENTS.—The recommendations under subparagraph (A) shall include—

(i) a definition of the types of information to which the standards apply; and

(ii) the process by which an agency—

(I) applies that definition to information disseminated by the agency on the Internet; and

(II) implements permanent public access.

(3) FEDERAL CHIEF INFORMATION OFFICER FUNCTIONS.—

(A) IN GENERAL.—After the submission of recommendations by the Board under paragraph (2) and public notice and opportunity for comment, the Office of Management and Budget, acting through the Federal Chief Information Officer, shall issue a circular or promulgate proposed and final regulations establishing permanent public access standards for agencies.

(B) COMPLIANCE.—The Federal Chief Information Officer shall—

(i) work with agencies to ensure timely and ongoing compliance with this subsection; and

(ii) post agency reports on a centralized searchable database, with a link to the integrated Internet-based system established under section 3602(a)(13) of title 44, United States Code, as added by this Act.

(e) INVENTORIES.—

(1) AGENCY FUNCTIONS.—

(A) IN GENERAL.—

(i) INVENTORIES.—Not later than 180 days after the effective date of this Act, each agency shall inventory agency

websites, including all directories and subdirectories of such websites established by the agency or contractors of the agency.

(ii) INDIVIDUAL DOCUMENTS.—Nothing in this paragraph shall preclude an agency from inventorying individual documents on a website.

(iii) ASSISTANCE.—The Federal Chief Information Officer and the General Services Administration shall assist agencies with inventories under this subsection.

(B) COMPLETION OF INVENTORY.—Each agency shall complete inventories in accordance with the circular issued or regulations promulgated under paragraph (3) and post the inventories on the Internet.

(2) BOARD FUNCTIONS.—Not later than 1 year after the effective date of this Act, the Board shall—

(A) consult with interested parties;

(B) identify for inventory purposes all classes of Government information, except classes of information—

(i) the existence of which is classified; or

(ii) is of such a sensitive nature, that disclosure would harm the public interest; and

(C) make recommendations on—

(i) the classes of information to be inventoried; and

(ii) how the information within those classes should be inventoried.

(3) FEDERAL CHIEF INFORMATION OFFICER FUNCTIONS.—

(A) GUIDANCE.—After submission of recommendations by the Board under paragraph (2) and public notice and opportunity for comment, the Office of Management and Budget, acting through the Chief Information Officer, shall issue a circular or promulgate proposed and final regulations to provide guidance and requirements for inventorying under this subsection.

(B) CONTENTS.—The circular or regulations under this paragraph shall include—

(i) requirements for the completion of inventories of some portion of Government information identified by the Board;

(ii) the scope of required inventories;

(iii) a schedule for completion; and

(iv) the classes of information required to be inventoried by law.

(C) LINKING OF INVENTORIES.—The Federal Chief Information Officer shall link inventories posted by agencies under this subsection to the integrated Internet-based system established under section 3602(a)(13) of title 44, United States Code, as added by this Act.

(f) STATUTORY AND REGULATORY REVIEW.—Not later than 180 days after the effective date of this Act, the General Accounting Office shall—

(1) conduct a review of all statutory and regulatory requirements of agencies to list and describe Government information;

(2) analyze the inconsistencies, redundancies, and inadequacies of such requirements; and

(3) submit a report on the review and analysis to—

(A) the Federal Chief Information Officer;

(B) the Committee on Governmental Affairs of the Senate; and

(C) the Committee on Government Reform of the House of Representatives.

(g) CATALOGUING AND INDEXING DETERMINATIONS.—

(1) AGENCY FUNCTIONS.—

(A) PRIORITIES AND SCHEDULES.—Not later than 180 days after the issuance of a circular or the promulgation of proposed regulations under paragraph (3), each agency shall consult with interested persons and develop priorities and schedules for cataloguing and indexing Government information. Agency priorities and schedules shall be made available for public review and comment and shall be linked on the Internet to an agency's inventories.

(B) COMPLIANCE WITH REGULATIONS.—Not later than 1 year after the issuance of the circular or the promulgation of final regulations under paragraph (3), and on October 1, of each year thereafter, each agency shall submit a report on compliance of that agency with such circular or regulations to—

(i) the Federal Chief Information Officer;

(ii) the Committee on Governmental Affairs of the Senate; and

(iii) the Committee on Government Reform of the House of Representatives.

(2) BOARD FUNCTIONS.—The Board shall—

(A) not later than 1 year after the effective date of this Act—

(i) review the report submitted by the General Accounting Office under subsection (f); and

(ii) review the types of Government information not covered by cataloguing or indexing requirements; and

(B) not later than 18 months after receipt of agency inventories—

(i) consult interested persons;

(ii) review agency inventories; and

(iii) make recommendations on—

(I) which Government information should be catalogued and indexed; and

(II) the priorities for the cataloguing and indexing of that Government information, including priorities required by statute or regulation.

(3) FEDERAL CHIEF INFORMATION OFFICER FUNCTIONS.—

(A) IN GENERAL.—After the submission of recommendations by the Board under paragraph (2) and public notice and opportunity for comment, the Office of Management and Budget, acting through the Federal Chief Information Officer, shall issue a circular or promulgate proposed and final regulations that—

(i) specify which Government information is required to be catalogued and indexed; and

(ii) establish priorities for the cataloguing and indexing of that information.

(B) COMPLIANCE.—The Federal Chief Information Officer shall—

(i) work with agencies to ensure timely and ongoing compliance with this subsection; and

(ii) post agency reports and indexes and catalogues on a centralized searchable database, with a link to the integrated Internet-based system established under section 3602(a)(13) of title 44, United States Code, as added by this Act.

(h) AVAILABILITY OF GOVERNMENT INFORMATION ON THE INTERNET.—Not later than 1 year after the com-

pletion of the agency inventory referred to under subsection (e)(1)(B), each agency shall—

(1) consult with the Board and interested persons;

(2) determine which Government information the agency intends to make available and accessible to the public on the Internet and by other means;

(3) develop priorities and schedules for making that Government information available and accessible;

(4) make such final determinations, priorities, and schedules available for public comment; and

(5) post such final determinations, priorities, and schedules on an agency website with a link to the integrated Internet-based system established under section 3602(a)(13) of title 44, United States Code, as added by this Act.

SEC. 216. PUBLIC DOMAIN DIRECTORY OF FEDERAL GOVERNMENT WEBSITES.

(a) DEFINITIONS.—In this section, the term—

(1) "agency" has the meaning given under section 3502(1) of title 44, United States Code; and

(2) "directory" means a taxonomy of subjects linked to websites that is created with the participation of human editors.

(b) ESTABLISHMENT.—Not later than 2 years after the effective date of this Act, the Federal Chief Information Officer and each agency shall—

(1) develop and establish a public domain directory of Federal Government websites; and

(2) post the directory on the Internet with a link to the integrated Internet-based system established under section 3602(a)(13) of title 44, United States Code, as added by this Act.

(c) DEVELOPMENT.—With the assistance of each agency, the Federal Chief Information Officer shall—

(1) direct the development of the directory through a collaborative effort, including input from—

(A) agency librarians;

(B) Federal depository librarians; and

(C) other interested parties; and

(2) develop a public domain taxonomy of subjects used to review and categorize Federal Government websites.

(d) UPDATE.—With the assistance of each agency, the Federal Chief Information Officer shall—

(1) update the directory; and

(2) solicit interested persons for improvements to the directory.

SEC. 217. STANDARDS FOR AGENCY WEBSITES.

Not later than 1 year after the effective date of this Act, the Federal Chief Information Officer shall promulgate standards and criteria for agency websites that include—

(1) requirements that websites include direct links to—

(A) privacy statements;

(B) descriptions of the mission and statutory authority of the agency;

(C) the electronic reading rooms of the agency relating to the disclosure of information under section 552 of title 5, United States Code (commonly referred to as the Freedom of Information Act);

(D) agency regulations, rules, and rulemakings;

(E) information about the organizational structure of the agency, with an outline linked to the agency on-line staff directory; and

(F) the strategic plan of the agency developed under section 306 of title 5, United States Code; and

(2) minimum agency goals to assist public users to navigate agency websites, including—

(A) speed of retrieval of search results;

(B) the relevance of the results; and

(C) tools to aggregate and disaggregate data.

SEC. 218. PRIVACY PROVISIONS.

(a) DEFINITIONS.—In this section, the term—

(1) "agency" has the meaning given under section 551(1) of title 5, United States Code;

(2) "information system" means a discrete set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information, in accordance with defined procedures that—

(A) electronically collects or maintains personally identifiable information on 10 or more individuals; or

(B) makes personally identifiable information available to the public; and

(3) "personally identifiable information" means individually identifiable information about an individual, including—

(A) a first and last name;

(B) a home or other physical address including street name and name of a city or town;

(C) an e-mail address;

(D) a telephone number;

(E) a social security number;

(F) a credit card number;

(G) a birth date, birth certificate number, or a place of birth; and

(H) any other identifier that the Federal Chief Information Officer determines permits the identification or physical or online contacting of a specific individual.

(b) PRIVACY IMPACT ASSESSMENTS.—

(1) RESPONSIBILITIES OF AGENCIES.—

(A) IN GENERAL.—Before developing or procuring an information system, or initiating a new collection of personally identifiable information that will be collected, processed, maintained, or disseminated electronically, an agency shall—

(i) conduct a privacy impact assessment;

(ii) submit the assessment to the Federal Chief Information Officer; and

(iii) after completion of any review conducted by the Federal Chief Information Officer, where practicable—

(I) publish the assessment in the Federal Register; or

(II) disseminate the assessment electronically.

(B) SENSITIVE INFORMATION.—Subparagraph (A)(iii) may be modified or waived to protect classified, sensitive, or private information contained in an assessment.

(2) CONTENTS OF A PRIVACY IMPACT ASSESSMENT.—A privacy impact assessment shall include—

(A) a description of—

(i) the information to be collected;

(ii) the purpose for the collection of the information and the reason each item of information is necessary and relevant;

(iii)(I) any notice that will be provided to persons from whom information is collected; and

(II) any choice that an individual who is the subject of the collection of information shall have to decline to provide information;

(iv) the intended uses of the information and proposed limits on other uses of the information;

(v) the intended recipients or users of the information and any limitations on ac-

cess to or reuse or redisclosure of the information;

(vi) the period for which the information will be retained;

(vii) whether and by what means the individual who is the subject of the collection of information—

(I) shall have access to the information about that individual; or

(II) may exercise other rights under section 552a of title 5, United States Code; and

(viii) security measures that will protect the information;

(B) an assessment of the potential impact on privacy relating to risks and mitigation of risks; and

(C) other information and analysis required under guidance issued by the Federal Chief Information Officer.

(3) RESPONSIBILITIES OF THE FEDERAL CHIEF INFORMATION OFFICER.—The Federal Chief Information Officer shall—

(A)(i) develop policies and guidelines for agencies on the conduct of privacy impact assessments; and

(ii) oversee the implementation of the privacy impact assessment process throughout the Government;

(B) require agencies to conduct privacy impact assessments in—

(i) developing or procuring an information system; or

(ii) planning for the initiation of a new collection of personally identifiable information;

(C) require agencies to conduct privacy impact assessments of existing information systems or ongoing collections of personally identifiable information as the Federal Chief Information Officer determines appropriate;

(D) assist agencies in developing privacy impact assessment policies; and

(E) encourage officers and employees of an agency to consult with privacy officers of that agency in completing privacy impact assessments.

(c) PRIVACY PROTECTIONS ON AGENCY WEBSITES.—

(1) PRIVACY POLICIES ON WEBSITES.—

(A) GUIDELINES FOR NOTICES.—The Federal Chief Information Officer shall develop guidelines for privacy notices on agency websites.

(B) CONTENTS.—The guidelines shall require that a privacy notice include a description of—

(i) information collected about visitors to the agency's website;

(ii) the intended uses of the information collected;

(iii) the choices that an individual may have in controlling collection or disclosure of information relating to that individual;

(iv) the means by which an individual may be able to—

(I) access personally identifiable information relating to that individual that is held by the agency; and

(II) correct any inaccuracy in that information;

(v) security procedures to protect information collected online;

(vi) the period for which information will be retained; and

(vii) the rights of an individual under statutes and regulations relating to the protection of individual privacy, including section 552a of title 5, United States Code (commonly referred to as the Privacy Act of 1974) and section 552 of that title (commonly referred to as the Freedom of Information Act).

(2) PRIVACY POLICIES IN MACHINE-READABLE FORMATS.—

(A) IN GENERAL.—The Federal Chief Information Officer shall promulgate guidelines and standards requiring agencies to translate privacy policies into a standardized machine-readable format.

(B) WAIVER OR MODIFICATION.—The Federal Chief Information Officer may waive or modify the application of subparagraph (A), if the Federal Chief Information Officer determines that—

(i) such application is impracticable; or

(ii) a more practicable alternative shall be implemented.

(C) NOTIFICATION.—Not later than 30 days after granting a waiver or modification under subparagraph (B), the Federal Chief Information Officer shall notify the Committee on Governmental Affairs of the Senate and the Committee on Government Reform of the House of Representatives of the reasons for the waiver or modification.

SEC. 219. ACCESSIBILITY TO PEOPLE WITH DISABILITIES.

All actions taken by Federal departments and agencies under this Act shall be in compliance with section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

SEC. 220. NOTIFICATION OF OBSOLETE OR COUNTERPRODUCTIVE PROVISIONS.

If the Federal Chief Information Officer makes a determination that any provision of this Act (including any amendment made by this Act) is obsolete or counterproductive to the purposes of this Act, as a result of changes in technology or any other reason, the Federal Chief Information Officer shall submit notification of that determination to—

(1) the Committee on Governmental Affairs of the Senate; and

(2) the Committee on Government Reform of the House of Representatives.

TITLE III—AUTHORIZATION OF APPROPRIATIONS AND EFFECTIVE DATE

SEC. 301. AUTHORIZATION OF APPROPRIATIONS.

Except for those purposes for which an authorization of appropriations is specifically provided in this Act, including the amendments made by this Act, there are authorized to be appropriated such sums as may be necessary to carry out this Act for each of fiscal years 2002 through 2006.

SEC. 302. EFFECTIVE DATE.

This Act and the amendments made by this Act shall take effect 120 days after the date of enactment of this Act.

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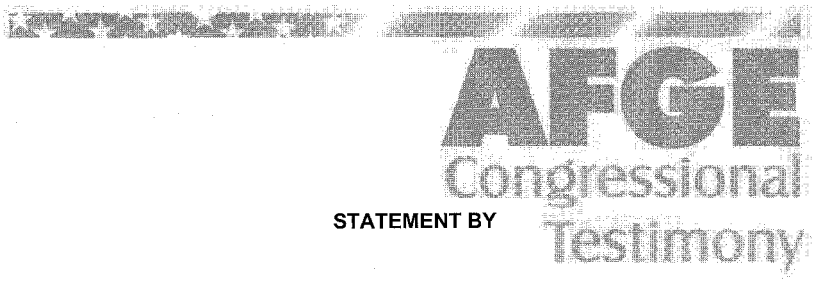

STATEMENT BY

BOBBY L. HARNAGE, SR.
NATIONAL PRESIDENT
AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES, AFL-CIO

BEFORE

SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS

REGARDING

S.803: E-GOVERNMENT ACT OF 2001

AUGUST 9, 2001

American Federation of Government Employees, AFL-CIO
80 F Street, NW, Washington, D.C. 20001 * (202) 737-8700 * www.afge.org

Mr. Chairman and Members of the Committee, on behalf of the more than 600,000 federal and District of Columbia employees represented by the American Federation of Government Employees, I want to thank you for the opportunity to express our views and concerns regarding S.803, the E-Government Act of 2001.

I congratulate the Chairman for his leadership in promoting e-government as a way of transforming government and enhancing public access to federal information. Whether government will undergo this e-transformation is no longer the question, rather the question is how will government be e-transformed. There are many technology aspects to this question which we will address at a later time. In this letter, I will focus on three areas of concern to AFGE, i.e. human resources, contracting in and share-in-savings.

Obviously, the demand for a quality Information Technology (IT) workforce will continue to rise. The entire knowledge-based economy requires highly trained workers who continually build and enhance skills throughout life. The federal government must make policies and create plans and programs to develop, train and retain federal workers to meet the needs in this area, especially in light of the human capital crisis that is expected within the next five (5) years due to retirement. The first place to look to address this crisis and fill the IT needs must be the technically skilled workers already in our federal workforce. E-government will not operate in a vacuum, rather it will provide government services to citizens electronically. Also, in order to deliver the services electronically, knowledge of the substantive areas for service delivery is an absolute prerequisite. Our federal workers know

their jobs better than anyone, bar none, and this knowledge must be utilized in the transformation to an e-government.

Efforts to streamline e-government should encourage contracting in as well as contracting out. Public employees must have the opportunity to compete for IT work. One way for this to occur would be to encourage teams of government employees to bid on IT contracts throughout the federal sector. This would allow individuals who understand the specific needs and culture of the public sector to offer that expertise across all federal agencies. It would increase competition for IT contracts and drive down costs. This is not only fair to public employees – it is good policy. The federal sector must retain capable, qualified, and knowledgeable employees to perform IT functions. Without these individuals, the government will be unable to capably monitor high tech contracts.

AFGE looks forward to working with the Senate Governmental Affairs Committee to address our concerns about the potential expansion in the use of controversial share-in-savings contracting that would come about from the enactment of S.803. Federal spending on IT service contracting has risen so dramatically in the last ten years that it would be difficult to contend that agencies are somehow constrained in taking advantage of private sector expertise and need additional mechanisms to outsource. To the best of our knowledge, the only use of a share-in-savings contract in the IT services context is an effort at the Department of Education that is just underway.

It is not clear what possibilities there would be for public-private competition in the share-in-savings context. Such contracts, in which agencies are essentially borrowing from contractors to fund significant projects, are a poor substitute for capital budgeting – a mechanism that would not only obviate the need for agencies to share savings but also allow for in-house as well as contractor performance of services. While securing authority for capital budgeting is probably outside the scope of S.803, perhaps other budgetary mechanisms, like revolving funds, might be better than share-in-savings contracts for ensuring reliable performance of IT services, whether by federal employees or contractors.

AFGE appreciates the strong support the Chairman has shown for ensuring that federal employees have opportunities to compete for their work, new work, and contractor work, as shown in his strong support for the Truthfulness, Responsibility and Accountability (TRAC) Act (S.1152). We look forward to working with the Committee as this bill is developed to implement e-government initiatives that are consistent with the views we have stated.

American Chemical Society

OFFICE OF THE PRESIDENT

Attila E. Pavlath
President-Elect, 2000
President, 2001
Immediate Past President, 2002

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
Phone: (202) 872-4461
Fax: (202) 872-6338

June 26, 2001

The Honorable Joseph I. Lieberman
Chairman, Government Affairs Committee
Washington, DC 20510

The Honorable Fred Thompson
Ranking Member, Government Affairs Committee
Washington, DC 20510

Subject: Section 208 of The E-Government Act of 2001 (S.803)

Dear Senator Lieberman and Senator Thompson:

The American Chemical Society (ACS), the world's largest scientific society, commends your efforts to improve citizen's ability to access government services and communicate with federal agencies. As you consider how the nation could use emerging electronic technologies to advance innovation, the ACS urges you to consider the potential impacts of an online database of federally funded research and development on the scientific enterprise and on scholarly publishers. The Society offers the following comments on S.803, The E-Government Act of 2001. ACS requests that these comments be included in the hearing record.

About ACS

ACS is a nonprofit scientific and educational organization, chartered by Congress, with more than 163,000 individual chemical scientists and engineers as members. The mission of ACS is to advance the chemical enterprise and its practitioners. To that end, ACS advances scholarly knowledge, increases public understanding of chemistry, provides professional services and support, and brings its expertise to bear on science, education, and public policy.

The Society's scholarly publishing program is the largest of its kind. Each year, ACS brings forward nearly 20,000 peer-reviewed research studies that are published in print and electronically. The Society's Chemical Abstracts Service maintains the world's largest and most comprehensive databases of chemical information. They include more 18 million abstracts of journal articles and patents, and over 30 million records of individual chemical substances.

Revenues from publications and databases support almost all of ACS's other activities in pursuit of its mission.

Government role in providing scientific & technical information

Section 208 of The E-Government Act of 2001 would substantially increase the government's role in providing S&T information over the Internet. ACS believes that this provision should be carefully reviewed to ensure it does not harm the scientific enterprise, jeopardize the stewardship of S&T information, and result in unnecessary government competition with businesses and nonprofit groups.

Scientific and technical (S&T) information is the basis for innovations that have made the United States the world leader it is today. The explosion of information technologies is creating a wealth of options for presenting and disseminating scientific findings and insights. New opportunities also are emerging to package information so it can be accessed quickly and communicated effectively to both scientific and non-scientific audiences. No dearth of options exists for accessing the results of federally funded research and development that have been submitted to a peer-reviewed journal.

The core mission of scientific societies and professional organizations is to advance science and technology. Central activities to the mission of any of these organizations are disseminating ideas, discoveries, and research results and ensuring the integrity of knowledge within a given scientific discipline. These are the proper incentives to ensure that S&T information is broadly disseminated, that state-of-the-art technology revolutionizes the communication of science, and that scientific knowledge is archived for the future in print and electronic journals and databases. These nonprofit groups provide scientists many options to search a wide range of journals, abstracts, citations, and patents in specific fields and across scientific disciplines.

Government-sponsored, comprehensive databases that are a gateway to the scientific literature threaten the efforts of nonprofit organizations to advance science and engineering. The ACS, for example, has a significant investment in publishing, abstracting, and indexing the physical-sciences literature. ACS spends tens of millions of dollars each year developing on-line journals and maintaining the world's largest collection of chemical information. Concentrating traffic on government websites would reroute on-line traffic and undercut or limit revenues for these activities. This would jeopardize over 1,500 jobs and limit ACS's ability to support a wealth of services for its members, the scientific community, and the general public.

In addition to potential economic impacts on scientific societies, a strong government role in publishing S&T information could have significant consequences for science. Scientific knowledge must be preserved in perpetuity. Even when new knowledge is created, the history of discovery is important to retain. Changes in funding priorities could diminish the government's ability to provide appropriate stewardship for its databases. In addition, the large volume of information generated each day presents a daunting management challenge for any single provider. The ACS Chemical Abstracts Service collects its information from more than 8,000 journals, patents, technical reports, books, conference proceedings, and dissertations from around

the world. About 14,000 records are added every week, with much of the information added to the database on a daily basis. This effort would need to be significantly enhanced if a comprehensive database was assembled. Delays associated with loading data on a single-source website using outdated technology would slow progress in science and technology. Finally, government policies also could influence the website's content, and thereby limit access to information concerning controversial areas of research.

Government should exercise substantial caution in entering a market in which the private and non-profit sectors already are active and where the costs of keeping up with technology are high. According to the Software & Information Industry Association, the worldwide market for U.S. providers of abstracting and indexing services is $500 million per year. These services are performed by well-established businesses and nonprofit organizations that employ thousands of U.S. citizens. Office of Management and Budget Circulars A-76 and A-130, Section 8a(6)(b) require the government not to compete with its citizens. These circulars also require that government balance the goals of maximizing the use of information and minimizing costs to the taxpayer. It is not clear that subsidizing the creation of expensive databases will minimize the costs to the public and increase access to scientific information. Government-sponsored databases simply could shift the costs that are currently borne by the individual users to the taxpayer, without increasing the overall audience for the information.

The federal government will invest nearly $90 billion in FY2001 to support research and development and prepare the next generation of scientists and engineers. It also will grant billions of dollars in tax incentives and provide patent protection to encourage private sector R&D. Only government can support innovation in these ways, and it must continue to do so to secure our nation's prosperity. It should not undermine these efforts with decisions that could harm the innovation system it aims to support.

Specific recommendations on Section 208

An interagency task force review of the government's role in providing S&T information could benefit science. The public should have an opportunity to participate in the work of the task force and review its results. Two activities would add the most value:

1. **An assessment of how the government can concentrate and strengthen its efforts to disseminate S&T information from federally funded R&D that is not otherwise published in the scientific literature.**

Provisions in Section 208 that would require the development of a database and websites that provide information about published research not funded by the government and links to the servers of the publishers to access the peer-reviewed literature would promote unfair government competition with existing services. In addition, a database that linked publications to specific grants could inadvertently encourage a narrow view of the benefits of federal R&D. In addition to new knowledge, these benefits include the creation of intellectual property, education of the next generation of scientists and engineers, as well as other less quantifiable impacts. Ensuring that federal agencies are accountable for the nation's R&D investment is explored in a recent National Academies report, *Implementing the Government Performance and Results Act for*

Research: A Status Report (2001). As an alternative, ACS believes that the task force should examine options and make recommendations to speed the release and improve distribution of S&T information that is not otherwise published by federally operated R&D centers and research programs.

2. **An assessment of areas of duplication and gaps in the government's and scientific publishers' S&T information collection and dissemination efforts.**

Some federal programs to disseminate S&T information, such as the Department of Energy's PubSCIENCE initiative, are a potential source of unnecessary government competition that could cause long-term harm to the scientific enterprise. Other initiatives, such as the National Science Foundation's RaDiUS database, provide information that the private sector does not have an economic incentive to develop but could speed innovation by helping individuals identify which federal organizations are involved in specific types of R&D, determine the scope of a particular R&D activity in the federal R&D enterprise, and learn about specific R&D activities sponsored by the federal government.

The task force should make recommendations to eliminate government programs that compete with existing services. The Chief Information Officer should ensure that these recommendations are carried out. Any recommendations to fill an identified gap with a new government service should be based on an assessment that it would enhance opportunities for innovation and take into account the capabilities of private, nonprofit, and government information providers and needs of data users.

Thank you for considering the views of the American Chemical Society. If you have any questions, please contact Dr. Tamara Nameroff in our Office of Legislative and Government Affairs at (202) 872-4394 or t_nameroff@acs.org.

Sincerely,

Attila E. Pavlath

STATEMENT OF
THE
CENTER FOR DEMOCRACY AND TECHNOLOGY
BEFORE THE
SENATE GOVERNMENT AFFAIRS COMMITTEE

July 11, 2001

Summary

E-government proponents have long believed that new technologies in general and the Internet in particular can be used to enhance the way we are governed and the way in which we interact with government. It has been argued that the Internet will be able to reinvigorate the stagnating institutions of our democracy by ushering in a new era of citizen involvement, government transparency and administrative efficiency.

The Center for Democracy and Technology shares this vision. The nature of the Internet, which gives agencies the ability to publish vast amounts of information cheaply and gives citizens an easily accessible way of interacting and transacting with government, means that it holds important promise for the way in which we are governed and the way government operates. CDT recognizes that the Internet will not solve all of the current problems facing representative democracy at a stroke, or even that it will solve most of the problems, but we believe that the Internet is an important tool in the campaign against citizen apathy, inefficiency and civic disengagement.

In order to meet the demands of Americans, we will need to provide more information and services online. We believe the E-government Act of 2001 contains a number of important steps towards that vision and we applaud its main authors Senators Lieberman and Burns for moving the issue forward.

However, while the bill sets the government on a new course to comprehensively cover an important issue, CDT hopes that this is only the beginning. In particular, we urge the committee to hold much needed hearings examining the state of the Privacy Act. Insuring that America's strongest provision to protect against the misuse of personal information in Federal government records remains vital in the Internet age.

About CDT

The Center for Democracy and Technology (CDT) is a non-profit public interest organization founded in 1994 to promote democratic values and individual liberties for the digital age. CDT works for practical, real-world solutions that enhance free expression, privacy, universal access and democratic participation.

We are guided by our vision of the Internet as a uniquely open, global, decentralized and user-controlled medium. We believe the Internet has unprecedented potential to promote democracy, diversity and human development, by placing powerful information and communications technology in the hands of individuals and communities.

Introduction

The United States used to be thought of as the world leader in the field of e-government. But recently, we have lost this edge to other countries like Singapore and Canada, who have better funded e-government projects. Indeed, Accenture, the consultancy firm, recently ranked America third in its league table of e-government maturity. The company's end of year report card on US e-government might have read "good, but could try harder."

CDT believes that this bill goes some way towards mitigating the "could try harder" part of the report card. It contains a number of proposals that will improve accountability, transparency and responsiveness and, importantly, lays out a structure for the investigation of the privacy implications of new e-government initiatives.

In summary, the Center for Democracy and Technology believes that the E-Government Act is an important first step towards providing government information and services for the Internet age. However, we cannot stress strongly enough that this is only a first step, we must move forward, constantly striving to reinvent government in ways that are ever more efficient, making government ever more accountable, and, ultimately, serving its customers in the best possible way. In particular, we hope that, in the near future, the committee will address some of the fundamental problems facing the Privacy Act of 1974 in the age of e-government.

E-Democracy

CDT believes that the provisions in the E-Government Act concerned with putting government functions online will reduce the transaction costs of doing business with government, increase transparency and accountability, and, lastly, help to reinvigorate a populace of growing apathy.

Perhaps the most important of these provisions in this bill is that which would require all regulatory agencies to accept filings online and compel them to issue electronic dockets where practical. This is another step towards increasing the efficiency of government transactions. Regulatory agencies are a major consumer and generator of paperwork – efforts to decrease this burden on companies are positive. But electronic filing does not just benefit companies, by making the filings more accessible to advocacy workers and the media, they expose firms to scrutiny and help to keep them accountable to their

shareholders, their customers and the public at large. Even in the limited trials of online comment periods that we have seen so far, CDT has found that with the proper outreach to public interest and community groups, more individuals participate. For example, the Federal Election Commission last year held an online comment period on the issues of Internet campaigning. CDT worked to build a Web site that helped frame the issues in a way that Internet users could easily file their comments on particularly relevant issues to the Web. In the month before CDT's campaign, only 25 individuals had filed comments. The week after the web site went up thousands had filed. CDT was only able to do this because the FEC was open about the technology used for filing comments. If the Federal government can insure openness and standardization in the process of online filing, this process can significantly increase the transparency and accountability of government. We believe this initiative to be wholly positive.

The bill would also set in motion an investigation of the way in which the government might implement a single integrated reporting structure. Not only will this measure benefit businesses, but it also opens up exciting new possibilities in the field of e-democracy as integrated government databases create the possibility of better consultation with the public over policy issues.

Electronic government is not just about transacting using the Internet as in the previous example. It is also about the way in which documents are published by agencies. The parts of this bill that seek to modernize the way that Federal Courts publish their data are especially interesting. In particular, Section 205(d), which would mandate the exploration of technology to enable dockets to be linked to filings, are important steps which CDT believes will be replicated in many areas of government. These provisions would enable web surfers to find a case docket, then link electronically from there to a ruling, filing or submission for a case. This would open up the courts to the public, strengthening confidence in the judiciary and boosting transparency.

CDT believes that technologies that allow electronic versions of government documents to link to each other seamlessly will become increasingly important. Indeed, CDT believes that these technologies are already achievable at reasonable cost.

The importance of information is an overarching theme of this bill and the moves to create an integrated government portal are symptomatic of the significance that easy access to government information has for today's citizens. Indeed, this portal will have to build on the considerable work of firstgov.gov, which is a significant starting point for the collation of government information and services online. CDT has long recognized that successful e-government will require some reorganization of government and its functions around users rather than departments. Plans for an integrated portal are commensurate with that vision. Like the provisions highlighted above, an integrated portal will not just improve

government efficiency, but it will strengthen our very democracy as legislatures and agencies make more and more government products available online.

If passed, the bill would also appropriate $10 million for the creation of an online public library that would house electronic versions of items of national significance. The importance of such an institution would be unparalleled – it would be the equivalent of building a library the size of the Library of Congress in every small town, homestead and city across the United States. The Online Public Library would be used to house America's heritage and make it accessible to everyone across the country. At a time when information and access to information are becoming ever more important in our economy, an Online Public Library would be a superb educational resource, providing people with information about our country and our democracy. It would be administered in conjunction with the Smithsonian and the Library of Congress, lending it some of the best institutional back up one could wish for.

But just as e-government presents a number of opportunities, which have been highlighted above, it presents a number of challenges. Permanent historical preservation of data is one such challenge. Much information is now published online only and is never issued on paper – were this information not archived in an accessible manner, parts of the US national record, which previously would have been kept in paper format, could be lost forever. This bill would give the Federal CIO the power to set standards for permanent historical preservation of documents. This is particularly significant because of the rapid change at which computer formats change, the rapidly evolving nature of Internet content (with many sites updated several times per day) and because of the lack of a single cataloging standard for Internet documents.

Privacy

Americans have always been concerned with issues of privacy from government and privacy has long been a concern of the online community. While the Privacy Act of 1974 offers some protections, the law has become outdated in the face of current technologies. The E-government act of 2001 is a first step to reassuring users of online government services.

In particular mandatory privacy impact assessments in all government IT projects will be highly beneficial. For instance, if an agency wanted to share information with another agency, this bill would force it to consider whether this amalgamation of data adequately protected the people the agency served. These assessments would be similar to the environmental impact statements that agencies must perform before embarking on projects. These have been successful in making agencies accountable for the decisions with regard to building projects. It is hoped that privacy impact assessments will have similar consequences. CDT understands that these assessments will not force agencies to adopt one standard, however, they will force agencies to act responsibly. CDT

believes this provision will ultimately lead to better-designed and more user-oriented government IT projects.

The Center for Democracy and Technology is proud to have been associated with the Platform for Privacy Preferences Project (P3P) since its inception and is delighted that language is included in this bill that mandates Federal agencies to use it (or similar machine readable protocols) on their websites. P3P is a format that makes the complicated Web site privacy policies machine readable and easy to find in new Web browsers. They are then represented in graphical format by the web browser to the user. This makes surfers aware of how much data they are giving away when they surf and tells them what companies will do with it. P3P is important because it represents a compromise between freedom and legislated privacy. Using P3P, surfers will be given a meaningful choice about how much data they disclose and are given fair and comprehensible warning of what it will be used for. As the standard is adopted by government, users will come to expect it on commercial sites, making it the *de facto* Internet privacy best practice. CDT strongly supports this move.

While these are very small steps to start the federal government in the right direction on privacy, CDT believes that there is still much more to be done. In particular, the Privacy Act needs to be revisited for the Internet age. For example, some of the definitions are well known to be out of sync with the original intentions of the bill. For example:

The basic definition of "system of records" — While the authors of the Privacy Act attempted to keep the definitions in the law technology neutral, the authors could not have foreseen how database structures would change in the intervening years. The central definition in the Act is the "system of records," limiting the types of databases that are covered to those that search for a specific term that could be personally identifiable. In the '70s, most databases would have been covered by this definition. Today, however, new, "relational" databases are created that allow information to be retrieved by multiple methods. Therefore, while some databases do not technically fit under the definition, there is the potential for major abuses in the future, where information resources that have been created for one purpose outside of the current Privacy Act context are used for other purposes. On the other hand, opening up the definition of system of records could include far too many databases to be useful and add an extra level of bureaucracy. These issues must be carefully balanced in a new definition..

Definition of the "routine use" exemption — The issue that has caused the most concern over the 26 years of the Privacy Act has been the growing exemptions to the part of the law forbidding personal information from sharing between agencies. Recent Administrations have been increasingly accepting of the "routine use" exemptions, that was supposed to allow agencies the ability to share information with selected others based on the frequency and administrative

burden of the project. These exemptions are now so widely used and unchecked that almost every Privacy Act Notice required by the law lists numerous routine uses, often citing uses that are exempt through other means or that seem to be boilerplate language. Clearly, this is not what Congress intended by including this exemption. While several members of Congress have examined this problem, few detailed alternatives have been offered.

These are just two of the many difficult issues facing the Privacy Act today. CDT strongly urges the Committee to hold hearings as soon as possible on the future of this important law and begin to look into how to address these fundamental issues.

We thank you for your attention and look forward to any comments or questions from the committee.

Testimony on S. 803, the "E-Government Act of 2001," submitted to the Government Affairs Committee of the United States Senate, July 16, 2001

by Marc Strassman

President
Citizens United for Excellence in E-Government
(Join our mailing list at http://CUEE.listbot.com)

I want to thank Chairman Lieberman and Senator Thompson for holding these hearings and Michael Alexander, of committee staff, for directing me to the online testimony of previous witnesses and inviting me to submit this testimony.

My name is Marc Strassman. I'm currently the President of Citizens United for Excellence in E-Government. During the 1960s, I was as a Student Congressional Intern, on the House side. I used the most primitive IT tools imaginable (printed pages and a few Xeroxed copies of the Congressional Record and a manual typewriter) to compile an updated version of the House Rules. In 1980, I ran for the House in the Silicon Valley on a platform of "Compute, Don't Commute."

In 1996, I wrote and circulated the Virtual Voting Rights Initiative, which mandated the issuance to all citizens of digital certificates on smart cards that could be used for the identification and authentication of voters using the Internet to cast ballots. In 2000, I wrote the Smart Initiatives Initiative, which would have allowed for the digital signing of initiative and other official petitions over the Internet. Then I build a website that allowed people to download copies of the petition to qualify this measure.

This year, I've been focusing on e-government.

Thanks to the power of computers and the Internet, I am able to draft and send you these remarks from California at virtually no cost and in virtually no time, compared to the weeks or months this process would have taken in the 19th century and the days it would have taken during most of the 20th. E-Government, properly designed and implemented, can bring the same astounding acceleration to most government functions as well. I want to discuss how S. 803, the "E-Government Act of 2001," can be a primary agent of such a transformation.

The Prodigal Internet

The Internet is a creation of the Federal Government, specifically the Defense Advanced Research Projects Agency (DARPA). Gradually, the Internet drifted away from the Federal Government and developed a life of its own, first as a tool for university researchers, then for counter-cultural hackers, and, now, primarily, as a means for giant corporations to more effectively pursue their sales and marketing strategies, while

individual users surf, chat, shop, buy movie tickets, watch pornography, gamble, and send a lot of e-mail.

Now, like the Prodigal Son, the Internet has tentatively returned home, perhaps willing to labor in its Father's fields, perhaps so skittish that it will skip out again, and sink into the debauchery at which it has already proven itself to be so adept.

So on top of all the discussions you've had already about "stovepiping," interagency cooperation and where to put the Federal CIO, there is also a more profound, even moral, choice before you in the form of this bill. The essence of that choice is whether the Federal Government will embrace the Internet as a powerful tool to facilitate its work or merely relegate it to some peripheral role that fails to take full advantage of all it has to offer and then watch as its capabilities and energy are squandered on tasks much less worthwhile to the American people than upgrading the quality of their historical and unprecedented experiment in self-government.

The Father in the parable acted decisively to welcome the Prodigal Son back. Even though I myself don't eat meat, I strongly believe that in the case of this electronic Prodigal Son, we should at once slaughter the Fatted Calf and prepare a generous meal, of at least, shall we say, $200 million?

Proposed Amendments

1. **A More Expansive E-Government Fund**

Citizens United for Excellence in E-Government wants to see more and better e-government systems implemented at every level of government. We would therefore like to see this part of the bill:

Establishes in the Treasury an E-Government Fund to be used to fund interagency information technology projects and other innovative uses of information technology.

changed to read:

Establishes in the Treasury an E-Government Fund to be used to fund interagency, interlevel, and interjurisdictional information technology projects and other innovative uses of information technology.

with "interlevel" meaning between and among federal, state, or local jurisdictions within the US and "interjurisdictional" meaning between and among any combination of local, state, or federal jurisdictions anywhere in the world.

2. EZ Voting Record Access

Surveys reveal that the e-government application most desired by the most respondents is one that allows them to quickly and easily find out how their representatives and other elected officials have voted on particular bills. Such systems already exist for the use of Congressional staffers. It would not be technically difficult or expensive to provide access to these systems for everyone. In a system of representative democracy, using the Internet to allow the represented to instantly and on a continuing basis know exactly how they are being represented ought to be a priority.

3. Federal Hand-Me-Downs to Bridge the Digital Divide

As introduced, S. 802 requires:

(2) best practices of federally funded community technology centers; and (3) disparities in Internet access across various demographic distributions.

These are worthwhile provisions, but CUEE would also like to see some concrete steps on the part of the Federal Government to "bridge the digital divide." One obvious way to do that would be for the Federal Government to contribute most, if not all, of the surplus hardware and software that will be made redundant by the massive infrastructure upgrades envisioned under this bill to community technology centers and other non-profit organizations involved in providing technology training and Internet access to those without one or both of these.

4. Use S. 803 to Streamline and Accelerate the Creation of a Universal PKI

Greg Woods, Chief Operating Officer of Student Financial Assistance at the Department of Education, referred in his testimony to the benefits his agency is deriving from the use of electronic signatures. Many witnesses mentioned the importance of interoperability. Building a ubiquitous and universal e-government infrastructure requires the establishment of a ubiquitous and universal public key infrastructure in order both to secure it and make it accessible to users in an appropriate way.

S. 803 should be used as the means to deepen and expand the Federal Government's commitment to the creation of a state-of-the-art PKI structure using open standards and possibly open source for all levels of government worldwide, for all businesses, and all individuals.

Broader Issues

In addition to suggesting these modifications to S. 803, we would also like to make a few remarks regarding the overall benefits and impact of this proposed Act. They are being offered in the hope that by providing a broader context in which to view S. 803 and e-government generally, they will gain additional support and more rapid acceptance and implementation.

1. Energy Savings

As recent events in California show, the Age of Endless Energy is probably drawing to a close. This means that government, as well as all other institutions, will need to do all it can to encourage and enable more energy-efficient ways of doing things. Enabling citizens, businesses, and other governments to do business with the Federal and other levels of government through e-government systems will save all parties involved plenty of energy, thereby both saving them money and helping society accommodate itself to new, stricter energy scenarios.

2. Downsizing Government through E-Government

What with all the efficiencies and cost-savings made possible by e-government applications, it's bound to occur to someone that the government may need fewer workers to carry out its responsibilities. Perhaps "early retirement" and "attrition" can accommodate most of these surplus workers. Certainly no one likes to be thought of as "non-essential" workers as many are categorized during government shutdowns.

But if e-government works, the same dynamic that reduced farm employment from a majority of workers to the two percent it is today, that eliminated millions of manufacturing jobs, and, increasingly, is eliminating service jobs in the private sector, could start to apply to government workers at all levels. It would probably be a good idea to start thinking and even talking about this now.

3. Global E-Government

Filling out a form is filling out a form, whether it's being done in Beijing, Stockholm, or Alexandria, Virginia. Systems that can assist people in filling them out, collect the data, process it, and store it can reside anywhere the Internet reaches. The Federal commitment to taking advantage of the power of the Internet evinced in S. 803 means opening up the performance of government work to an array of economic and technological forces that extend far beyond the Beltway.

One impact of more e-government will be more uniform procedures, everywhere. Once a "best practice" is discovered and anointed, pressure will mount to adopt it everywhere. This will be an administrative and technological advantage, but it may mean that small

towns in Kansas or the Ukraine won't be able to afford to include unique items in their forms or databases. Or maybe customization will allow greater flexibility for everyone, and even urban dwelling city managers will have the option of collecting data on dairy production.

In any event, the vertical, horizontal, and diagonal integration that will be required for e-government to work will inevitably continue and accelerate trends that the Internet has already generated among private citizens, such as the breaking down of national borders and the melding of points of view caused by being exposed to more of them.

4. E-Democracy

E-government is not e-democracy. E-government is the Internet-mediated delivery of information and transactional services to citizens. It is conducted as a means of carrying out the existing policies of the jurisdiction that controls it. E-government can be used by monarchies, democracies, or repressive totalitarian terrorist societies. It is policy-neutral.

E-democracy involves using IT and the Internet to involve the people in the formulation of policies, presumably, from now on, for the e-government infrastructure to implement. It can be as tame as providing elected officials with the means of conducting occasional online surveys about their constituents' preferences. It can be as extreme as replacing representative democracy with direct digital democracy, under which all eligible citizens participate directly, through the Internet, in making fundamental political decisions for their jurisdiction, on an occasional or day-to-day basis.

In between these two ends of the spectrum, e-democracy also includes such mechanisms of remote Internet voting and Smart Initiatives™, the use of the Internet, along with digital certificates and smart cards, to allow citizens to sign initiative and other official petitions in a way that legally counts.

S. 308, being legislation about e-government, and not e-democracy, is completely silent on the subject of using the Internet to allow citizens to exchange views on issues, organize themselves into large or small groups, negotiate positions, or take decisions about public issues. Of course, doing these things, and using the Internet to facilitate doing them, is already commonplace in the business world, and it is increasingly commonplace among political elites, such as elected representatives.

It is, however, pretty much unknown for the political masses. But one of the Internet's primary characteristics is that technologies, once developed for one purpose or group, can pretty easily be made available for a similar purpose or another group. It is in the context of that phenomenon that I'd like to recount a progression I call "the Bacerra Scenario," since I first expounded it publicly to Congressman Xavier Bacerra in the mid-90s when we both attended a conference on intellectual property.

As I said to the Congressman, "You Congress members already vote by card in the House

Chamber, don't you?" When he agreed, I continued: "I know from my days on the Hill that an awful lot of time is spent responding to those klaxons that signal a floor vote. Wouldn't it make more sense for you to stay in your office, or the committee hearing room, and vote from a card reader there? There's such a thing as television now. Every office has C-SPAN on continuously. Why can't you vote from the office building?" The Congressman allowed as how this might be possible.

"So why can't you watch C-SPAN from your district office and vote from there? You'd be among your constituents a lot more, you'd share their experiences, you'd know what's bothering them, and you could vote just as easily as from your Capital Hill office." He wasn't so sure about that.

"And if **you** can vote from your desk in your office in your district, why can't the other 300,000 or so people of voting age there vote as well?" I asked. He declined to endorse this scenario.

Half a decade later, 300,000 people in a congressional district much more easily vote on every bill before the House than they could have five years ago. Millions of voters could themselves vote on campaign finance reform, funding the National Missile Defense program, a Patients Bill of Rights. James Madison might, and Alexander Hamilton certainly would, find in undesirable, but they could.

It costs a million dollars to qualify a ballot initiative in California. This excludes almost everyone and every group from legislating directly, in the way the Progressives at the turn of the 19th to the 20th century established as a right in many, mostly the Western, states. This is because it costs that much to pay professional signature gatherers to collect enough signatures on initiative petitions to meet the state's requirements.

The E-Sign Bill, which went into effect on October 1, 2000, gave the federal imprimatur to the use of digital certificates for the legally-valid signing of documents over the Internet. This body, the other body, and the sitting President all agreed that Internet-based, digital signature technology was adequate technically and therefore ought to be legally sufficient to be used by individuals and companies to enter into contracts of any kind over the Internet.

This being exactly the technology involved in the Smart Initiatives system for online petition signing, one can clearly see that what's good for the goose is not always considered good for the gander, since no body of elected state legislators has yet seen fit to legalize the signing of a public petition for a redress of grievances by the same methods now acceptable to the Federal Government for buying a car or house.

As citizens become empowered to enter into binding legal relationships with their government over the Internet, digital certificates, smart cards, and digital signatures will most probably be the way they are so empowered. It would be wrong to allow them to do business with the government using these methods while disallowing them from

exercising their Constitutional rights to petition their government for a redress of grievances using the identical technology, which is what not implementing Smart Initiatives will mean.

This example clearly illustrated the difference between e-government and e-democracy. The same technology has now been approved for use in one, but not the other. The power of the Internet is now legally at the disposal of corporations selling consumers products, but it is not at the disposal of the people or civic organizations to change the laws under which this selling is done.

This is a phenomenon and perhaps a trend that bears close watching. One way to rectify the present unfairness is to see to it that Smart Initiatives are encouraged in all the states. Those concerned because state initiative laws are matters for the states and not the Federal Government could easily direct their attention to creating a National Smart Initiatives Amendment.

5. Global E-Democracy

The culmination of all these trends—technological, administrative, and political—is, course, what it has always been, at least from the time when humans formed groups, developed technology, and began making political decisions: chaos or a global state.

The power of IT and the Internet to collect, process, store, and distribute information currently makes the global state the more likely alternative. But whether this global state will be a repressive dictatorship or a personal freedom-enhancing democracy is by no means certain.

In Orwell's *1984*, Internet-like one-way video conferencing networks called "telescreens" formed the technological basis for Big Brother's surveillance and the subjugation of all. In Huxley's *Brave New World*, genetic engineering and advanced entertainment technologies formed the technological basis for a softer but equally comprehensive repression of personal autonomy. Since some of today's biggest, and real, technological breakthroughs include networked surveillance methods, genetic engineering, and advanced entertainment technologies, there's certainly plenty to worry about.

Political leaders in many other countries are also worried, in other ways, mainly about what they see as not subjugating their national interests to what many of them consider a government in Washington bent on world domination.

While Judea, Gaul, and Britain were being simultaneously subjugated by Rome, they had no good ways of effectively communicating with each other, shared insurrectionary best practices, or enrolling in joint procurement programs. Now, when Japan, the European Union, Russia, China, India, and Brazil have a disagreement with the United States, the heads of their governments, and millions of their people can talk about it, and plan what they want to do about it, separately or collectively, in as little time as it takes a untech-

savvy undersecretary at Foggy Bottom to take an elevator from the Sixth to the Seventh Floor.

The world is facing an unprecedented time of turmoil and change. Exploding levels of population, uneven distribution of resources, global climate change, the co-existence of the most modern of technologies and the most ancient of hatreds mix and match now in seemingly random patterns, obliterating old categories, creating new alliances, entertainment forms, lifestyles, experiences, expectations, all of which fold back on each other, in an endless cycle of creation, destruction, and transformation.

Global corporations are increasingly integrating their operations with one another. They achieve this administratively and by legal agreements and then implement it through the Internet and related networks. Corporations are not bound by the need to satisfy their constituents, as are all governments to some extent. They need only satisfy their shareholders, their customers, and, to a lesser extent, their employees. Freed of these constraints, assisted by powerful technologies of which the Internet is the most important, and benefiting from the energy, intelligence, and desire for wealth and power of their leaders, global corporations are now the most successful organizations on the planet.

Except as constrained by government, however, these powerful organizations have no need whatsoever to care about the environment, their workers, or the cultural wasteland that they profit from so mightily. Certainly individuals or civic groups (with the possible exception of Greenpeace) completely lack the traction necessary to modify global corporate behavior. Only governments and, in fact, only collectivity of governments, have a chance of substituting the welfare of their people for the profit of these giant combines.

To the extent that national governments become the pawns of one or more global corporate interests, their ability to provide countervailing power against the corporations is diminished.

Globalization speaks directly to these issues. As corporations globalize while national governments do not, power flows to the private sector that they embody. Only by joining in collectives larger than nations can governments as representatives and agents of the people hope to attain and maintain the resources necessary to stand up to the global oligarchs.

This is where e-government and e-democracy come in. E-government and e-democracy, properly integrated with each other, designed and deployed can allow all the world's governments and all the world's people to choose their own future and then work with the private global corporate sector to implement that future.

The alternative is a world like today's Russian, where the mass of people are powerless and afraid and thug oligarchs plunder and do what they will.

S. 803, which the Senate Committee on Governmental Affairs is now considering, could play a crucial, even pivotal, part in the creation of a more hopeful scenario. It could do so if it establishes itself as a grain of technopolitical sand around which a much larger pearl of sociotechnopolititical re-alignment and transformation could form.

It could begin that process by putting the US Governmental squarely behind the movement to move the functions of government online, to simplify, rationalize, and make directly accessible to the people transactions with their government. It could follow through by using the e-government infrastructure to jump-start and build out an equally robust e-democracy infrastructure.

Taken together these tools for government administration and policy formulation could give us what we've long wanted, a system of government whose operations are as well-run as the most efficient global corporations mentioned above and whose values and decisions reflect the best that is in us as a free and generous people.

6. The Down Side

Speaking of *1984*, let's not forget, while we are architecting, funding, and implementing this no-stovepipes, integrated-in-all-directions, citizen-centric e-government infrastructure, that such a apparatus also has the potential to become the most intrusive and most repressive means of government ever developed, to become what Pink Floyd is talking about in "Wish You Were Here," when they sing, "Welcome to the Machine."

A recent book, "IBM and the Holocaust," paints in excruciating detail how it was the to-us-primitive-but-at-the-time-state-of-the-art Hollerith computing machines built and sold by IBM to the Nazis that made possible the racial censuses, round-ups, and exterminations that were the heart of the Third Reich's agenda. Sixty years later, as we all know, computing capability and its amplification through the Internet have created the possibility of systems for surveillance and control far exceeding those at the disposal of Adolph Hitler.

It's therefore important, as we implement e-government systems, to think seriously about consequences that some may welcome and others may find very problematic.

Once, as others and I have suggested, federal, state, and local systems are integrated into a seamless, you'll pardon the expression, web, what's to stop the implementation of policies that would make participation in any particular government program contingent upon a clean record under every other government program?

Many of these cross-checking programs are already in place, at all levels of government. But building a citizen-centric system that subsumes all relations and transactions between citizens and any government agency anywhere may provide more coherence than many want, and convert the system from one that is citizen-centric into one that is citizen-targeting.

I assume it's already impossible to get a government-backed mortgage loan if one's student loans are in arrears. And it would be good to know if an applicant for public assistance in Maine is already still receiving such benefits in Florida. It might be useful to know if an applicant for a gun permit is a convicted felon or psychotic patient who's escaped from a locked ward in a mental hospital.

But perhaps at some point over-crowded National Parks might want to exclude citizens whose DMV registration is not up-to-date, or who haven't paid all their traffic tickets, or attended a certified traffic school as they promised as a condition for the resolution of their speeding ticket. Maybe the military wants to know everything about the arrest records, school grades, medical history, and driving record of their recruits. Maybe, unknown to me, they already do find out, through procedures using the Internet that I know nothing about.

But certainly all this exchange of information would be faster and easier within the context of the universal, comprehensive e-government network we're talking about creating under S. 803. And such a network, as you can all well imagine, could be used even more intrusively and effectively than the existing mish-mash of incompatible and non-interoperable stovepipe systems currently in place throughout the government, and through out local and state governments.

Connecting the e-government system with the financial services network, the health care network, and other big and growing networks such as AOL and MSN, adding the kind of data mining and detection programs that have been developed by the National Security Agency, linking this combination to video surveillance programs such as Face-It, which was used at the last Super Bowl to spot fugitive criminals and is now permanently in place in Tampa, presumably for the same reason, and setting the filters low enough would mean the arrest, trial, and sentencing of some people by the automatic action of a combined network also capable of blocking a targeted person's bank account, notifying his or her employer (by e-mail or synthesized voice, or both) that he or she is a wanted criminal, placing their license tag number on the screen of all police cars anywhere, notifying his or her children's school's administration that the social workers will be arriving soon to take away the children, and even, in extreme cases, turning off his or her cable tv and smart refrigerator, thereby cutting the subject of from the ultimate essentials of American life, sports and a cold beer.

There is nothing technically standing in the way of building this system. I'd really hate to think that by encouraging you to pass S. 803 and move forward to build a universal and ubiquitous e-government infrastructure I was contributing to the construction of the monstrosity I've just described. But technologies are neutral and computers and the Internet are no exceptions. They can facilitate "online, not in line" government or they can facilitate genocide. Determining to what use the machines S. 803 will provide will be up to us collectively but mostly up to you as our representatives. I just want to make sure we've thought enough about the downside of what we're contemplating so that we can

successfully avoid some of the less desirable possible outcomes.

7. E-Government Gap

Senator John Kennedy was elected in 1960 partially on the basis of the warning he sounded about the "missile gap," which turned out to be largely fictitious.

Today, an equally important and more real "e-government gap" is coming into view. It's a triple gap. First, it's a gap between the United States and many other advanced counties that are far ahead of the US in their deployment of PKI, their use of wireless technologies and their development of cutting-edge e-government systems for their people and political jurisdictions. Second, it's a gap between the sophistication of the IT and Internet technology used by non-security, non-military agencies of the US Government and what is possible and what is routinely used by private companies and individual users. Third, and finally, it's the gap between the rudimentary e-government infrastructure in place in the Federal Government today and the astounding possibilities for transformation and liberation inherent in existing and future high technology.

The choice facing the government and country today is pretty much the same one set forth by two very dissimilar prophets at two widely dispersed times, although, of course, the Hebrews in the Wilderness and mankind now were both at critical crossroads in their historical development.

In Deuteronomy 30:19, Moses speaks to the people, saying:

"I call heaven and earth to witness against you today, that I have set before you life and death, the blessing and the curse. So choose life in order that you may live, you and your descendants."

At the end of "Things to Come," a film written by the British novelist and historian H.G. Wells, the character played by Raymond Massey gazes at the hurtling space craft struggling to leave the planet and sets out mankind's choices:

"The Universe or nothing. Which shall it be? The Universe…or nothing?"

The entire Universe is not at stake in S. 803; but a little bit of it is. I hope we will choose wisely.

Statement of
The Industry Advisory Council
Shared Interest Group on Electronic Government
to the
Senate Government Affairs Committee

July 11, 2001

On Wednesday, May 31 several members of the SIG leadership met to review and comment on Senator Lieberman's bill. These comments were compiled and circulated to the IAC membership at large, amended and then circulated to the Board of Directors for any additional comments. The following comments are the result of these efforts and are submitted for your consideration.

We appreciate very much the opportunity you have provided us to play a part in this important legislation. If we can be of any further assistance, please do not hesitate to call upon us.

Comments resulting from IAC discussions and review of S-803

This legislation is very important because it provides a focus on a major transformation that the US government must make. This is quite unique. Additionally, the legislative process alone, which requires hearings, testimony, and attention, builds momentum within government itself for the transformation it must undertake.

It is critically important that the Federal Government, which plays a major role in the US economy, make the same type of e-transformation as is happening in the private sector. It cannot afford to be left behind. This legislation sets a framework in place to push that transformation into being. It is clear that transformation will not occur without a concerted effort to create leadership for e-government, to underscore the importance of interoperability, and to establish a mechanism for trying out new approaches through a well-funded pilot project program. Those are the most critical aspects of this important legislation. The community that supports e-government transformation should support this legislation quite strongly. It may not be perfect at this point, and there is plenty of opportunity to amend and improve the legislation. The fundamental idea, however, is that without legislation like this, e-government transformation is much less likely to occur. E-government is goes well beyond a single focus on management issues. Because government is so complex and has so much inertia to overcome, legislation that pushes the process on is critical to attaining the ultimate goal. Whatever the differences in views may be, they really should be at the margins because this legislation is so important to drive e-government forward.

All felt that the emphasis should be placed on identifying and leading efforts that melt the boundaries between agencies and levels of government. The Federal CIO's energies could best be spent ensuring that agencies and departments are taking advantage of all possible opportunities to share resources, information and customers.

Emphasis should not be so limited to a specific technology, such as the Internet. Integrated service delivery can be achieved using a variety of technologies for information or services that

may or not be Internet-based. Example, the service may be a land survey, a hospice, etc. There was a strong feeling that the real issue is to be customer-centric/constituent-centric - not Internet-centric.

E-Government is also about using technology to enhance interaction between government and many other types of constituents. If government thinks about this in a holistic way, it can avoid spending on what would result in another kind of "stovepipe" solution. It is unclear how far the Bill would promote cross-agency or cross-jurisdictional cooperation.

If the Federal CIO is placed in a role of reviewing all projects that are part of the GSA IT Fund, there is a high likelihood that use of this innovative fund will shrink substantially. As a key channel for agencies trying to implement multi-year projects, this added layer of bureaucracy could result in a substantial unintended negative impact on Agencies' ability to modernize.

There was a general feeling that there needs to be more clarity about roles and empowerment of the role of the Federal CIO and his/her relationship with/to GSA's OGP & DOC's NIST.

E-Government when focused on Citizens alone is too limiting. We suggest that in addition to citizens, the bill also explicitly name business, industry and other agencies as target beneficiaries of e-gov.

One major missed opportunity is the role E-Gov could play in reducing the regulatory burden that government imposes on industry. We should use the Internet's inherent ability to "drive transaction costs to zero" and provide "information transparency" to lower the cost burden of regulation while simultaneously improving access to the information by citizens and other agencies.

Everyone took issue with the Federal CIO "establishing" instead of reviewing and recommending use of standards. The general feeling was that this is the role of NIST. While standards are much more effectively developed in the private sector, NIST is the agency chartered with this responsibility, for interpreting how standards should be codified for Federal use.

Discussion ensued around whether yet another project management training center would be the best use of funds made available through this legislation. There are many excellent programs available already, from NDU's IRMC and GSA's STAR program to public/private initiatives like the CIO University.

Likewise, it is confusing as to whether the government-wide portal required by the legislation is intended to be an extension of funding for the existing FirstGov site or whether it seeks to create a second, competing site providing essentially the same function. To build on the foundations already in place and minimize duplication of effort, the legislation should explicitly state that existing capabilities, such as FirstGov, be targeted for enhancement.

The Justice system needs to be tackled in a centralized approach/architecture, with a "franchise model" that would ensure consistent information availability across all judicial districts. This branch of government currently has the "lightest" presence on the web, so it is felt to be in an excellent position to develop a uniform customer presence on the web.

information
renaissance

July 17, 2001 Statement of
Dr. Robert D. Carlitz and Barbara H. Brandon
Before the
United States Senate Committee on Governmental Affairs

Information Renaissance is a non-profit organization that works to expand public participation in the regulatory process using the Internet. We appreciate this opportunity to offer our views on S. 803, the E-Government Act of 2001.

First, we want to applaud the Chairman's leadership in spurring the adoption of electronic rulemaking. Section 206's requirement that Agencies establish electronic docket rooms is an extraordinarily important E-Government reform. However, we do have some suggestions for improvements.

The Web is an interactive and educational medium of singular power that can transform how the public participates in federal policymaking. We are strong supporters of two types of reforms, electronic docket rooms and moderated asynchronous discussions. The latter would serve as an adjunct to the rulemaking process. We have explained how agencies can use both tools to stimulate greater and more informed participation in *Online Rulemaking: A Tool for Strengthening Civic Infrastructure* published in the 2001 E-Government Briefing Book.[1]

Electronic Docket Rooms

Section 206 of the E-Government Act takes giant strides towards accomplishing the first aspect of our reform proposal. To take full advantage of this improvement, we think that the Administrative Procedure Act (APA) should be amended to require rebuttal comment periods. Precedent exists for this feature. The Federal

[1] http://www.netcaucus.org/books/egov2001/pdf/OnlineRu.pdf

Communications Commission (FCC) does so as a matter of practice[2] whereas Section 307(d)(5) of the Clean Air Act provides for rebuttal comment periods where the proposed rule is national in scope.[3]

Electronic dockets coupled with a second round of comments will foster deeper exchanges between the parties, because each participant can comment on all the submissions. This also assures that one side does not gain a tactical advantage by submitting its views on the final day, a common practice. As a former Research Director for the Administrative Conference of the United States observes, "[p]ublic comments are much more likely to be focused and useful if the commenters have access to the comments of others. More ample comments benefit the agency, the public, and ultimately the reviewing courts."[4]

As the Committee is undoubtedly aware, many statutes set tight timetables for agency rulemakings. These statutory schedules could preclude the utilization of rebuttal comment periods. Therefore we recommend an across-the-board amendment to the APA granting agencies the freedom to incorporate rebuttal comment periods into their rulemaking activities even where a particular authorizing statute does not envision this step. This type of amendment is necessary to assure that all Americans, not just those who work inside the Beltway, can participate effectively in the rulemaking activities of the federal government.

Second, Section 206 should direct agencies to post index pages for each electronic docket that mirror the types of indexes required under the present APA regime. Sections 552 and Section 552a of 5 U.S.C. require agencies to build paper

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[2] FCC Rules of Practice, 47 CFR 1.1.145.

[3] 42 U.S.C. § 7607 (d)(5).

[4] Jeffrey S. Lubbers, *A Guide to Federal Agency Rulemaking*, (American Bar Association, 1998) 214. The heightened transparency provided by electronic docket rooms should also diminish the likelihood that a reviewing court would overturn a rule because the agency failed to provide the public with adequate notice that a particular issue was under consideration. At present the federal courts are split as to whether or not issues raised in the comments but not in the proposed rule provide adequate notice to other members of the public. Lubbers, *supra*.

In addition, summaries of *ex parte* communications with agency staff during a rulemaking can be docketed electronically in order to minimize the chance of reversal under Sierra Club v. Costle, 657 F.2d 298 (D.C, Cir. 1981). During its recent rulemaking on marketing standards for organic food the USDA provided a direct link to memoranda detailing these *ex parte* communications.

indexes for rulemaking records that disclose the identify of commenters. The FCC, the Nuclear Regulatory Commission and the Department of Transportation (DOT) all identify the submitters by name. The DOT site displays a docket index page for each rulemaking.

Unfortunately, some of the electronic docket rooms being built by federal agencies do not share these features. This past January we participated in the Beta test of EPA's upcoming electronic docket system, the Regulatory Public Access System (RPAS).[5] EPA's new system only allows access to the commentary via a search engine. This structure makes participation too dependent on correct spelling and typing. More importantly it entirely precludes browsing, an excellent way for a citizen to learn more about a particular topic.

EPA staff were reluctant to include an index of submitters because of Privacy Act concerns. Other agencies such as DOT view this as a mistaken construction of the Act. This Bill should clarify this matter by requiring that each electronic docket have a public index page that mirrors the types of indices that courts and agencies presently maintain for paper docket systems. Absent such a provision, a citizen's skill with a search engine becomes the measure of his or her access.

Third, the E-Government Act should address a closely related Privacy Act issue. EPA's Office of General Counsel thinks that any electronic docket equipped with a search function that sorts comments by name raises a "system of records" issue under the Privacy Act. This would require OMB approval with prior notice given in the Federal Register. Again we do not see this as a privacy issue.

Again this seems an overly cautious approach. Companies, trade associations and other organizations are the predominant commenters during rulemakings[6] and these groups do not have cognizable privacy rights in shielding their identity. Agencies can take steps to shield the e-mail addresses of individuals, but a citizen's or an

[5] The test site may be found at http://63.88.245.102/rs-bin/RightSite/dk_public_home.htm.
[6] See discussion on rulemaking participation at footnotes 56-59 in *Online Rulemaking: A Tool for Strengthening Civic Infrastructure*, *infra* at note 1.

organization's identity is a key aspect of the comment that both the Agency and the public at large are entitled to know.

Fourth, the Bill should preclude agencies from seeking to adopt two practices of the United States International Trade Commission. The public should not be required to register to view the dockets or copy materials from an electronic docket room. Paper docket rooms do not require users to register and the government does not track public access. Similarly courts allow access to their dockets and copying of materials without requiring the public to register. Comparable freedoms to browse and copy should apply to online dockets.

Fifth, the Act should require agencies to establish a master index listing all proceedings that are ongoing. The absence of such an index can hobble the operation of even the best site, as illustrated by the online docket room at the Department of Transportation. That site's failure to incorporate a master index into its design inhibits public participation because a user has to know the docket number to access most of the docket rooms.[7]

Sixth, the Bill should address agency concerns about whether an electronic docket should be considered a public forum under the First Amendment. DOT and EPA have taken one approach on issues of obscenity and threats whereas USDA has taken another.

Seventh, either a federal CIO or the Office of Management and Budget should monitor electronic docket rooms to assure that certain issues are handled in a consistent manner from one agency to another. While the General Accounting Office reported in *Federal Rulemaking: Agencies Use of Information Technology to Facilitate Public Participation*[8] that many of the rulemaking agencies did not see the need for a one-size fits all approach, uniformity on certain issues is necessary.

Online Public Hearings

[7] http://dms.dot.gov/. Only the top 25 most requested dockets can be found under an icon labeled 'reports."
[8] Report No. GGD-00-135R at page 9, June 30, 2000.

The E-Government Act should also encourage agencies to experiment with online public hearings. Let us elaborate.

Last year this Committee constructed an electronic bulletin board to enable the public to discuss E-Government issues. Similar uses of asynchronous technology can provide more Americans, especially those living outside Washington, with the opportunity to participate in agency policymaking.

For instance, EPA has begun reconsidering its Clean Air Act new source review program pursuant to the President's energy policy. The agency has scheduled four days of public hearings this July in Cincinnati, Sacramento, Boston, and Baton Rouge. [9]

At issue are the regulatory requirements that apply to proposed energy production projects that will increase emissions above baseline emissions formulas set by law. These provisions are the heart of the ambient air quality attainment and maintenance provisions of the Act. Many Americans who do not live near these four venues would welcome the opportunity to express their viewpoints on whether new source review is unfairly stifling new investments in energy production or whether changes to the present system would severely weaken the Clean Air Act.

An online asynchronous discussion of these issues would flesh out the legal, technical and policy issues that surround this important topic. More importantly, such an online hearing would allow many more Americans to learn about this central issue and to submit their comments to the Agency. Our work offers several possible models. We are presently hosting a National Dialogue on Public Involvement in EPA Decisions for the Agency at http://www.network-democracy.org/epa-pip/welcome.shtml. Similarly we held a National Dialogue on Social Security during the spring of 1999 where numerous Senators and Congressmen and Congresswomen discussed options for reform.[10]

We think the Bill should be amended to include provisions that would encourage agencies to experiment with this type of format. Agencies in Canada and the Netherlands have found these formats to be successful vehicles for public

[9] http://www.epa.gov/air/nsr-review/public_mtgs.html
[10] http://www.network-democracy.org/social-security/

participation.[11] Agencies should also be encouraged to use this type of format to supplement rulemaking proposals and Federal Advisory Committee Act proceedings. Our suggestions in this area are laid out in greater depth in *Online Rulemaking: A Tool for Strengthening Civic Infrastructure.*[12]

Unified Agenda Reforms

We would also suggest two other measures to improve public participation in rulemaking. Each agency's Unified Agenda submissions should be prominently displayed on the agency's site. In addition, the agency should set up a listserve mechanism that would allow persons to subscribe for electronic notification of further developments in the rulemaking.[13]

[11] Electronic Civic Consultation, Dutch Ministry of Interior and Kingdom Relations http://www.minbzk.nl/pdf/eo/actie/elcivco.pdf; Online conferencing: Lessons Learned, Office of Learning Technologies, Human Resources Development, Canada, http://olt-bta.hrdc-drhc.gc.ca/download/lessons_e.pdf

[12] See pages 5-7 and 19-23.

[13] This is also a Draft Recommendation of the Section of Administrative Law and Regulatory Practice, American Bar Association that is on file with the authors.

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ONLINE RULEMAKING: A TOOL FOR STRENGTHENING CIVIC INFRASTRUCTURE©

Barbara H. Brandon[1] <bhb@info-ren.org>
Robert D. Carlitz[2] <rdc@info-ren.org>
Information Renaissance
425 Sixth Avenue, Suite 1880
Pittsburgh, PA 15219

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Public participation in federal rulemaking is too often a pro forma exercise, involving just Washington-based groups. The Internet can change this by engaging more Americans in the process. Two simple innovations, electronic docket rooms and online policy dialogues, can allow groups and individuals all across the nation to have a say in how Washington develops regulations.

We are not offering this as an abstract vision of online democracy; our focus is utilitarian. The federal government should build a civic infrastructure where the public and the bureaucracy can engage in interactive dialogues at key junctures in the

[1] Barbara H. Brandon is a policy analyst with Information Renaissance; she has a J.D. from the University of Pittsburgh and an LLM. from Harvard Law School.
[2] Robert D. Carlitz is Executive Director of Information Renaissance and a Professor of Physics at the University of Pittsburgh.

administrative process. The scope would be as broad as Washington's reach, ranging from environmental standards to insider trading rules.

While much of the regulatory workload is mundane, there are many issues that will engage broad segments of the public. For example, public interest was remarkably high in President Clinton's initiative to foreclose development in roadless areas in our national forests. The Forest Service received comments from well over a million Americans.[3] Thoughtful implementation of electronic rulemaking can capture this interest by making civic participation easier and more effective.[4] More importantly, Washington will not just be hearing from the usual suspects.

Rulemaking and the Internet

At the federal level, broad congressional policy directives are most often translated into law through the informal rulemaking process. This literally is the engine of the modern administrative state, and its scope is vast.[5] Last November's Unified Agenda, which outlines the government's rulemaking activities, ran two thousand eight hundred and fifty one pages through several volumes of the Federal Register.[6]

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[3] 66 Fed. Reg. 3244, Jan.12, 2001. The Forest Service performed an extensive outreach effort during this rulemaking. While it was preparing the draft environmental impact statement, the Service asked for public input; this drew 517,000 written responses, and 16,000 people attended 187 public meetings. After issuing the proposed rule and the draft environmental impact statement, the Service hosted two rounds of meetings for each national forest, and 23,000 people attended these sessions. During the comment period on the proposed rule the Service received over 1 million form letters and postcards, 60,000 original letters and 90, 000 electronic mail messages. 68 Fed. Reg. at 3248.The dedicated Web site for this rulemaking is http://roadless.fs.fed.us/.

[4] Smaller rulemakings will also benefit from online rulemaking. See discussion *infra* at note 62.

[5] Cornelius Kerwin, *Rulemaking: How Government Agencies Write Law and Make Policy*, 13-15 (2d ed. 1999); Jerry L. Mashaw & David L. Harfst, *The Struggle for Auto Safety,* 4-10 (1990).

[6] 65 Fed. Reg. 73, 301 – 75,152, Nov. 30, 2000. Not all of the government's rulemaking activities are covered in the Unified Agenda. For instance, numerous rulemakings at the

The mechanics of the informal rulemaking process are simple.[7] The agency publishes a notice of proposed rulemaking in the Federal Register that contains both the text of a proposed rule and a discussion explaining the basis and purpose of the regulatory action under consideration. The notice asks the public to submit comments on the proposal, normally within a 60-day time period.[8] In the final stage, the agency analyzes the submissions and promulgates a final rule that must address all material comments on the proposal. Since the heyday of informal rulemaking in the nineteen seventies,[9] opponents and supporters of regulation have warred over the analytical procedures to be used in assessing the costs and burdens of a particular rule.[10] Additional requirements have been imposed, but the notice and comment feature described above remains as the key mechanism for public participation.

Two other features are noteworthy. Each rulemaking agency maintains a paper docket room only at its Washington headquarters, which deprives Americans outside

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Environmental Protection Agency (EPA) are not covered; these include significant actions such as the approvals of state implementation plans under Section 110 of the Clean Air Act, 42 U.S.C. § 7410.

[7] 5 U.S. C. § 553 of the Administrative Procedure Act (APA). The APA authorizes formal rulemaking as well, but this approach has fallen into disuse. See Wesley A. Magat, *Rules in the Making: A Statistical Analysis of Agency Behavior* 15 (1986) cited in Stephen P. Croley, *Theories of Regulation: Incorporating the Administrative Process*, 98 Columbia Law Review 1, 108 (1998).

[8] Agencies will often shorten the comment period to thirty days for minor rules.

[9] Jerry L. Mashaw, *Improving the Environment of Agency Rulemaking: An Essay on Management, Games and Accountability*, 57 Law & Contemporary Problems 185, 186-87(1994): Thomas O. McGarity, *Some Thoughts on 'Deossifying' Rulemaking*, 41 Duke Law Journal 1385 (1992); Kerwin, *supra* note 5.

[10] Much of the debate has centered on cost-benefit analysis and whether or not it should be utilized to assess the overall costs imposed by a particular regulation. See Robert W. Hahn, editor, *Risks, Costs, and Lives Saved: Getting Better Results from Regulation,* (1996) [advocating its use] and Thomas O. McGarity, *Reinventing Rationality: the Role of Regulatory Analysis in the Federal Bureaucracy,* (1991) [pointing out its limitations]. Both the Reagan and Clinton Administrations made the Office of Management and Budget (OMB) the gatekeeper for

the Beltway of access.[11] Second, many of the key analytical materials that support a particular proposal are also available only in the Washington docket rooms. Thus the public can not view important economic analyses that describe the costs and the benefits of particular regulatory alternatives.[12]

To date, most federal agencies have taken rudimentary steps to utilize the Internet during rulemaking. All proposed and final rules are published simultaneously online[13] and in the Federal Register. Sometimes agencies will post additional materials on their Web sites that amplify and explain policy details in the proposed and final rules.[14] In addition, many agencies invite the public to submit comments via e-mail,[15] fax[16] or Web page[17] during a fixed time period. But these are circumscribed efforts that fail to capitalize fully on the Web's interactivity.

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executive agency rulemaking, and both issued Executive Orders on rulemaking that imposed additional analytical requirements on executive branch agencies.

[11] In a 1993 *Reinventing Government* report, the Clinton Administration recognized that public participation in rulemaking needed improvement and suggested that information technology could play a role in expanding public access at www.npr.gov/library/reports/reg04.html. However the Administration did not follow through with this and its December 1999 e-government initiatives are strangely silent on expanding public input into this aspect of governmental decision-making. See documents at www.pub.whitehouse.gov/uri-res/I2R?urn:pdi://oma.eop.gov.us/1999/12/20/5.text.1 and www.pub.whitehouse.gov/uri-res/I2R?urn:pdi://oma.eop.gov.us/1999/12/20/2.text.1.

[12] U.S. General Accounting Office, *Federal Rulemaking: Agencies Use of Information Technology to Facilitate Public Participation* 9, Report No. GGD-00-135R (2000) available in a PDF file on the GAO Web site (hereinafter GAO Report).

[13] The Government Printing Office's online link is at http://www.access.gpo.gov/su_docs/index.html.

[14] Two excellent examples are the Forest Service's Web site for the roadless area rulemaking at http://www.roadless.fs.fed.us and EPA's Web site for its rulemaking on achieving water quality standards in degraded waters at http://www.epa.gov/owow/tmdl/index.html.

[15] See http://www.epa.gov/opptsfrs/home/Elec_comm.htm. Practices on accepting e-mail submissions vary widely, even within agencies. GAO Report, *supra* note 12, at 8-9.

[16] The Department of Health and Human Services (HHS) and the American Civil Liberties Union recently had a dispute about the propriety of submitting comments by fax. Ben White, "A Fight Over the Fax," *Washington Post*, Feb 10, 2000, A21 at http://washingtonpost.com/wp-srv/national/feed/a34346-2000feb10.htm. Rather than submit comments by e-mail, the ACLU Web site encouraged individuals to submit personalized faxes to HHS. HHS refused to accept 2400

Two Internet-based innovations, electronic docket rooms and online policy dialogues, will transform public participation in rulemaking.[18] First, electronic docket rooms make the process far more transparent by allowing participants to view all the commentary on a proposal as it is submitted. As currently conducted, only Washington-based groups are able to monitor the comment submission process by visiting the paper docket rooms. This precludes the public from engaging in a dialogue either with the agency or with other parties to the proceeding. No interchanges can develop that allow views to evolve and thoughts to be refined. Indeed, the process seems to be "carried out...as much for the sake of appearance" as for the substance.[19]

In contrast, an electronic docket room allows an interactive discussion to develop. The public can raise questions about the regulatory policies that undergird a particular proposal, and this enables the agency to explain why it is charting a particular course. But the more significant feature of an electronic docket room is its potential to promote an informed dialogue. Now an interested member of the public will not have to visit Washington to learn what positions other parties are advocating. She can review these materials online upon their submission and exchange views with others. As a

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faxes because its machine jammed. HHS further responded that it had created a Web site for the submission of comments, and that mechanism as well as the submission of 3 copies by mail were the exclusive methods for commenting on the rule. The GAO report also summarizes fax submittal practices at various agencies. *Supra* note 8, at 8-9.

[17] See http://erm.aspe.hhs.gov/ora_web/plsql/erm_rule.rule?user_id=&rule_id=2.

[18] An electronic docket room is an online equivalent to a paper docket. It serves as a mechanism for viewing all the comments submitted on the proposed rule. It should also operate as a repository for the background materials that the agency used in developing a proposal. Finally, agencies should post educational materials in the docket room and use this mechanism to explain both the regulatory background and the technocratic complexities to lay audiences.

[19] J. Clarence Davies & Jan Mazurek, *Pollution Control in the United States: Evaluating the System,* 155-56 (1998).

result, more nuanced comments will be developed, and overall the quality of submissions should improve.[20]

The second aspect of our Web-based reform would incorporate online policy dialogues into those rulemakings that interest wider audiences. These would be moderated asynchronous discussions and should not be confused with informal real-time chat rooms.[21]

We conducted just such a discussion when the Federal Communications Commission (FCC) proposed its Universal Service rule under the landmark 1996 Telecommunications Act. Here the FCC laid out a plan to adopt a cross-subsidy, the E-rate, to finance Internet connections for the nation's schools and libraries. We thought it vital that key beneficiaries of this rulemaking, educators and librarians, should learn about the proposal, share their views with one another and most importantly offer their comments to the FCC. Thus we built an electronic docket room and conducted an online seminar during the rulemaking.[22]

The discussion was moderated to avoid the rare occasion where an overly heated exchange developed and summarized weekly so those new participants could

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[20] Three legal scholars have concluded that the Administrative Procedure Act does not pose a bar to electronic rulemaking. See Henry H. Perritt, *Electronic Dockets: The Use of Information Technology in Rulemaking and Adjudication* (The Administrative Conference of the United States, 1995); Jeffrey S. Lubbers, *A Guide to Federal Agency Rulemaking*, 151-153; (1998); Stephen M. Johnson, *The Internet Changes Everything: Revolutionizing Public Participation and Access to Government Information Through the Internet*, 50 Admin. L. Rev. 277 (1998).

[21] With an asynchronous format, participation is not restricted to any particular time of day; this flexibility easily accommodates different time zones and busy schedules.

[22] http://www.info-ren.org/universal-service/network-democracy.html. The seminar actually ran after the formal public comment period had expired, but the FCC entertained the comments because the docket was still open. See also discussion in GAO Report, supra note 12, at 11.

easily catch up and join in. During this effort we brought together more than 500 individuals from all 50 states and Puerto Rico.

The seminar participants learned about the policymaking process by viewing and discussing the regulatory materials. Almost invariably the text of a proposed rule is encumbered with dense layers of statutory and regulatory language that the lay reader has to struggle to master. This "enshrouding" in "technocratic complexities" often makes a rule "inaccessible to public control."[23] An open-ended forum like our online seminar allows those interested in the regulatory issues to peel away these layers and gain a greater understanding of the policy problems.

Our efforts also benefited the FCC, which had to formulate a new program in an area where it had little background. Experienced teachers and librarians, whose voices had not previously been heard, explained how they currently used information technology and offered their thoughts on how this new program should operate. This group had several thousand person-years of experience in the application of networking technologies, which FCC staff found most useful in crafting the final rule.[24]

It is instructive to examine the range of commenters on the E-Rate rule before and after the online discussion. In the official comment period there were submissions by some 100 individuals and groups. Almost all of the nation's telecommunications companies were represented, as were numerous trade groups and professional organizations, but only two of the nation's 16,000 school districts had spoken. Thus over 95% of the industry groups weighed in while scarcely 0.01% of the affected school

[23] Richard Pildes & Cass Sunstein, *Reinventing the Regulatory State*, 62 University of Chicago Law Review 1,7 (1995).

districts spoke out.[25] The online discussion thus provided a counterbalance to what had been a narrow conversation between Washington-based interest groups.

Present Efforts

To date, seven electronic docket rooms have been constructed in scattered corners of the federal bureaucracy.[26] Two independent agencies, the FCC[27] and the Nuclear Regulatory Commission (NRC),[28] have installed good first generation efforts.[29] The record is far more mixed in the executive branch. The Department of Transportation (DOT) has the most extensive system, providing an electronic image-based database for every agency rulemaking.[30] At the Animal and Plant Health Inspection Service (APHIS) in the Department of Agriculture (USDA)[31] and the Administration for Children

[24] Conversations between the FCC staff and Robert D. Carlitz.
[25] http://www.info-ren.org/universal-service/network-democracy.html.
[26] This may not be an exact tally of the present effort; more public dockets systems are presently being constructed. For instance, EPA proposes to bring up an electronic docket system in the last quarter of this year. See post by Barbara H. Brandon at OMB Watch's Government Information Policy listserve, http://lyris.ombwatch.org/cgi-bin/lyris.pl?visit=gov-info-access&id=141531872.
[27] http://www.fcc.gov/e-file/ecfs.html.
[28] http://ruleforum.llnl.gov/.
[29] Unfortunately the Securities and Exchange's Commission's initial effort falls short. See http://www.sec.gov/rules/proposed.shtml. The SEC allows the public to view the text of comments submitted electronically but not those submitted by other means. Moreover the Commission dismantles this feature after each rule is promulgated.
[30] http://dms.dot.gov/. This site's design could do more to encourage public participation. A user has to know the docket number to access the docket rooms. The search engine can fail to locate a docket room if the docket number is not supplied. In addition, the help line staff provides no assistance without a docket number. Finally, while the site provides information tracking a regulation's progress through the bureaucracy, access to this data requires registration and a password.
[31] http://www.aphis.usda.gov/ppd/rad/.

and Families in Health and Human Services (HHS),[32] resource constraints have precluded scanning postal submissions onto the Web, thereby depriving the public of access to all the commentary.[33] [34] In contrast, the Food and Drug Administration (FDA) has built fully electronic docket rooms for both rulemaking and its advisory committees.[35] [36]

Suggested Improvements

Agencies with electronic docket systems should institute a two-stage comment submission process to foster a better dialogue between the parties. If rebuttal periods are routinely authorized, the participants can comment on all the submissions made by

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[32] http://www.acf.dhhs.gov/hypernews/. HHS has also created a post-comment period electronic docket. During its recent rulemaking on medical privacy, HHS stated that it would grant electronic access to all the commentary on this proposal *after* the comment period had closed. See also discussion on the ACLU fax submittal controversy in footnote 16.

[33] This failure to create a single docket online greatly limits the utility of an electronic docket to the agency. Having all the comments online allows the agency to categorize the submissions easily; this should significantly minimize the agency's burden in preparing the comment response document, a key part of the final rulemaking. Second, agencies can develop templates to sort out form letters, a step that parts of FDA have taken to index comments.

[34] Agencies that engage in online rulemaking should encourage the parties to submit comments in HTML, the Web formatting language. Many word processing programs make this a simple conversion. This would make it easy to search these submissions.

[35] http://www.fda.gov/ohrms/dockets/default.htm. The FDA has also done a good job in creating an electronic reading room under E-FOIA, the 1996 amendments to the Freedom of Information Act.

[36] The National Telecommunications and Information Administration in the Department of Commerce set up an electronic docket room for its rulemaking on the Internet Domain Name transition, http://www.ntia.doc.gov/ntiahome/domainname/domainname130, but the agency has not established this as a permanent feature of its rulemaking activities.

In a rulemaking on the Federal Advisory Committee Act Management process last year, the General Services Administration created a limited electronic docket room; from its operation it became apparent that the agency was very slow in posting comments to its dedicated Web page. Comments submitted electronically by Information Renaissance were promptly acknowledged, but were not posted until after the comment period had closed. http://policyworks.gov/org/main/mc/rulecom.htm.

the other parties. This assures that one side will not gain a tactical advantage by submitting its views on the final day, which is currently a common practice.[37] As the former Research Director for the Administrative Conference of the United States[38] observes, "[p]ublic comments are much more likely to be focused and useful if the commenters have access to the comments of others. More ample comments benefit the agency, the public, and ultimately the reviewing courts."[39]

Certain "best practices" should also be implemented. The design of most existing docket rooms make them useful only to the cognoscenti.[40] The Environmental

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Several other agencies maintain Web pages which list the rules open for comment and explain how to submit comments by email. See for instance the Web page of the Bureau of Land Management in the Department of Interior, http://www.blm.gov/nhp/news/regul/regul.html.

[37] Neither the APA nor the case law presently require agencies to entertain rebuttal submissions. The Clean Air Act does provide for such comments where the proposed rule is national in scope. See Section 307 (d)(5), 42 USC § 7607(d)(5). The FCC does so as a matter of practice. FCC Rules of Practice, 47 CFR 1.145.

The Library of Congress recently used a rebuttal comment feature in its "fair use" rulemaking under the Digital Millennium Copyright Act. The Library asked commenters to respond to the points made by submitters in the opening round of comments and also during public hearings that were scheduled after the rulemaking had closed.

[38] The 104th Congress abolished the Administrative Conference. Established in 1968, the Conference served as an advisory agency on administrative law and procedure.

[39] Lubbers, *supra* note 20, at 214. The heightened transparency provided by electronic docket rooms should also diminish the likelihood that a reviewing court would overturn a rule because the agency failed to provide the public with adequate notice that a particular issue was under consideration. At present the federal courts are split as to whether or not issues raised in the comments but not in the proposed rule provide adequate notice to other members of the public. Lubbers, *Supra.*

In addition, summaries of *ex parte* communications with agency staff during a rulemaking can be docketed electronically in order to minimize the chance of reversal under Sierra Club v. Costle, 657 F.2d 298 (D.C, Cir. 1981). During its recent rulemaking on marketing standards for organic food the USDA provided a direct link to memoranda detailing these *ex parte* communications. GAO Report, *supra* note 12, at 12.

[40] The GAO found that the FAA's docket system was the most straightforward in providing the public with an easy way to comment. GAO Report, *supra* note 12, at 9. The public can "read a copy of the proposed rule in Microsoft Word, click on a link for DOT's docket management system, and then access that system's electronic commenting process." *supra.* Dedicated rulemaking Web sites like USDA's organic marketing proposal and HHS's medical privacy rulemaking provided separate links to both the proposed rule and the electronic comment procedure. *supra.* http://erm.aspe.hhs.gov/ora_web/plsql/erm_rule.rule?user_id=&rule_i.

Protection Agency (EPA) has developed a far more citizen-friendly interface for its proposed Regulatory Public Access System.[41] The system's home page highlights the proposed rules open for comment, thereby curing a widespread failing in many of the current docketing efforts.[42] While we are not advocating a common "look and feel" for all agency Web sites, home pages should provide a direct route to a page that lists all proposed rulemakings open for comment.

Electronic docket rooms should permit anonymous browsing and copying just like paper docket rooms.[43] However, anonymous filing should not be permitted once a person or organization is submitting comments for the record. Both the governmental entity and other participants have a legitimate interest in knowing who is commenting.[44]

The HHS Web page allowed the commenter to post directly under the section using a comment button on the Web page. This is a useful mechanism. However the site had two big flaws. It was not easily accessible from the Department's home page. See Patrice McDermott, "Online but Off-Target" *Federal Computer Week*, 3/13/00. http://www.civic.com/fcw/articles/2000/0313/fcw-pol-mcdrmtt-03-13-00.asp. In addition, HHS only planned to post the commentary after the final rule was promulgated.

[41] EPA's design contains a useful Frequently Asked Questions feature. The agency also stated that it plans to develop a Web tutorial for the public. However, the proposed design has a significant design flaw; it does not include a public index to the docket. See discussion *infra* at note 46.

[42] No agency currently does this across the board, although certain high visibility rules have been featured on home pages. GAO Report, *supra* note 12, at 8-9. For instance, the Department of Labor's (DOL) proposed ergonomics rule was featured on both the DOL home page and the Occupational Health and Safety Administration (OSHA) home page. GAO Report, *supra* note 12, at 5. The USDA did this with the organic food rule and the roadless proposal as well.

[43] Last year United States International Trade Commission's proposed that all users of its electronic docket room had to register before browsing or copying documents.

[44] In a recent beta test demonstration of its new docket system, EPA stated that it had opted for anonymous filing because of privacy concerns. See post by Barbara H. Brandon, *supra* note 26. At a minimum, the authors do not think that the Privacy Act should be construed to shield the identity of organizations submitting comments. The agency's current paper docket systems do not protect the identity of any commenter, and judicial dockets never allow a party to mask his or her identity. Moreover, adoption of such a practice would defeat one of the central virtues of electronic filing by forcing a visit to the paper docket room to determine the identity of the submitter.

Indeed, anonymous filings are not accepted under the existing rules for paper dockets during rulemakings or adjudicatory proceedings.

Dockets should contain index pages that allow the public to browse the filings by name and organization.[45] Agencies should not limit access to the commentary to a search engine, as USDA did during its organic food marketing rulemaking last year.[46] An online index allows the public to browse the docket to locate comments made by organizations, trade associations and public interest groups and to learn the perspectives of these groups.[47]

Electronic methods like listserves or Web postings should be adopted to expand participation beyond the narrow subscription base of the Federal Register and the other passive notification systems that agencies presently utilize.[48] For example, the State of Washington's Division of Information Services manages a central listserve that allows

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In addition, comments in a rulemaking record clearly meet the definition of "agency records" under FOIA, 5 U.S.C. § 552(a)(4)(B). As such they are subject to disclosure under the two-pronged test of Department of Justice v. Tax Analysts, 492 U.S. 136 (1989). Moreover, the Privacy Act, 5 U.S.C. § 552a(a)(4), only applies to individuals and should not serve to protect organizational identity or the identity of a person acting in a representative capacity such as a lawyer or lobbyist representing a client. It is noteworthy that Shaw Pittman Potts and Trowbridge, a large Washington law firm, saw no need for anonymity in its practice when commenting on electronic filing procedures at DOT. See comments at page 11 at DOT Docket OST-96-1436.

[45] FDA and DOT deploy docket index pages as the primary access tool for using their dockets.

[46] Three major difficulties flow from limiting access to a search engine. The public may not be confident that they have retrieved all the appropriate documents. Two, if the search engine is flawed, this fear is justified. Third, many citizens will find it easier to use a docket index to locate comments that interest them.

[47] This is not a burdensome requirement; USDA almost certainly generated just such an index while the organic food rulemaking was ongoing. Moreover, such an index must be prepared if there is an appeal under Rule 17 of the Federal Rules of Appellate Procedure.

[48] The print version has a base of 13,750 subscribers nationwide. Stephen P. Croley & William F. Funk, *The Federal Advisory Committee Act and Good Government*, 14 Yale Journal of Regulation 451, fn. 467 at 529 (1997). During the FCC rulemaking, we reached out to teachers and librarians through electronic contacts with professional organizations and through online interest groups frequented by our target audience. Such practices should be routinized.

citizens to custom tailor a list that that will automatically alert them of opportunities to participate in governmental decision-making processes like rulemaking.[49] At the federal level, such measures are clearly necessary because of the voluminous nature of both the Unified Agenda and the Federal Register. As the General Accounting Office (GAO) recently noted, locating information about a specific rulemaking can be a "daunting" task.[50]

Better public education efforts should be undertaken; at a minimum links to explanatory materials should be a common feature for all docket rooms. If the proposal is significant, weekly summaries, specialized search engines and subject matter indices should be created to allow the public to review prior submissions easily and to post more informed comments in turn.

Electronic docket rooms will also allow agencies to post many of the materials that are developed to satisfy various ancillary legal requirements. These include cost/benefit analyses or information addressing concerns under the Paperwork Reduction Act.[51] As the GAO observed in a recent report, "access to these materials can permit public comments...to be more informed and targeted."[52]

Additional Advantages of Online Rulemaking

Other benefits will flow from online rulemaking. Increased transparency will allow commenters to learn from earlier submissions and to refine their views accordingly. Indeed, some set of participants may reach a consensus on an issue that the agency

[49] GAO Report, *supra* note 12, at 13.
[50] *Supra* note 12, at 3-4.
[51] 44 U. S. C. § 35 *et seq.*

can incorporate into the final rule. Online interchanges will further benefit the judiciary, because the rulemaking record will provide more insights into how a regulation will work in practice.

We do not envision online rulemaking as a panacea that will cure the post-promulgation rush to the courthouse door.[53] The legislative design of modern regulatory statutes often reflects a deliberate congressional determination to pass the hard questions on to the agency for resolution.[54] The logical outgrowth of this buck-passing is an adversarial rulemaking process. But a more open, interactive process can minimize disputes and show the agency where the bulk of public concern lies on a particular matter.[55]

These measures should also broaden the participation base in federal rulemaking. At present, little good data exists showing both who is participating in rulemakings and what influence parties exert.[56] However, it is clear that business groups predominate.[57] A recent study of rulemaking participation found in a randomly

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[52] GAO Report, *supra* note 12, at 9.
[53] Professor Johnson offers such a rosy prognostication in his article, *supra* note 20, at 303-04.
[54] Mashaw, *supra* note 7, at 206-07; Wendy Wagner, *Congress, Science and Environmental Policy,* 1999 University of Illinois Law Review 181 (1999).
[55] See Jody Freeman, *Collaborative Governance in the Administrative State*, 45 UCLA Law Review 1 (1997).
[56] Professor Kerwin has observed that good empirical studies "are as rare as hen's teeth." *supra* note 5, at 192. See also Stephen P. Croley, *supra* note 7, at 37-38; Marisa Golden, *Interest Groups in the Rule-making Process: Who Participates?* 2 Journal of Public Administration Research and Theory, 252 (1998). As Professor Kerwin notes, each agency compiles participation data differently and the summaries of rulemaking activities in the Federal Register are often not illuminating on this issue. Kerwin, *supra* note 5, at 185-89.
[57] The most comprehensive study is dated. In 1977 the Senate Committee on Governmental Affairs studied public participation at eight agencies by reviewing the dockets for thirty rules at each agency. The Staff found that parties representing regulated interests significantly outnumbered groups representing broad outside interests. Staff of Senate Comm. on Governmental Affairs, 95th Cong., 1st Sess., Study on Federal Regulation, Vol. III: Public Participation in Regulatory Agency Proceedings 1977.

selected group of rules proposed by EPA and the National Highway Safety Transportation Agency that corporations, public utilities or trade associations submitted between 66.7% to 100% of all comments.[58] [59]

To date, the partial deployment of information technology in the rulemaking arena has had some interesting results. During the comment period on marketing standards for organic food, a USDA official noted that electronic rulemaking changed the dynamic of public participation.[60] In most paper rulemakings commenters typically wait until the last minute to file comments so no one else could see their views.[61] But during this

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More recently, Professor Coglianese studied participation in twenty-five EPA rulemakings on hazardous waste. In these rulemakings between 1989-91 parties representing businesses participated 96% of the time while environmental and citizen groups participated 12% of the time. Trade associations were active over 80% of the time. See Unpublished Ph.D. dissertation cited in Croley, *supra* note 7, at 472.

[58] Golden, *supra* note 56.

[59] It is also interesting to note the wide variability in the amount of commentary that agencies receive on their major rules. The Clinton Administration issued numerous important rules during its last six months. The public response was greatest in response to the roadless area proposal. See discussion *supra* at note 3. EPA's adoption of standards covering heavy-duty diesel engines and fuel standards drew over 55,000 comments. 66 Fed. Reg. 5002, at 5012, Jan. 18, 2001. Over 52,000 Americans submitted comments during HHS's medial privacy rulemaking. http://www.hhs.gov/news/press/2000pres/20001220.html. USDA received 40,774 comments during its rulemaking on the marketing standards for organic food. 65 Fed. Reg. 80548, Dec. 21, 2000. In promulgating its highly controversial ergonomics rule, OSHA received 5,900 comments and 714 submissions from witnesses at public hearings. 65 Fed. Reg. 68,261, 68265, Nov. 14, 2000. When adopting a new rule to promote full and timely disclosure of financial information to the public, the SEC received 6,000 comments. 65 Fed. Reg. 51,716, 51, 717, Aug. 24, 2000. Three thousand organizations and individuals commented on the SEC's tightening requirements for insuring that auditors remain financially independent from their clients. 65 Fed. Reg. 76,008, 76,009, Dec. 5, 2000. In setting an arsenic drinking water standard EPA received 1,100 comments. 66 Fed. Reg. 6976, 7024, Jan. 22, 2001. The Department of Energy recently set energy conservation standards for central air conditioners and heat pumps and received 800 comment. 66 Fed. Reg. 7170, 7174, Jan. 22, 2001. The FDA received 800 comments on its new safety standards for fruit juice. 66 Fed. Reg. 6138, 6140, Jan. 19, 2001.In setting poultry handling standards the USDA received 252 comments, mostly from industry or trade associations and three from consumer groups. 66 Fed. Reg. 1750, 1752, Jan. 9, 2001.

[60] GAO Report, supra note 12, at 12.

[61] See e.g. Shaw Pittman Potts and Trowbridge's discussion of its filing needs, *supra* note 45, at 3-10.

rulemaking, the early submitters had "the greatest influence on the evolving discussion."[62]

APHIS, another part of the USDA, had a slightly different take on the process. They found that electronic docket rooms were particularly helpful when the rule was less controversial. During these rulemakings commenter interaction provided "a real-time, informal 'peer review.'"[63] This experience should be transferable. Active notification systems and rebuttal comment periods should generate more input even when a rule is very technocratic. Specialized audiences at universities, nonprofit organizations and individuals with a particular expertise have valuable input to offer if Washington makes it easy to do so.

A final benefit will be cost savings to the taxpayer. As the GAO has documented, these savings can be substantial.[64] After the DOT installed its electronic docket system, it began saving approximately a million dollars a year in administrative costs.[65] Similarly, the USDA estimates that it saved more than $100,000 dollars in administrative costs during the organic marketing rulemaking while simultaneously boosting public awareness and participation.[66]

Potential Criticisms of Online Rulemaking

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[62] GAO Report, *supra* note 12, at 12.
[63] *Supra* at 11.
[64] *Supra* at 9.
[65] *Supra.*
[66] *Supra* at 12. However USDA utilized a proprietary software package that it cannot use again. *Supra* at 13.
The GAO also reported that some federal officials thought that electronic docket systems would require substantial resources that could better be used on other activities. This is a

Critics may focus on access problems faced by the information "have-nots." This is a fundamental issue of societal equity that we must face as a nation. However, the Internet's civic potential should not be ignored because of legitimate concerns about access. Simply put, the digital divide should not prevent us from utilizing the Web to re-engage more Americans with their government.

A second fear is that increased participation will overwhelm the agencies with citizen input.[67] In the rulemaking context this issue is easily disposed of, because an electronic docket room offers the agencies an immediate internal payoff. Unlike a bulky paper docket, online comments can easily be sorted, indexed and searched. Second, it matters very little if an agency receives 10 or 100 or 1000 repetitive messages electronically; it need only respond once to the substance.[68] Third, an agency does not have to respond to every aspect of every submission; its legal obligation is limited to responding to all material comments.[69] Finally, tools like content analysis can aid an agency in mastering a voluminous docket. During the roadless area rulemaking, the Forest Service used content analysis techniques to organize and analyze the comments that it received.[70]

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penny-wise but pound-foolish approach, because administrative cost savings will be realized on an annual basis.

[67] See e.g. Jim Rossi, *Participation Run Amok: The Costs of Mass Participation for Deliberative Agency Decision-making*, 92 Northwestern University Law Review 173 (1997).

[68] If large volumes of "astro-turf" comments become a problem, software can be deployed to scan and sort these submissions. USDA took this step in its National Organic Food rulemaking, and the FDA staff developed a template to sort and index form letter submissions quickly.

[69] Portland Cement v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973); Lubbers, *supra* at 376.

[70] 66 Fed. Reg. at 3248.

GAO found several federal officials who were skeptical about the benefits of electronic rulemaking.[71] They questioned whether these changes would enhance public participation in terms of numbers or quality of the commentary.[72]

The numbers claim can be easily dismissed. Where an agency makes an effort to involve the public like the Forest Service did, Americans are happy to contribute their thoughts.[73] This point is further buttressed by a recent public opinion survey performed for the Council for Excellence in Government.[74] More Americans want the federal government to use the Internet as a tool to enable them to become better informed and more involved in governmental activities.[75] Fifty-nine percent of the adults sampled chose greater public participation as their preferred focus for future governmental initiatives, as opposed to thirteen percent who selected the provision of more online governmental services.[76]

Our response to the quality objection is threefold. Some regulatory issues do not call on the public for their expertise – they ask Americans what they think about a straightforward issue. For instance, the Park Service recently imposed a ban on snowmobiling in Yellowstone and the Grand Tetons. The public submitted 5,273 comments on the proposal with 4,935 commenters supporting a ban and 817 opposing

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[71] GAO Report *supra* note 12, at 15.
[72] *Supra.*
[73] See discussion *supra* note 3.
[74] Council for Excellence in Government, *e-Government: The Next American* Revolution, Feb 2001, available at http://www.excelgov.org/techcon/egovex/index.htm
[75] *Supra* at 25.
[76] The Hart-Teeter survey also points out that about three in four Americans (73%) want e-government to be a high priority for the Bush Administration. *Supra* at 18. The survey also revealed that e-government may improve public confidence in the federal government. Thirty-six percent of Americans who use the Internet to access a government Web site have a "high level

one.[77] Second, more technocratic rules often entail choosing between conflicting public values. Americans are entitled to express their preferences between competing alternatives such as saving jobs or setting tighter environmental standards. Third, this critique seems both shortsighted and insular. The USDA's experiments with electronic rulemaking and the FCC's experience during the E-rate show that Washington has much to gain by hearing from more than Washington-based groups.

Steve and Cokie Roberts offer a fourth criticism of online activism.[78] They characterized the Federal Trade Commission's (FTC) request for e-mail comments on a proposed merger as an improper attack on representative democracy. As Andrew Shapiro notes, their knee jerk opposition to electronic input wrongly confuses the Internet's capacity for promoting civic engagement with an appropriate concern for maintaining the distinction between direct and representative democracy.[79] Rather than argue that agencies remain tightly insulated within the Beltway, such critics should recognize that the solicitation of public input is sound practice in a republican government.[80]

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of trust in the government" as compared to twenty-two percent of users who never have visited a government Web site or the 19% who do not use the Internet at all. *Supra* at 19.

[77] 66 Fed. Reg.7260, Jan. 22, 2001.

[78] "Internet Could Become a Threat to Representative Government," United Features Syndicate, April 5, 1997.

[79] Andrew L. Shapiro, *The Control Revolution: How the Internet is Putting Individuals in Charge and Changing the World We Know*, 195 (1999).

[80] One potential source of objections could be troubling. Several legal scholars find the present rulemaking process too "ossified" by complicated analytical procedures designed to measure the costs and benefits of a particular course of action and by judges hostile to an agency's regulatory mission. See Thomas O McGarity, *supra* note 9 and *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 Texas Law Review 525 (1997); Freeman, *supra* note 54, at 9. Although our suggested reforms do create more work for those agencies most encumbered by these burdens, overall we think the gains in civic engagement outweigh the risk of further delay. Moreover the deployment of information technology should shorten the turn-around times between proposal and promulgation.

Leveling the Playing Field

The Internet can make earlier stages of the rulemaking process more transparent. At present, business groups based in Washington monitor the development of a rule as it is drafted by agency working groups, enabling them to offer their input at these key, early stages. Outside the Beltway, grassroots consumer and environmental groups are effectively barred from having any substantive input as the proposal is crafted. As a former EPA general counsel has observed, "notice and comment rulemaking is to public participation as Japanese Kabuki Theater is to human passions - a highly stylized process for displaying in a formal way the essence of something which in real life takes place in other venues."[81] Making key regulatory documents available online prior to proposal of the rule could shift this dynamic.[82]

In the near future, EPA will propose new air pollution regulations to control hazardous emissions from coke ovens in the steel industry.[83] This rulemaking will deeply interest grassroots environmental groups located near these plants in the

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[81] E. Donald Elliott, *Re-Inventing Rulemaking*, 41 Duke Law Journal 1490, 1492-93 (1992). Mr. Elliott served during the Bush Administration.

[82] In 1996 Congress enacted the Electronic Freedom of Information Act Amendments, Pub. L. No. 104-231 to guarantee public accesses to governmental information by electronic means. Last year OMB Watch issued a report critiquing the Act's implementation. See Patrice McDermott, *A People Armed?* (1999).

E-FOIA encourages federal agencies to utilize the Internet to provide information to the public but the Act does not establish rules to assure that the public has easy online access to policy documents and databases. For instance, the general public has to register and pay a fee to obtain access to EPA's enforcement database, IDEA. This database tracks the issuance of notices of violations, administrative orders, civil penalty actions, civil injunctive relief and criminal referrals by both EPA and the states. Because businesses routinely obtain this enforcement data under the Freedom of Information Act, such a restrictive approach does not seem defensible.

Midwest, but these organizations have little practical ability to monitor EPA's internal drafting efforts. In contrast, the American Iron and Steel Institute and its member companies will be closely observing EPA's activities, and they will undoubtedly obtain early access to the key analysis that assesses the state of pollution control technology in this area. This will be the single most important document developed during this rulemaking, and viewing it at the earliest possible stage will allow the grassroots groups to coordinate a far more effective submission during the public comment period. Thus, if EPA posted this document online as soon as its first internal draft is released to the industry, the playing field would be less tilted against the grassroots.

Another online experiment also shows the Web's potential to increase public participation prior to proposal. The NRC used an online "chat group" during its "RuleNet" initiative to determine whether the fire protection rules governing nuclear power plants should be changed from prescriptive rules to performance-based standards.[84] After posting all the necessary background material online, the Commission hosted an electronic forum where both the agency and the participants identified topics that needed be addressed in order to formulate a new rule.[85] A moderator from the agency led the discussions, summarized the comments and periodically asked participants to vote in favor of or against various positions. The agency's stated goal was the

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[83] Coke ovens emit high levels of carcinogens, and Congress highlighted this source for specialized treatment in the1990 amendments to the Clean Air Act. Section 112, 42 USC § 7412.

[84] http://nssc.llnl.gov/rulenet. The GAO Report states that DOT also has used a chat room arrangement during certain comment periods. GAO Report, *supra* note 12, at 11.

[85] In effect, this was an online substitute for an advanced notice of proposed rulemaking.

solicitation of a broad range of public input rather than the development of a consensus proposal as would occur during a negotiated rulemaking.[86]

Asynchronous dialogues could also be utilized to obtain public input prior to proposal, serving as an effective adjunct to an advanced notice of proposed rulemaking. Under the Administrative Procedure Act an agency often will publish a notice in the Federal Register when it wants to solicit public input on a particular topic prior to shaping a proposed rule. An online dialogue would be an effective supplement where interested parties could exchange their thoughts and viewpoints with each other and with the agency.[87]

Other Uses for Online Dialogues

Online dialogues should also be considered as a replacement for public hearings where the government wants to hear from a larger audience outside the Beltway. These dialogues would be easy to set up. Interest group presentations could be placed online, and representatives from each group could exchange views with each other and the public.

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[86] Because the Commission has yet to publish a proposed rule on this topic, it is hard to judge the success of this particular effort.

[87] The documents generated during a negotiated rulemaking could also be posted online, which could serve to broaden public input into the negotiations. Once viewed as a promising mechanism to increase the settlement of contested regulatory issues, negotiated rulemaking has recently fallen on hard times. Professor Cary Coglianese's research indicates that this process has not reduced litigation as its proponents had hoped it would. *Assessing Consensus: The Promise and Performance of Negotiated Rulemaking*, 46 Duke Law Journal, 1255 (1997). Moreover EPA which had utilized the process the most, has used it much less frequently during the nineties. Davis & Mazurek, *supra* note 18, at 156-158. Increasing the transparency of the process might reinvigorate it by providing potential objectors to the negotiated rule with the opportunity to provide input to the appropriate side during the negotiations.

Moderated dialogues offer other advantages. They can be administered as efficiently as a series of public meetings, especially with electronic notification. In late 1999 the FDA held three public meetings around the nation on the safety of bioengineered foods.[88] These meetings were well attended according to press coverage, and the debate was heated.[89] An online dialogue would have broadened the FDA's audience beyond Chicago, Oakland and Washington, letting the Agency hear what consumers nationwide think about the use of biotechnology in foods.[90]

An online dialogue offers other advantages. A moderated discussion can be both civil and deliberative, whereas public hearings often descend into polemical slugfests, full of one-sided diatribes. Had the FDA used an online dialogue to discuss biotechnology in foods, it could have adopted a roundtable format where opposing experts would discuss the issues with each other, the agency and the public.[91] This allows all sides to make considered presentations and to respond fully to each other claims. The discussion also serves as an informative archive that can later be viewed by others interested in the issue.[92]

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[88] See press release at http://vm.cfsan.fda.gov/~lrd/hhbioeng.html.
[89] Interest was intense at the Chicago forum. See William Claiborne, "A Biotech Food Fight: Two Sides Square Off at FDA Hearing" Washington Post, Nov. 19,1999, A03. http://washingtonpost.com/wp-srv/Wplate/1999-11/19/1701 –1119999-idx.html; Greg Burns and Phat X. Chiem, "Food Fight for the FDA: Dozens Protest Use of Altered Ingredients" Chicago Tribune, 19 Nov. 1999.
[90] The FDA did solicit public comment on this topic at its Web site and it has archived the public comments in Docket # 99-4282 at http://www.fda.gov/ohrms/dockets/dockets/99n4282/99n4282.htm.
[91] Information Renaissance and Americans Discuss Social Security successfully incorporated a roundtable format into an online discussion of Social Security reform in the spring of 1999. Leading lawmakers and national policy experts debated the issues fully and civilly and interacted with online audience. See http://www.network-democracy.org/social-security.
[92] This point is significant. While FDA has archived its hearing transcripts on bioengineered food online, the material is not indexed and it is not searchable. This makes it most unlikely that the public will peruse these 1330 pages to learn more about the topic. In contrast, an online

Finally, online dialogues are far more participatory than most public hearings. Most often, federal officials convene a hearing and listen passively as presentations are made. Few questions are asked, and substantive matters are almost never discussed in depth. During five public hearings on its emission standards for sport utility vehicles EPA staff addressed only a handful of questions to the presenters;[93] the whole effort could just as easily have been mailed in.[94]

Deliberative Governance and Online Dialogues

Robert Reich has advocated a broader vision of public administration. He thinks agencies should reject a narrow calculus that just focuses on what each interest group wants and instead adopt a more deliberative conception of what is good for society.[95] This would entail the government's engaging in an ongoing dialogue with the public, both to evaluate a problem and to address what's at stake when a particular decision is made.

To illustrate his concept, Reich points to an experiment that William Ruckelshaus engaged in during his second tenure as EPA's Administrator. The agency was faced with imposing a new health-based arsenic standard that had the potential to shut down

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dialogue serves the long-term interests of agencies and interest groups alike, because the archive automatically becomes a permanent educational resource for the general public.

[93] The transcripts can be found at http://www.epa.gov/OMSWWW/regs/ld-hwy/tier-2/nprm/tr2-nprm.htm# This passivity is logical in one sense. EPA had undoubtedly heard from key outside constituencies in private meetings beforehand; it therefore had little need or incentive to explore topics in a public forum. An online dialogue would have a different dynamic.

[94] Thomas C. Beierle views most public hearings on environmental issues as so pro forma in nature that they should be viewed as "active forms of notice and comment procedures." *Public Participation in Environmental Decisions: An Evaluation Framework Using Social Goals,* Discussion Paper 99-06 at 21 in Resources for the Future Library at http://www.rff.org/disc_papers/PDF_files/9906.pdf.

the Asarco smelter in Tacoma, Washington. In a series of public fora, Ruckelshaus engaged the local community in a dialogue to explore the classic trade-off between jobs and the environment and in assessing the risks posed by continuing exposure to arsenic.

An online dialogue would work well in this area. Interested parties could explicate their positions in depth and exchange views with the public. And, as Reich hopes, such a "process, properly managed, can build on itself" allowing the public to define and evaluate its collective goals.[96] This would be particularly valuable in areas such as environmental risk, where an agency is struggling to decide how protective it should be, and the public is faced with the same questions of safety and cost. At best, an interactive deliberation could build a consensus, and at least, it would foster greater public appreciation for the complex issues confronting governmental decision-makers.

The benefits of these dialogues could flow in another direction as well; they could make Americans better citizens. Instead of just talking past each other, the public could engage in "discursive participation" to adopt Paul Brest's phrase.[97] He envisions a process where Americans justify their positions in an open forum and reflect on what their fellow citizens think as well. If implemented with care, online dialogues could develop into a civic tool where these types of thoughtful and reflective interchanges become commonplace.

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[95] Robert Reich, *Public Administration and Public Deliberation: An Interpretive Essay*, 94 Yale Law Journal, 1617 (1985); Pildes & Sunstein, *supra* note 23, at 89-94.
[96] Robert Reich, *The Power of a Public Idea,* 6 (1990).
[97] Paul Brest, *Further Beyond the Republican Revival: Toward Radical Republicanism,* 97 Yale Law Journal 1623, 1624 (1988).

Structuring dialogues that achieve these goals will be interesting and challenging. Agencies must recognize that they do not want to create a debating forum for the scoring of rhetorical points. Here recruitment becomes key. Last fall EPA funded a National Dialogue on Libraries as a Community Resource for Environmental Information.[98] This forum was notable for its civility and the thoughtfulness. Much of this was due to the breadth of the participants' backgrounds and their ability to listen to each other reflectively.

But this may not always be the case. "Discursive participation among people who are misinformed or who represent a relatively narrow spectrum of views may create or re-inforce a distorted but strongly-held consensus."[99] Thus educational materials should be provided and techniques should be developed to make participants more empathetic listeners.

Further Steps

Most Americans believe that the Bush Administration should put the adoption of information technology at the top of its to-do list.[100] The Administration could speed the adoption of electronic rulemaking by issuing an Executive Order. Others have suggested that President Bush appoint a Technology Czar to foster the rapid implementation of e-government initiatives.[101] As an alternative, Congress could require all rulemaking agencies to establish electronic docket rooms by a date certain.

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[98] http://www.network-democracy.org/epa/welcome.html.
[99] Paul Brest, *Constitutional Citizenship*, 34 Cleveland State Law Review 175, 196 (1986).
[100] See Council for Excellence, *supra* note 74, at 18.
[101] Last year Chairman Horn of the House Subcommittee on Government Management, Information, and Technology held hearings on whether a Federal Chief Information Officer

President Bush and Congress should also encourage the quick adoption of a minimum number of "best practices." Agencies should be directed to utilize rebuttal comment periods and to abandon a total reliance on passive public notification through the Federal Register. Some design features should be mandated like public index pages and easy to locate lists of rulemakings that are open for comment.

Certain policy questions need to be addressed as well. These include the propriety of anonymous filing, the handling of copyrighted material and censorship standards for inappropriate messages.[102] We are not advocating a one-size-fits-all approach. Each agency does face different challenges in implementing online rulemaking because of its authorizing legislation, executive orders and organizational structure. This, however, is no excuse for not adopting common conveniences that would aid the public in accessing these rulemaking dockets.

In addition, both Congress and President Bush should encourage agencies to experiment with more open and interactive processes. This should include online policy dialogues and other efforts to increase public input to the rulemaking process. At a minimum, agencies should be encouraged to frame issues for discussion during the opening round of commentary and during the rebuttal period.

Greater funding of information technology will also be necessary. In particular, software needs to be developed to allow thousands of Americans to engage in online

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should be established. See http://www.house.gov/reform/gmit/hearings/2000hearings/000912cio/000912sh.htm. The Council for Excellence in Government called for the naming of an Assistant to the President for Electronic Government with Cabinet level rank. *Supra* note 74, at 7. The Council also suggested that the Deputy Director of OMB should head an Office of Electronic Government and Information Policy. *Supra* at 8.

discussions during rulemakings and public hearings. Second, more work needs to be done to aid agencies in sorting and analyzing the commentary that they receive.[103]

Conclusion

The USDA's recent rulemaking activities and efforts like our E-rate seminar demonstrate that the Web can reinvigorate the public sphere. If agencies use the Web thoughtfully, Americans living beyond the Beltway can shape rulemaking proposals just as Washington-based interests do. Properly utilized, the Web can become a vibrant mechanism for improving our civic culture by allowing sophisticated policy issues to be well explained and thoroughly debated. It is time to build the necessary civic infrastructure so that this more open and interactive public arena can be ours.

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[102] Currently there is no structure or resource in the federal government that serves as a common resource and thus each agency has to "reinvent the wheel." GAO Report, supra note 12, at 14.

[103] This is area where the government could profitably sponsor research and make use of results that would be placed in the public domain for all federal, state and local agencies.

Statement of
Beverly Sheppard, Acting Director
Institute of Museum and Library Services
Prepared for the Senate Committee on Governmental Affairs
on S. 803, *The E-Government Act of 2001*
July 11, 2001

Mr. Chairman and members of the Committee, thank you for inviting testimony from the Institute of Museum and Library Services with regard to S.803, the E-Government Act of 2001.

Congress created the Institute of Museum and Library Services, an independent federal agency, in 1996 to enhance the capacity of the nation's libraries and museums to meet the needs of a learning society. In support of this mission, IMLS administers the Library Services and Technology Act and the Museum Services Act, and promotes the broadest public access to the wealth of resources housed in museums, libraries and archives throughout the country.

This testimony focuses on specific aspects of S. 803 pertaining to IMLS's mission, including public information and libraries. It is our understanding that a comprehensive discussion of S. 803 is being addressed by Sean O'Keefe, the Deputy Director of the Office of Management and Budget.

Museums, libraries and archives are all involved in creating rich digital content and in conducting applied research on the management, preservation and interoperability of digital information. Libraries, in particular, are also contributing to e-Government initiatives.

For these reasons, IMLS has a great interest in S. 803, the E-Government Act of 2001. In our view, the proposed legislation would:

- Promote the coordination of effort regarding the management of digital information, including the development of standards for preservation, access, and interoperability;
- Coordinate federal government information policy and enhance the integration of access to federal government information with state and local government information; and,
- Recognize the significant federal investment in information creation and increase the accessibility and usefulness of the information created, thus maximizing its effectiveness.

Three areas addressed in S. 803 have direct connections with the work of the Institute of Museum and Library Services. They are:

1) Using Technology to Bring Government Information to People;
2) Development of an Online National Digital Library; and,
3) Community Technology Centers.

Using Technology to Bring Government Information to People
The proposed legislation intends to foster integration of State and Federal government information. State Library Agencies, because of their work to provide access to State government information through government information locator services, have a role to play in this integration.

IMLS grants are helping State Library Agencies to develop government information locater models.

The Chief Officers of State Library Agencies are leaders in information resources management in the States. They are deeply committed to encouraging collaboration and enhancing understanding of best practices and innovative approaches in acquiring, using, and managing information resources. Representatives of State Library Agencies from 21 states met in Springfield, Illinois, March 27 – 30, 2001 for the Third Annual State Government GILS (Government Information Locator Services) Conference. Participants addressed interoperability issues including development of a single, hierarchical subject tree of search terms needed to provide consistent searching and retrieval for State government information.

Their work will be valuable in developing a comprehensive national approach to providing seamless, interoperable access to state government information.

Development of an Online National Library
The proposed legislation envisions an Online National Library. A wealth of publicly-owned information exists in the nation's Federal libraries, archives and museums. In addition, the Federal Government has invested significant resources in converting some of this information, as well as information in non-Federal cultural-heritage organizations, to digital form.

IMLS is one of the federal agencies that is actively involved in the development of digital libraries. IMLS has funded approximately 100 digital library projects over the last three years. Projects have included applied research in the management, preservation, and interoperability of digital information, in addition to creating rich content drawn from the unique collections of museums, libraries and archives across the country. In addition, state libraries are using funding from IMLS to support digitization projects and to share information on best practices.
IMLS is working with representatives of the National Science Foundation and museum and library experts to develop projects to demonstrate or test the feasibility of repurposing and enhancing digital content in museums and libraries throughout the country and making them accessible through a new digital library. IMLS and NSF have created a Digital Library Forum to discuss challenges to interoperability.

IMLS is a partner with the Library of Congress and other federal entities in the National Science Foundation's Digital Library Initiative to support research and development of digital library technologies. Through these activities, IMLS is working with computer scientists and collections professionals to provide seamless access to the resources of libraries, archives and museums. The digital resources created by collections-holding institutions will provide the basis for much of the informal learning and distance education that will take place in the 21st century.

Community Technology Centers
In many communities across the country the public library is the *de facto* community technology center. Libraries provide the number one point of Internet access for people who do not have computers at home or at work. The proposed legislation calls for a report on community technology centers. In the development of such a report, the contribution of public libraries should be recognized.

I appreciate the hard work ahead for this Committee and thank you for considering the role libraries and museums will play in accomplishing these goals.

904 CLIFTON DRIVE, ALEXANDRIA, VA 22308
(703) 768-0400 (V) (703) 765-9295 (F)
WWW.ICHNET.ORG INFO@ICHNET.ORG

Interoperability Clearinghouse Statement on the E-Government Act of 2001 (S.803)

We would like to propose that S.803 include additional measures to help government IT leaders avoid some of the greatest pitfalls are encountered today. Based on overwhelming evidence (IDG, CMP, GAO, OMB, OSD Reports, etc), many of these failures are preventable and could be avoided if government IT shops were able to change their engineering processes to leverage the new methods of e-business brought to light by the internet. The greatest source of failure today, as stated in a December 1998 CMP Media research report, is caused by deficiencies in the technology insertion process. This is the result of a combination of factors:

- The rate of technology change
- Excess market hype (vendor promises)
- The complexity of engineering component-based systems

Much has been written on the deficiencies of current government IT processes (software engineering, architectures) that will hinder the success of the S.803 directive. S.803 must also address the processes, methods and tools needed for transformation. Government program managers and their preferred suppliers are entrenched in antiquated, costly processes that favor custom development and rely on advice from special interests. Based on our work with many of the government's largest suppliers, it is clear that they must be strongly encouraged to take advantage of these more efficient processes and technologies (much like the NIMA Commission has). Current policies and architecture guidance do not assure success, and must be augmented to support these unique concepts.

Industry has already begun to move away from costly software development and toward a buy and integrate (plug and play) environment. Nearly every major software company has made its product internet/web enabled. However, there is no single model for making the different products work together, and users continue to struggle with figuring out "what really works" and "what works with what". It was these issues that spurred the creation of the ICHnet.org.

The ICHnet.org supports S.803's attempt to address the shortcomings in current government IT processes and to identify known entities/standards that can help push government IT programs in the right direction (i.e. Open GIS and XML). These initiatives are worthy of recognition, and it should be noted that both of these have already aligned themselves with the ICHnet.org consortium. However, S.803 does not provide mechanisms for identifying and adopting other progressive technologies and standards as they emerge.

After careful examination, the ICH believes the stated goals in S.803 can be better achieved by identifying the adoption of better engineering processes to deal with the transition into this new internet-driven landscape, like the one already created by our joint government/industry initiative. The ICH, with 6 years of process engineering research, has developed the following mechanisms to help assure a successful transition into e-government:
A) New engineering methods for architecting commercial off the shelf (COTS) based systems that utilize internet/web standards (XML, OpenGIS, Java)
B) A non-profit, technology-neutral venue that facilitates collaboration on advanced systems design and shared best practices (avoiding repeated pitfalls)
C) New architecture tools that leverage the internet and enable collaborative engineering and systems design (will also help achieve interoperability)

Since the ICH has already been chartered to solve these problems and meets the litmus test of government and industry, why not encourage its utilization? The ICH will address three documented factors that are undermining success of major government IT programs (currently failing at a rate of 72%):

1) The inability to leverage commercial technologies (specifically noted by the agency heads from NSA, CIA, DoD, and Commerce).
2) The influence of special interests and market hype.
3) Interoperability challenges. Our systems are not working together (XML helps, but IT managers need a process for dealing with this, not just one promising standard)

If we are to take these bold initiatives, at least we should address the major cause of IT failures. The ICH recommend the following changes to the bill to help assure success;
- Identify the ICH as another one of the specific organizations (already government approved) that can help facilitate selection of open and interoperable technologies (which would allow other standards groups to be validated).
- Provide additional research funds to advance past efforts (architecture methods and tools) within DARPA. Our research efforts have been seriously under funded which has prevented us from building on the great work already accomplished (see attached letter).
- Provide Govt. CIOs and PMs with new architecture methods and tools to help assure adoption of these new technologies (XML, internet, etc).
- Bridge the gap between traditional software development (very expensive and time consuming) and component integration (plug and play). This can be done by leveraging the ICHnet.org architecture methods, adopting the COTS evaluation approach (which maps business requirements to technical solutions sets), and encouraging IT managers to collaborate on systems design (building on DARPA efforts)

The ICHnet.org community would be glad to come together to recommend specific additions to S.803 that would allow government IT programs to change. Our advocates and members represent this new landscape and will work together to help assure success if allowed;
- Standards Groups: Open GIS, OASIS (XML), IEEE, Open Applications Group, Object Management Group, Council for Excellence in Govt., Center for Internet Security, Federal E-Commerce Coalition.
- Commercial Users: Finance industry, Telecom Industry, Manufacturing Industry, Healthcare Industry
- Government Agencies: OSD C3I, Navy CIO, Intel Community, NIMA, Civil Agencies, and Federal CIO Council.

Without the ICH's tried and true approaches, the status quo will win, and there will be no real change. The ICH strongly recommends that we not leave it to the special interests, but include items in S.803 that address the core problems IT managers are facing daily.

Point of Contact:
John Weiler
Executive Director
Interoperability Clearinghouse
(703) 768-0400
(703) 765-9295 - fax
john@ICHnet.org
www.ICHnet.org

Statement of

Dr. Patrice McDermott
Senior Policy Analyst
OMB Watch

For the Committee on Governmental Affairs

on
The E-Government Act of 2001

Thank you for this opportunity to submit testimony on S. 803, the E-Government Act of 2001. We congratulate Senator Lieberman and the other co-sponsors on the development of a thoughtful bill that will do much to help the federal government move into the electronic information age.

OMB Watch is a nonprofit research and advocacy organization that works to encourage a more open, responsive, and accountable federal government. For more than 15 years OMB Watch has been calling for improved public access to government information. And we have encouraged the federal government to make use of the new electronic technologies to assist in the improved access. Since 1989 we have operated RTK NET (www.rtknet.org), which provides public access to complex databases most of which deal with toxic chemicals in our communities. Thus, we have practical experience with providing public access to government information.

Unfortunately, it continues to be necessary to promote the same message about public access. As S. 803 notes, "The Federal Government has had uneven success in applying advances in information technology to enhance Governmental functions and services, achieve more efficient performance, and increase access to Government information and citizen participation in Government." (Sec. 2(a)(2)) We couldn't agree more, which is one reason that a bill like S. 803 is needed.

OMB Watch has maintained that an essential component of our civil society is an informed citizenry. In this context, the free flow of information is essential to democracy; it is a public resource that enables citizen participation, promotes greater transparency and accountability, and provides opportunities for improving quality of life. Through our Agenda for Access project, we have learned that, while many organizations heavily rely on government information, many of them have never thought of public access as a policy issue. To begin to address this gap, we worked with organizations across the country to develop a set of principles that should guide the public's right-to-know about information created, collected, or held by or for the federal government. (See Attachment A) While we recognize the government cannot change overnight, we do believe the public is entitled to a floor plan for making government far more transparent and interactive with its citizenry.

This is why OMB Watch strongly endorses the principles undergirding S. 803—it is an attempt to strengthen our democracy by instilling information access leadership in the executive branch. In particular, we vigorously support the second purpose of the bill to use "Internet-based information technology to enhance citizen access to Government information and services, improve Government efficiency and reduce Government operating costs, and increase opportunities for citizen participation in Government." (Sec. 2(b)(2))

As with any ground breaking legislation, we believe it can be strengthened. We believe that S. 803 provides the framework for critical legislation. The bulk of this statement addresses specific issues within

the bill. What follows is a summary of the elements we support in the bill and those elements that we think can and should be strengthened.

Beneficial Elements in S. 803

- **Leadership:** S. 803 is to be applauded for filling the leadership vacuum with a plan for addressing e-government issues. OMB Watch has complained about lack of leadership in the executive branch, despite statutory authority being given largely to OMB's Office of Information and Regulatory Affairs through the Paperwork Reduction Act and the Clinger-Cohen Act. Agency Chief Information Officers, who are primarily technology experts—not necessarily information policy or information access experts—have provided the most consistent leadership in information technology concerns with procurement and security. GSA and GPO (in the legislative branch) have taken leads in areas of access to web sites and in permanent public access to electronic (and other) government documents. But, even with the best legislative requirements, without central and focused leadership it is less than likely that there will be effective implementation.

  OMB Watch does not have a position on where to house the government-wide CIO, what level of authority the position should have (e.g., Senate confirmation), or whether it can be combined with other functions. We do, however, believe it vitally important to have leadership. S. 803 takes a bold step, and we see no reason not to try the structure. If there are future problems with the CIO or the CIO Council, the law can be modified.

  We do advise caution on two points. First, it is critical that the federal CIO have a firm grasp of information policy issues, not just expertise on use of technology. S. 803 appropriately delineates the CIO responsibilities to include information policy issues, but, too often, they are relegated secondary to technology issues. We understand that preventing this is one of the central reasons for the structure proposed, but we would urge that the legislation contain clear language on the areas of expertise that the federal CIO must possess.

  The second relates to the CIO Council. In its current form, there is a strong bias away from information policy and public access issues, mostly because the required membership is dominated by technology experts as noted above. It may be useful to require additional participation, including from other branches. We are also concerned that the CIO Council can have enormous policy clout, yet there is no required public accountability. There is no requirement for open meetings or records of such meetings. There is no requirement to make the recommendations to the CIO publicly available. We hope these issues will be addressed.

- **Integrated Public Access:** The public wants access to government information regardless of where it sits, whether it is in a database or held by several agencies. Ideally, the public should able to use the government's web portal, FirstGov, to obtain not only a listing of documents on agency web sites, but also a list of government information in all its manifestations (publications, databases, records schedules, etc.) and an indication of whether the public can obtain such information. If the information is not available electronically, a description on how to obtain the information should be provided. If the information is available electronically, a link to such information should be available. And if it is not available, information should be provided as to why it is not.

  A list of government information is a good start, but there must also be access to public

government databases through the government web portal and other entry points to government. For example, the public has a right-to-know about regulatory compliance by industry. An individual should be able to enter the name of a company in a search box on a government web site that accesses public databases across the agencies—such as the Toxics Release Inventory at EPS, accident and injury data from OSHA, and filings with the Securities and Exchange Commission. Today, this cannot be done: FirstGov does not provide access directly to databases; there is no common identifier so that information about a company or its subsidiaries can be properly searched within a database; and there is no plan for a distributed database structure to link databases from different agencies.

S. 803 does not provide the complete answer to these gaps, but begins to take important steps to address these problems. Key among these are the steps taken to identify both the information technology standards and the cataloging/indexing standards in use in the agencies, to limit the use of proprietary standards, and to move the government rapidly toward interoperability of its standards. The bill, in Section 215, also sets up a process for agencies to inventory their information, catalog or index it, and make it accessible online. Some clarification is needed in this part of the bill, to ensure that the intent of the legislation is clear. (See below)

It also creates a process to identify and establish standards and policies for public access to information on a permanent basis. This is critical to meaningful public access over time.

S. 803 also requires up to five pilot projects to test public access to integrated databases. This is a critically important component to achieving meaningful public access as described above.

- **Public Participation and Accountability:** Various parts of S. 803, most notably through creation of the Advisory Board on Government Information (Sec. 215(b)), place an emphasis on public participation. In doing so, there is an acknowledgment that there are different types of publics that must be involved. We think this perspective is not only appropriate but also essential to an accountable, transparent government. Unfortunately, OMB Watch still remembers only too well the meetings on public access organized by EPA that excluded the public from participation. Public access requires public involvement.

  As an example of good public participation, we commend Sec. 215 of S. 803. It provides a useful floor plan for a mix of public participation, agency authority, and CIO oversight. We are very pleased with the idea of creating an Advisory Board that involves the public in making recommendations on issues that are central to public access. Through our Agenda for Access project we have learned that there are many types of representatives who would do an excellent job on such a Board—experts on information policy, on privacy, and on technology. We hope that there would also be an emphasis on involving those who access and use government information, including unions, environmental organizations, health, religious, consumer and other public interest groups. We would encourage that the majority of participants come from a category that might well be called "users."

  We would urge that the E-Government Status Report Sec. 201(c), the decisions over use of the E-Government Fund, and the notification to Congress of provisions that are obsolete or counterproductive to the purposes of this act, required under Sec.220, be made publicly available.

- **Inequities:** We concur with the principles underlying S. 803 that a shift to e-government cannot

leave any citizen behind because they cannot use newer information technologies. There is substantial data showing a digital divide based on race/ethnicity, income, geographic location and other factors. This divide is about more than simply providing computers or Internet access. It also is about literacy, training, and availability of useful content.

Over the years, we have been firm advocates of federal resources for training and technical assistance with use of technology. For example, we lead a coalition calling for more federal funding for community technology centers (CTCs). The studies identified in S. 803 to evaluate best practices of CTCs that get federal funding and to learn more about disparities in Internet access will be very useful. We hope that the study on disparities also looks at literacy issues. And we hope that the study also looks at Internet access for nonprofit organizations. In an ongoing study we are doing with Tufts University, we have found that 90% of charities use email and 84% use the web. But not much is known about the 10% who don't use email or the 16% who don't use the web. The disparities study could add to our understanding of potential digital divides in the nonprofit community.

- **Money:** We are pleased to see that S. 803 authorizes specific sums of money for various activities. Even when agencies want to improve public access and embrace e-government, it has been difficult because of a lack of resources. Of course, the main issue will be whether Congress chooses to appropriate the money that will be needed to do the job properly.

Portions of S. 803 to be Strengthened

- **Linkage or Developing a Unified Framework:** S. 803 is pioneering legislation. As such, it needs to provide a comprehensive framework for electronic access. In this regard, the bill has three areas that can be improved. First, it continues a tradition of creating information legislation without the creation of an information policy blueprint, a comprehensive policy plan to better understand that the sum of the parts is greater than each individual part. Such a plan would clarify how the initiatives in this bill relate to GPO Access, FedWorld, depository libraries, the National Archives, and other existing institutions and services.

  Notwithstanding the useful provisions in the bill, there are components that can create confusion. For example, how does the "integrated Internet-based system of delivering Government information and services to the public" described in Sec. 3602(a)(13) relate to the Government Information Locator Service required by the Paperwork Reduction Act or to FirstGov? Some of this may be appropriately addressed in report language, but the relationship to other statutes and other parts of Title 35 of the US Code need to be clearly addressed in the bill itself.

  Second, it is not clear how some of the provisions in the bill—online access to federally funded research and development, the online national library, crisis management—fit with the rest of the bill, particularly with its focus on standards and information management.

  Third, it is not entirely clear what the CIO is supposed to do with the information coming from the various fora created in Sec. 3602(a)(9)-(12) and what is to be done if there are conflicts. Nor is the relation clear between the Cross-Sector Forum and the Advisory Board created in Sec. 215, although they potentially will be addressing related issues and concerns.

- **Public Participation and Accountability:** As we noted above, S. 803, most notably through

creation of the Advisory Board on Government Information (Sec. 215(b)), places an emphasis on public participation. There are other parts of the bill where we think additional public participation and accountability provisions are needed. For example, there are no requirements that the CIO Council's action be handled in the sunshine. The decisions over use of the E-Government Fund are to be known to Congress, but there is no requirement to make the decisions publicly available. There is no public notice if agencies choose not to participate in the electronic docketing under rule-making procedures.(Sec. 206(e) The study required to assess best practices of community technology centers (Sec. 213) does not require public or user input. We urge the rectification of these gaps in public participation and government accountability.

We think that the Advisory Board on Government Information should also develop recommendations for addressing inequities in access to information. And why shouldn't the Advisory Board be involved in advising the creation of the "integrated Internet-based system" for public access required under Sec. 3602(a)(13)? The public and users have key stakes in these discussions as well and the perspective of information policy and information access should inform these discussions.

- **Integrated Reporting:** As mentioned above we applaud S. 803 for the integrated reporting requirements (Sec. 207) if they lead to improved public access. Accordingly, we would recommend that Sec. 207(d), dealing with pilot projects, be strengthened by being explicit that the pilots are also about public accessibility. For example, Sec. 207(d)(1) could be modified to state that there be "a series of no more than 5 pilot projects that integrate data elements *and provide public access to such information.*" (Italics added)

  We also believe that the bill should be calling for a corporate identification system that can be employed throughout the government for companies doing business with the government. This ID system should be used to help reduce reporting burdens and create the framework for improved public access across agencies. For example, the government has no way to know whether a federal contractor has repeated civil or criminal violations. With a common ID system, the public – and the government – can better track who they do business with across agencies and that they are not a scofflaw.

- **Identification of Government Information:** It is clear that the intent of the bill is to provide the public (and the government) with knowledge of and access to government information, of whatever type. For this reason, we are very concerned with some of the language in Sec. 215(e)(2)(B) and (3)(B)(i). The language is not clear on what is meant by "classes" of information. Either in the legislation itself or the report language, it should be spelled out that what is meant are such types of information as publications, databases, records schedules, and not, for instance, "public/non-public"or "administrative." It is also imperative that Sec 215(e)(3)(B)(i) spell out that it is individual items that are to be inventoried (not just the "classes"), lest we end up with inventories that read "X Agency has publications, databases,..." We are very concerned about the language in (3)(B)(i) that the CIO will include in the circular or regulation requirements for the completion of "some portion" of government information. This would seem to indicate that the CIO can, at his or her discretion, limit the extent and content of the inventories. This creates an impossible situation for the public, as we will have no way of knowing what has been excluded. This problem could be partially resolved by requiring, in (e)(2), that the recommendations of the Advisory Board be made publicly available online.

  In terms of the inventories themselves, we would urge that report language indicate that they

should identify which of the information is available online, which is available electronically (if not yet online), and which is available in other formats. The inventories should also list what information is not publicly available and why. Without this information, we run the risk that e-government will not enhance government transparency and accountability, and, thus, not live up to its potential.

- **Legislative Branch:** We would encourage an expansion of S. 803 to also address access to legislative branch information. For example, the online telephone directory in Sec. 203 should also include the staff in legislative offices.

  It would also be useful to require all testimony and reports (e.g., CRS and CBO reports) to be made available online.

The remainder of this statement provides specific reactions to sections of S. 803. We have broken these comments into three sections: the management of government information, the need to bring information policy and the coordination of information practices to the fore, and equity issues as we move to transformative e-government.

Managing Government Information

OMB Watch is most enthusiastic about the information policy and information access components of this extensive bill. In terms of *information policy*, the bill would give a federal CIO responsibility for implementing existing information provisions found in the Paperwork Reduction Act, the Clinger-Cohen Act, the Government Paperwork Elimination Act and other laws, for reviewing the agencies' information technology budget requests, and for leading the efforts to address issues of government-wide concern, such as online privacy and computer security. We consider it essential that there be a central focus in the executive branch for ensuring the implementation of and compliance with statutory information provisions. The Office of Information and Regulatory Affairs has never evinced much interest in the "information" component of its responsibilities—other than limiting information collections undertaken by the agencies—and we do not anticipate that the situation will change.

In terms of the information access responsibilities that would be addressed by the federal CIO and the advisory boards, we are most interested in those related to standards and protocols, the Integrated Reporting Program, and the process for identifying and providing access to government information. In order for government and its information to become more accessible and useful, IT interoperability standards and open, non-proprietary standards for categorizing and cataloging government information are essential.

We would note, however, that it should not be the role of the CIO to *establish* these standards (even in consultation with NIST) [Section 3602 (a) (8)]. It is established federal government practice that NIST (in coordination with other standards setting organizations) establishes standards. The role of the CIO should be consultation to identify these established standards, adoption and promulgation of them, and then establishment of guidelines to ensure their implementation. Moreover, what should be sought are not "standards for categorizing and electronically labeling electronic information" [Section 3602(a)(8)(A)] but, rather, standards for categorizing and *cataloging government* information. The central concept and goal should be to make all government information findable, or "citable," by common bibliographic elements such as Title, Author, Date of Publication, etc., to enhance both electronic and other search capabilities. In this same section, it is important to add language explicitly

referencing Section 3511 (the Government Information Locator Service), along the lines of "...to enhance electronic *and other* search *and retrieval* capabilities, *including compliance with Section 3511*."

Providing real, meaningful, useful, ongoing access to the vast array of information created or collected or maintained by or for the federal government is complex. The E-Government Act of 2001 is a key step in acknowledging and addressing the need and the difficulties. The bill does not, however, rise out of a vacuum. A number of nonprofit public interest organizations, including OMB Watch and the library community, have been raising these issues for many years. And, both historically and more recently, voices inside the government have focused on these concerns. One significant recent report from the government on these issues is "Transforming Access to Government through Information Technology" from the Panel on Transforming Government of the President's Information Technology Advisory Committee (PITAC).

One of the findings in the Panel's report is particularly relevant: "Major technological barriers prevent citizens from easily accessing government information resources that are vital to their well being. Today government information is often unavailable, inadequate, out of date, and needlessly complicated." The Panel notes that *finding* the important information stored in the government's many databases is—in and of itself—difficult. The Panel recognized that FirstGov is not the solution to this problem, but is a "near-term effort built with currently available technologies." They urged effort focused on "government-specific capabilities" such as "metadata creation, and comprehensive searchable catalogs of information and services."

This is precisely the effort for which the E-Government Act of 2001 lays the framework.

Accessibility, Usability, and Preservation of Government Information and **Common Protocols for Geospatial Information Systems** We consider these sections, particularly the former, as key components of the bill. Each creates a process for moving the federal government to common and open protocols and standards. The former section also moves the government to establish basic knowledge and management of its own information—for both its own uses and for the public. This management is critical for access—the public cannot ask for and the government cannot disseminate what neither knows exists, or cannot find.

The process established in this bill is as fundamental as the end result. At every stage in the process of identifying standards, identifying information to be inventoried (listed), to be cataloged, and to be disseminated, public participation is required and the results of the decisions are to be posted online. This process is key, because moving from the "silos of rotting information" that exist now (with some notable exceptions) to real management of government information across its life-cycle (from creation/collection through its retirement from current agency use to archiving/disposition or permanent public accessibility through a repository) is not going to happen in a year or even two. So, an open process and public accountability are essential.

It is also critical to note that the National Archives and Records Administration (NARA), GPO Access, and the Federal Depository Library Program have existing permanent access programs, and interests and concerns in federal government information and must be included in all of the discussions, both in Section 215 and in the new Section 3602.

In terms of the process of setting standards and moving toward public access, we have heard concern expressed—and think there is validity in it—that the process may delay agencies from beginning to put up information and publications. Perhaps some modification of the language is needed to encourage the

quick identification of *acceptable* standards for categorizing and cataloging information and the use of those standards by agencies to make their information available online. Certainly, all *new* information should be added to the inventories as it is created, and, as soon as acceptable standards are decided, cataloged and made available online As the process of public consultation is so essential, this should be an iterative process where agencies put information up and then get public response to the usefulness and appropriateness of that information and what it would prefer in terms of priorities. This process could be pursued simultaneously with the process outlined in the bill as currently written. The result would be to encourage agency openness while ensuring completeness and interoperability.

We consider the common protocols for geospatial information systems as a more specific manifestation of the problems identified above. As has been noted in your own materials, government data housed across federal and local agencies cannot be rapidly accessed, combined, and used for various applications because the data is developed with incompatible standards and processes. This problem, we would emphasize, is not unique to geospatial data but is a ubiquitous problem with government data of whatever sort (except, perhaps, statistical data).

In terms of the standards used for any classified geographic information systems and other classes of information, we believe that it is very important that substantially the same technology standards in place for unclassified systems be used, where such standards do not compromise the classified nature of the system.

Along these lines, we are very concerned by language in Section 215 (e)(2)(B)(ii). Allowing agencies to exclude from their inventories whole *classes* of information "of a sensitive nature" the disclosure of which "would harm the public interest" is much too broad. The terms are too open to expansive definition. We are concerned that it will become a catch-all for information that agencies do not want to share (or are pressured not to share). And we would note that those items excluded in (i) are always individually named/identified documents, and do not encompass classes of information.

It is also critical that the language in Sec. 215(e)(2) clarify what is meant by "classes" of information. Either in the legislation itself or the report language, it should be spelled out that what is meant are such types of information as publications, databases, records schedules, and not, for instance, "public/non-public." It is also imperative that Sec 215(e)(3)(B)(1) spell out that it is individual items that are to be inventoried (not just the "classes"), lest we end up with inventories that read "X Agency has publications, databases,..." We are very concerned about the language in (3)(B)(i) that the CIO will include in the circular or regulation requirements for the completion of "some portion" of government information. This would seem to indicate that the CIO can, at his or her discretion, limit the extent and content of the inventories. This creates an impossible situation for the public, as we will have no way of knowing what has been excluded. This problem could be partially resolved by requiring, in (e)(2), that the recommendations of the Advisory Board be made publicly available online.

In terms of the inventories themselves, we would urge that report language indicate that they should identify which of the information is available online, which available electronically (if not yet online), which is available in other formats, and which is not available to the public and why.

On more specific details, we urge that as agencies develop their inventories, GSA (or any successor agency with this responsibility) should make these accessible on a GILS-compliant server. This will provide the essential service interface and also assure search interoperability with library catalogs and directories throughout government at all levels.

In terms of the **Online National Library**, we think that it would be most in keeping with the rest of the bill, and of great use, for the energy and resources on this concern to be directed toward identifying or establishing common, open and non-proprietary standards for the description and sharing of information among libraries, archives, museums, historical societies, and other educational institutions. Such common standards do not, to our understanding, currently exist and, thus, creating a library such as that envisioned in this bill would be difficult, costly, and would maintain the current silos of information among these institutions. We would urge that the federal depository libraries (or the Federal Depository Library Council) be included in any such discussions.

Integrated Reporting Program The ability of the public to hold government accountable for its responsibilities will be greatly assisted by the Integrated Reporting Program. In a recent Hart-Teeter poll (http://www.excelgov.org/egovpoll/index.htm), respondents said greater "government accountability" was the most significant benefit that e-government could confer. This was chosen by a considerable margin, almost three times as often as was "convenient services." The second top priority according to the poll is "greater public access to information" (which is, of course, essential for greater government accountability).

We hope that the Administration and the CIO will take the opportunity to experiment with newly-developing technologies to benefit public health, safeguard the environment, improve government efficiency and help the public understand and participate in policy decisions, as well as reducing the burden of duplicate collection. For these reasons, we would suggest that—in addition to the language in Section 207 (d)(2)(B)(ii) about public access—the description of the pilot projects in (d)(1) should read "that integrate data elements *and provide public access*."

Centralized Online Portal We agree with the PITAC in its assessment (in the report previously mentioned) of FirstGov, as a "near-term effort built with currently available technologies." We think, therefore, that, rather than the CIO directing " the establishment, maintenance, and promotion of a centralized online government portal," it would be a more appropriate role for the Federal CIO to recommend the direction of the development of an open, public domain framework or architecture for enabling the aggregation/integration of services for wide use, re-use and accessibility. The CIO should ensure that an infrastructure is in place that supports the creation of portals and other applications. Any such portals should be open and public domain, as should any databases of information indexed on or through such portals.

It needs to be kept clearly in mind, and stated forcefully in this bill, moreover, that a transformed government does not and should not mean an electronic-only government. The access provided to government information and services needs to accommodate all those who seek information from and interaction with the federal government.

Given the existence of a portal, it is imperative that the information gathered in the agency inventories and cataloging of their information (electronic and otherwise) be captured by searches conducted through any such portal(s). This can easily be facilitated by making these inventories and catalogs accessible through a GILS-compliant server (mentioned above on page 4) through which the portal(s) can search this information, which could remain resident on agency sites. Failure to make these connections will leave vast amounts of government information unknown to the public. The public has a right and need to be able to learn about and obtain non-electronic publications, and to learn about electronic information (such as databases) with which they may not always be able to link directly.

Judicial Information. This bill takes important steps toward encouraging the Federal Courts to move

more aggressively into the electronic age. We are concerned, however, that nowhere in Section 205 is there a requirement that public access be provided for free. While the bill takes a step in this direction by *permitting* the PACER docket system to be made available for free, it does not go far enough. Court information is critical public information and should be treated as all other government information in terms of the cost to the public of access. This is of even greater concern as this bill allows the Chief Justice or any chief judge to opt out of compliance with online access with alternative methods—which also need not be free.

We strongly urge you to move the Courts rapidly toward free public access to all public court information, and to encourage them to provide this information in a manner that is easily accessible and usable by the public.

Directory of Federal Websites Our understanding is that this provision is similar in concept to the Open Directory Project (http://dmoz.org/about.html). If accurate, then this is an important service to the public and we support it. We also think it is useful for the federal government to search directly on the websites of state, local and tribal governments. We think that it would also be appropriate for the federal government to encourage the states and other governments to manage their own information more efficiently and, thus, to encourage the development of indexes maintained by state, local, and tribal governments that the federal government could then *link* to and search. And, again, the development and shared implementation of common, open and non-proprietary standards among these entities would be a great service to the ability of the public to find public information. The development of the public domain directory (taxonomy of subjects) of federal government websites can be a step in this direction by drawing on the work of state GILS (Government Information Locator Service) efforts, in addition to working with agency librarians, federal depository librarians, and other interested parties.

Online staff directory We consider this an essential component of meaningful e-government. We would urge that a requirement be added that each of these directories be interoperable with other search services adopted for government-wide use. We would also urge you, in report language, to put limitations on "agency judgment" as a justification for exclusion of departments and/or employees. We would urge that these directories contain street and mailing addresses, as well.

We also would urge that such a directory be developed and made accessible for Congressional offices. We understand that this is beyond the purview of this bill, but the legislative branch needs to make itself more accessible to the public as well—in this and other areas of legislative branch information.

Agencies' Websites The current lack of any coherency across the executive branch in terms of what the public can expect to find on and the ease of use of agency home pages is a problem that, heretofore, has not received any attention. This is an example of the sort of guidance that should have been forthcoming from OMB, but has not been.

Regulatory Proceedings We also applaud this initiative as critical for public participation in governance, which should be a primary goal of e-government. It is critical that the link for information published in the Federal Register related to an administrative proceeding be posted on the agency's homepage in language that will be clear to the general public. We would urge that agencies be required to accept print submissions as well, and that no extra burden (e.g., in terms of numbers of copies required) be put upon those who do not have access to electronic means for submission. In terms of the "Opt Out" provision, we understand that full electronic docketing may be difficult for some agencies, but we think that this should be strongly encouraged and that some clearance, public notice, and oversight process

beyond simple "notification" should be instituted.

Bringing Information and Coordination to the Fore

The E-Government Act of 2001 also lays important groundwork in the areas of coordination of activities and of funding for interagency/cross-agency initiatives. Currently, there is no coherent coordination of funding for governmental information management initiatives, which must be both government-wide and agency-by-agency. And, currently, the coordination and oversight responsibilities for the management of government information fall within the Office of Information and Regulatory Affairs (OIRA) at OMB. For all of OIRA's existence, the "I" has generally been subsumed and overwhelmed by the "R." This is a situation that is likely to continue, if not worsen. As noted earlier, we consider it essential that there be a central focus in the executive branch for ensuring the implementation of and compliance with statutory information provisions. The Office of Information and Regulatory Affairs has never evinced much interest in the "information" component of its responsibilities—other than limiting information collections undertaken by the agencies—and we do not anticipate that the situation will change.

The (currently-structured) federal CIO Council is no answer to this problem because, as the Panel on Transforming Government notes, the Council's "mandates require them to focus primarily on near-term operational issues and acquisitions." They also note that, while "the CIO Council has established mechanisms for *sharing results and lessons*, the process of creating standardized processes and information representations, eventually leading to cross-agency transactions and information federation and integration, is much harder and requires cross-agency budget planning and execution."

While the E-Government Act does not solve all these problems, it takes some key steps. The primary of these are to raise the importance and visibility of information policy and information management within the executive branch. When these have not been subsumed to regulatory concerns, as in OIRA, they have been inundated by concerns with procurement and security. But information is central to government in all of its interactions with contemporary society, and the government needs to provide a central focus on it. The bill would establish a Federal Chief Information Officer (CIO), who would be charged with providing the "leadership, vision, communication, coordination, and innovation necessary to maximize government effectiveness in using information technology." The Federal CIO would be located in the Office of Management and Budget (OMB), and would report to the Director. S/he would run a newly created Office of Information Policy.

The other key step that this bill takes is to establish an "E-Government Fund." The PITAC has noted that budget planning processes make it difficult to carry out effective cross-agency coordination and execution and the long-term research efforts that many of the goals require. As they note, creating cross-agency budgets requires substantial work and, "therefore, is used only for large initiatives." Moreover, depending on cross-agency plans is "very risky because of the uncertainty that all participants will receive adequate funding." The use of the E-Government fund to fund interagency technology projects will go a long way to alleviating some of the problems identified by the PITAC. We are concerned, however, that there is no public input into the process of allocating these funds and that there is no requirement that the use of any of the funds advance the management of and public access to government information. As regards the former concern, at a minimum the CIO report to the President and Congress on the operation of the Fund should be put online for the public once it has been submitted.

There are, moreover, structural problems which this bill does not address. The reality is that *agency* CIOs are primarily from the technology sector and, because of the legislative genesis of the position (i.e.,

"Clinger-Cohen"), they are strongly focused on procurement and security issues. The information and information policy components of the agency's work are usually not part of an agency CIO's portfolio, nor interest. For instance, the privacy officers in an agency generally do not report to the agency CIO. They can be read in this bill, however, as responsible directly to the federal CIO for Privacy Impact Assessments. This is not a tenable structure. It raises, moreover, the concerns expressed by OMB Deputy Director O'Keefe, that a federal CIO would give agencies the sense that they are absolved from direct and ongoing responsibility for the use of information and information technology in developing and advancing e-government.

In our view, this bill would ideally amend "Clinger-Cohen," and require agency CIOs to be versed in information access and information policy (including privacy policy)—to replicate at the agency level the responsibilities and coordination being vested in the federal CIO. This re-thinking of the roles and responsibilities has begun in some agencies —notably in EPA—and should be encouraged, at a minimum, throughout the executive branch. It is also critical that this bill have a similar requirement for the qualifications of the federal CIO, in order for that position not to just replicate the existing problems in the agencies.

This bill would codify the CIO Council. From our perspective, the primary reason to do this is to make what is currently an *un*accountable, *un*open body open and accountable to the public. This bill does not accomplish this goal and we strongly urge the addition of language that would do so.

On more specific concerns, we would support the recommendation that others have made that, in Section 209(b), the federal CIO not take responsibility directly for items (1)-(3) but, rather, charter the existing and successful (but to date unchartered) Federal Geographic Data Committee to do these items, with direct responsibility to the federal CIO. This is similar to the comment made earlier about the "adoption," rather than the identification, etc., of standards. The point should be to coordinate and bring focus to these efforts, not to duplicate or supplant them where they are working effectively and openly.

Finally, we think that while the Advisory Boards established in Section 215 and the Cross-Sector Forum established in Section 103's new Chapter 36, Section 3602(a)(12) are each useful, it would be helpful to understand what the relation is envisioned to be between them, as they potentially will be addressing related issues and concerns.

Equity

Disparities in Access to the Internet are still important issues in our society and we congratulate you on your attentiveness to their likely impact on e-government. The study to examine how disparities in Internet access influence the effectiveness of online government services should look at not only technology access but also linguistic and cultural barriers and access to skill development. We would also urge that the study also look at Internet access for nonprofit organizations. In an ongoing study with Tufts University, we have found that 90% of charities use email and 84% use the Web. But not much is known about the 10% who don't use email or the 16% who don't use the Web. The disparities study could add to our understanding of potential digital divides in the nonprofit community.

We do not agree that the recommendations on actions should only ensure that online government initiatives do not widen any *existing* gaps in access to government services and that access is not *diminished*. This indicates that current discrepancies and discriminations are considered acceptable. The goal should be to identify ways in which the new technologies and changes in government can overcome existing gaps while also not creating new ones. We do agree that, to the greatest extent feasible, the

federal CIO and agency heads should pursue technologies that make services and information more accessible to individuals who do not own computers or have access to the Internet. And, of course, and as your bill clearly states, in utilizing new electronic media, the federal government is required to comply with Section 508 of the Rehabilitation Act, which ensures accessibility by the handicapped to new information technology purchased by the government and the information disseminated/conveyed through that technology.

Community Technology Centers OMB Watch agrees with the analysis that, because these centers are funded by several agencies and run by a number of different organizations, there has been no coordinated approach in evaluating and disseminating best practices to ensure that the centers are most useful to the communities where they are located. The bill would require an evaluation of the best practices used by successful Community Technology Centers. We would note, however, that the measurement of "effective" and "successful" programs should not be generated from scratch, but should take into account existing community technology access service measures developed and utilized by groups such as CTCNet and the American Library Association. Taking a look at the common points of agreement on both what to measure and how to measure technology access by the public—at all points where public access is accommodated—will facilitate fleshing out what truly "works." An examination of what works, however, must also be accompanied by an examination of factors that hamper successful program development and implementation, and those that are impediments to sustained public access and to replication of scalable, cost-effective models.

It is important to note, moreover, that CTCs existed well before federal funding has been available to support them. Private efforts, private-public partnerships, and simple volunteer commitments to bring technology to both under-served and under-informed segments of our population have a long track record through community centers, libraries, community actions agencies, Urban leagues, co-op extension services, youth programs, places of worship, etc. Any study of what works, and what does not, should include an examination of both federally-funded programs and those programs that are not. For those programs that are not, an extra effort should be made to find out why those programs do not take advantage of the myriad opportunities for government funding and partnerships with government (e.g., for training).

The effectiveness of community technology access is not simply measured in a one-year program funding cycle. It is measured in terms of satisfaction by those served, the knowledge and skills they have gained and continue to employ in their lives, the range of services that are offered, and the capacity of the entities which offer them. For this reason, all studies of CTC effectiveness and best practices should be required to consult with the users and other publics in the process.

Any investment in providing greater access to electronic government through community technology access points of all stripes must allow for providing training, incentives, and technical assistance to points where the public access the Internet, and allow learning opportunities to take place at those very same points, commercial or non-commercial, federally-funded or not.

The investment of study as to the roles and relationship of enhanced community technology and information access, and increased interaction with electronic government, must, however, distinguish between commercial and non-commercial access, in terms of assessing the scope of what is truly available to the wider public, and those services that entail financial or even cultural barriers to citizen access to, and use of, these services. Internet cafes, for example, charge a fee for computer access time that, while affordable for a large number of people, will not meet the goal of equity for all users who wish to have access. Moreover, commercial access points do not necessarily come attendant with staff

who are encouraged to provide training, not just on use of technology, but on the types of information available online.

Electronic government holds the promise of opportunities to eliminate knowledge- and opportunity-gaps among citizens—but only if citizens know about and have meaningful access to the technology that affords those opportunities.

Finally, we would note that the Federal Depository Library Program already operates about 1400 "information centers" within existing libraries. This public/private partnership program has a long history and its experiences and resources should be looked at in any assessment of community information resources and access initiatives.

Thank you, again, for the opportunity to submit testimony on this legislation. We look forward to working with you to strengthen and to pass this important bill.

Attachment A

A Right-to-Know Platform

In order to fulfill government's democratic obligation to fulfill the public's right to know, Congress, the federal Executive Branch, the Courts, the States and Tribes, and local governments must be guided in their actions and decisions by the following core principles:

Resolved:

- That an informed public citizenry is critical to the effective functioning of a democracy;
- That the public's ability to participate in an informed democracy, as well as the Constitutional freedoms of speech, assembly, and petition and the functioning of a free press, all depend upon broad access to all relevant information;
- That the free flow of information is the lifeblood of our democracy and is a public resource, not a commodity to be taxed or sold; and
- That information is an essential public policy tool, supplementing but not supplanting government's regulatory authority in carrying out its responsibilities to the citizens.

Therefore:

- In our democracy, all members of the public have an enforceable right to private, timely, and unfiltered access to government information at low or no cost.
- Government has a duty to identify and collect data and information to protect and benefit the public, to spur efficiency and accountability, and to strengthen democratic processes. Government also has an obligation freely to disseminate information on threats to the public's health and safety, as well as the identity of those responsible for creating and mitigating those threats.
- Government has an affirmative responsibility to make information broadly available to the public in an equal and equitable manner, in formats that are timely, easily located, understandable, meaningful, and useful. Strategies for information access must ensure equity among groups with differing levels of capability to acquire and process the information. Moreover, government must provide a means for locating and directly accessing information.
- Those who seek to withhold information carry the burden of proof to justify their position. Only the narrowest of exceptions should be allowed to the general principle of broad public access to government information; the most important exceptions are to protect individual privacy, and when a compelling need for withholding information under existing laws has been demonstrated, such as for the protection of national security or public safety. Those asserting trade secret or confidential business information claims carry the burden of substantiating those claims.
- Government should strive to ensure that the information it releases is complete and accurate; however, questions about completeness or accuracy should not be permitted to restrict the free flow of information. The best solution to inaccurate or incomplete

information is to release all information in hand for robust debate and public airing of the issues, rather than keeping it secret. Government then has an obligation promptly to correct inaccurate information in an open process.

- Citizens have a right to participate in government decision making about public information access policies and strategies; however, this principle should not be construed as limiting the free flow of individual information products from government to the public.

- Citizens have a right to hold the government accountable for enforcing policies requiring public dissemination of information; government employees who disclose violations of those policies are entitled to the same "whistleblower" protections as those who disclose government waste, fraud and abuse.

- Government should embrace the use of electronic media to ensure meaningful public access, in a manner that does not disadvantage those without access to electronic dissemination tools; meaningful access means the ability to obtain, understand, and use information.

- Government has a responsibility to archive all information it collects, including documents, electronic files, and databases.

- The federal government has an obligation to ensure common data standards and collection mechanisms across the states, in order to gather data that can be used to determine national trends and indicators.

Software & Information Industry Association

Comments from the Software & Information Industry Association (SIIA)

Senate Governmental Affairs Committee Hearing July 11, 2001

E-Government Act of 2001 – S. 803

Introduction

SIIA is the principal trade association of the software code and information content industries, representing approximately 1,000 leading high-tech companies that develop and market software and electronic content for business, education, government and consumers. Our members include leading technology companies that provide the backbone of the Internet through the development of cutting edge software applications and services. SIIA members also include electronic publishers that provide a wide variety of information products and services covering nearly every subject matter imaginable.

SIIA member companies have played an essential role in the digitization of government and the dissemination of government information. We stand ready to work with policymakers to implement and promote the objectives of the "E-Government Act of 2001." Particularly, SIIA members look forward to providing cutting edge technology to assist in the transformation to e-government, and to continue providing sophisticated value added products and services to assist with the effective distribution of valuable government information.

We commend Sen. Lieberman and the cosponsors of the "E-Government Act of 2001" for their leadership to create a "New Generation Government." On behalf of the digital code and content industry, we submit the following comments to S. 803, and we look forward to working together to help enable government to harness new technologies to make the transformation to effective E-Government.

General Comments Regarding E-Government

SIIA supports government initiatives that utilize technology and the Internet to enhance citizen communication with government and access to government services. Application of new information technologies (IT) present a great potential to make government—including federal, state and local—more efficient and more responsive. To accomplish this, government efforts should complement, encourage and support private sector efforts, rather than duplicating them. Initiatives to develop e-government should be focused on improving service to citizens for inherently governmental functions, rather than expanding the role of government.

Under no circumstances should public funds—tax dollars—be used by government to directly compete with the private sector in providing e-commerce services. Rather, the opportunity for e-government should focus on improving the functions already performed by government, with the objective of making these more effective and efficient through electronic transformation.

In short, the government should not create value-added products and services where public-private partnerships or independent private services and products are available, or where such private sector services and products can efficiently and effectively provide the desired added value for the public. SIIA, therefore, strongly supports the policy found in OMB Circular A-76: "In the process of governing, the Government should not compete with its citizens. The competitive enterprise system, characterized by individual freedom and initiative, is the primary source of national economic strength. In recognition of this principle, it has been and continues to be the general policy of the Government to rely on commercial sources to supply the products and services the Government needs." ***To ensure that e-government is founded on this principle and relies on commercial sources to supply the products and services the public needs, SIIA strongly recommends that OMB Circular A-76 be codified in the "E-Government Act of 2001."***

Moreover, effective implementation of new technology should serve to automate and streamline inherent government functions, and therefore create a significant cost saving, not an increased burden to taxpayers. Just as the U.S. private sector has utilized new technologies to increase productivity and overall efficiency over the last several years, so to should the U.S. federal government, via e-government. While it is difficult to put dollar figures and costs savings anticipated by the transition to e-government, it is the objective of the high-tech industry to enable government to boost productivity and decrease costs in the long run by automating key functions and services.

Ensuring the E-Government Transformation

The E-Government Act of 2001 would significantly help to achieve multiple key objectives for a successful transformation to e-government. New leadership, better organization, improved interagency collaboration and more focused agency oversight are truly essential elements of an effective transformation. Additionally, increased investment in information technology is a critical component to improve government performance through the use of Internet-based technologies. While the legislation therefore creates a system to effectively enable and manage the transformation process, it leaves to individual agencies the responsibility to create their own vision, procedures and benchmarks to achieve transformation.

SIIA looks forward to working with the Congress and Federal Agencies to implement the E-Government Act of 2001 to ensure that e-government transformation is effectively implemented. We note that the E-Government Act does not impose affirmative mandates nor benchmarks to ensure that the transition is, in fact, ongoing within individual agencies to produce real change in the way that current interacts technology. While we are not proposing such specific steps, we point out to the Committee that

according to recent figures, less than 1% of all government-to-constituent and government-to-business transactions are done on line. The measurement of success will depend on ensuring that the E-Government Act of 2001 is implemented in a way that demonstrates real change in areas like this.

Election Dissemination of Government Information

Private sector information redisseminators have long played a key role in promoting and enhancing public access to government information; this traditional and vital role that has not been diminished by new technology. There are thousands of private sector information products and services based in whole or in part on government information and its redissemination. These efforts help to serve the varied needs of society to obtain information, either for reasons of convenience or efficiency, from sources other than government itself.

Government initiatives to disseminate government information electronically should not result in expanding the role of government in providing commercial information services that compete with the private sector. Rather, government efforts to disseminate information should take full advantage of public-private partnerships or independent private services and products to efficiently and effectively provide the desired added value for the public. A diversity of sources of government information enables more information to get into the hands of more citizens in ways that are most useful to them. A government's exercise of a monopoly over government information, on the other hand, risks curtailing the flow of information to the public.

Alternatively, non-government information dissemination is and has been provided to the public efficiently and effectively by many independent private services and products. There is no reason for the government to duplicate these efforts. The creation of government funded databases for non-government information, especially those databases distributed freely via the Internet, would effectively create a new worldwide information infrastructure paid for by U.S. taxpayers, at the risk of private industry.

The public is not served when the government forces out other sources of information. Existing products and services offered via the Internet by the private sector—both profit and not-for-profit organizations—cannot compete with the government providing competing services subsidized by tax dollars. The long-term result of this policy is to discourage such products and services and potentially create an U.S. Government monopoly on access to particular information.

Title I –Office of Management and Budget Electronic Government Services

As we understand the bill, it proposes the creation of a Federal CIO, operating within the Office of Management and Budget (OMB), with government-wide responsibilities for information technology, including electronic government services and information dissemination. It is our view that the addition of a Federal CIO could help ensure that e-government is effectively implemented, Agency initiatives are in compliance with the guidelines created by the Paperwork Reduction Act of 1995 (PRA) and other critical government information policies, and to create effective new policies as needed.

SIIA has recently expressed concern regarding a number of specific ongoing Federal Government initiatives that are in conflict with both the goals and the explicit guidelines of the PRA. Despite concerns expressed by industry, multiple agencies continue to defy these requirements through the use of inappropriate restrictions and/or fees for the use of government information, or by competing with the private sector—including competition with existing information products and services that facilitate access to non-government information.

The PRA created sensible guidelines for agencies that should be applied across the entire federal government. Therefore, SIIA supports top-level leadership for the government to provide improved management of federal information resources and compliance with existing regulations. Shifting the oversight and enforcement powers for existing laws and policies and providing budget authority within the office of the Federal CIO promises a greater level of expertise regarding information technology and electronic dissemination of information. Particularly, budget oversight on an agency-by-agency basis promises to add not only increased accountability, but also increased consistency among agencies—both with each other, and with private sector information providers.

Governmental decisions to create, expand, or discontinue significant information dissemination activities should be accompanied by a written explanation for each such decisions, and should be subject to public notice and comment. That is, agencies should regularly consult with the public users of their information dissemination products and preserve the public's ability to influence agency information plans at early stages. Actively consulting with all parties who could be affected by the decision to create, expand, or discontinue a significant information dissemination activity – including data submitters, users, and resellers – is intended to maximize the activity's quality and relevance and to ensure that the decision reflects not only the agency's needs but also the needs of the public.

SIIA is very supportive of the proposal in Sec. 103 to establish a "Cross-Sector Forum on Information Resource Management." This Forum promises to encourage collaboration and enhance understanding of best practices and innovative approaches in acquiring, using and managing information resources. SIIA believes that such a forum comprised of representatives from the federal government, private, nonprofit and academic sectors is very much needed to increase collaboration and ensure proper management of information resources. A forum such as this is consistent with SIIA's efforts to increase public-private collaboration with respect to new information technologies that can often lead to increased efficiency and overall cost savings, while supporting our market system.

Title II—Federal Management and Promotion of Electronic Government Services

SIIA has identified the following key sections of S. 803 to provide specific feedback. As presently drafted, multiple components of this legislation present serious concern to SIIA members. Attention to the concerns raised in these sections is critical to gaining support of the digital code and content industry for this legislation.

Online National Library – Sec. 204
SIIA is supportive of efforts to utilize technology and the Internet for purposes of education. Additionally, we are supportive of efforts to utilize the Internet to provide public access to federal information resources. However, we have serious concerns with the government taking on an additional role in an area that is more than adequately met by the private non-profit and for-profit sectors. In any case, we support the requirement for this intra-government working-group to consult with the private sector and other appropriate institutions in the formation of this effort.

SIIA has two strong objections to this section as drafted. First, in making decisions about new activities, as with all government decisions, it is critical to ensure the appropriate scope. In this case, the scope appears to be overreaching. Efforts for the Federal Government to provide access to a wide range of *non-government* information would be unprecedented, inappropriate and damaging to the national information infrastructure. To prevent such an occurrence, it is vital that the legislative mandate more clearly reflects the intent to provide access to only government information.

Our second concern is that paragraph (B)(1) in this section is vague, and does not address the intellectual property rights of those who own the "documents, photographs, audio recordings, films, and other media." The copyright law establishes a well-balanced system of rights granted to copyright owners and exceptions and limitations to those rights granted to users of copyrighted materials. The draft appears to grant broad authority to post copyrighted works online contrary to the delicate balance established by the copyright act. We therefore suggest the bill be amended to clarify that nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement under chapters 1 through 12 of title 17, United States Code.

Online database of federally funded research and development – Sec. 208
SIIA agrees with the objective of enabling the Federal Government to better track funding for research and development (R&D). However, we have serious concerns regarding the scope of Sec. 208.

Specifically, Sec. 208(e)(3) proposes for the Federal Government to extend beyond providing access to government information, to "include information about published research not funded by the Federal Government, and links to the servers of the publishers." This represents a radical, unprecedented departure from existing government information policy by making government an agent to provide public access to information published by the private sector. This approach clearly represents an inappropriate role for government to assume, one that will most certainly provide unfair competition with private sector existing products and services, therefore jeopardizing the future of scientific and technical information.

The Department of Energy's (DOE) PubSCIENCE presents an ongoing example of the inappropriate role of government in providing access to non-government information. PubSCIENCE, an Internet portal developed by DOE to facilitate the searching and accessing of peer reviewed scientific and technical journal literature, duplicates and competes with databases of scientific abstracts made available by private sector

information providers—both for-profit and not-for-profit. These innovative products were extant prior to the development of PubSCIENCE, and are now threatened by the competition of a free product offered by the U.S. government—subsidized by tax dollars.

To prevent this and other similar inappropriate government initiatives, SIIA recommends that the legislation be amended to facilitate public access to information derived only from government research programs, especially focusing on those that are not presently published.

Accessibility, usability, and preservation of Government information – Sec. 215
While this section proposes some positive steps to develop guidelines for accessibility, usability and preservation of government information, including such key concepts as cataloguing and indexing standards, and taxonomies, it is critical that such information access tools not be developed without consideration of established needs, costs and benefits, and existing alternatives.

As this is a difficult effort that would require significant expertise and cooperation, both among agencies and information experts, SIIA strongly supports the creation of an "Advisory Board of Government Information" established in Sec. 215(b) which contains members of the public, private and nonprofit sectors. SIIA recommends that the legislation be amended to add specific guidelines for the formation of the Advisory Board to ensure a fair representation from the various government and non-government sectors.

Additionally, it is essential that this process be completely open for public review and comment along the way, and that all results be made widely available. It is imperative that upon completion of this process, the results are available to all interested persons for purposes of facilitating a diversity of sources for government information. That is, while the Government will maintain responsibility to assist with public access to Government information on the Internet, and its permanent availability, the private sector will need to continue playing a key role as redisseminators of government information. Regardless of recent advances in technology, much of the public will continue to access government information from sources other than the government itself, for reasons of convenience and efficiency.

Public domain directory of Federal Government websites – Sec. 216
The development of "a public domain taxonomy of subjects used to review and categorize Federal Government websites" as proposed in Sec. 216(b)(1) will require the same types of safeguards raised regarding Sec. 215 above. The cooperation among both agencies and information experts in the public and private sectors will be essential. We offer the following suggestions to ensure the best possible public result for this effort.

It is critical that government information redisemminators receive access to the underlying taxonomy and indexing data so that they can provide an alternative source for access to the information. This would ensure broad redissemination of government information, often as part of a value-added product or service that reaches a significant segment of the public that seeks to receive this information from a source other than the government. Perhaps more now than ever, private sector redisseminators maintain a very

important role of tailoring information products to provide access in ways that are not efficient or cost effective for the government to provide.

Failure to provide equitable, convenient access to this directory would block this process, and result in an inferior service to the public. Ongoing efforts by the General Services Administration and the Federal Search Foundation to produce a taxonomy of government information is a timely example of how this process should *not* be performed. That is, ongoing efforts are not open to private sector input, and current plans do not provide for the results to be made available to private sector redisseminators at a reasonable cost—if the taxonomy is available at all, high costs and inappropriate compliance restrictions will prevent additional value added products to provide access to the database of government Web pages. Rather, ongoing efforts through the FirstGov initiative are an example of how an incautious approach to information policy can severely compromise public access to government information.

To protect against a similar outcome of this effort, SIIA recommends the adoption of specific language to ensure that private sector information redisseminators are guaranteed easy, equitable access to the public domain taxonomy.

Federal agency responsibilities and regulatory agencies – Sec. 201 & Sec. 206
The transformation to e-government requires Agencies to implement IT more aggressively and more cooperatively. Regulatory requirements and oversight are both critical components to ensuring an efficient, effective transformation process. Sections 201 and 206 therefore address very important components to e-government legislation.

Governmental agencies have a positive responsibility to avoid "reinventing the wheel." That is, agencies must formally address the question of whether expenditures for a particular activity are necessary in light of activities by other agencies and the private sector. In doing so, agencies have a responsibility to look beyond their own boundaries and be aware of efforts in the information marketplace that could render the agency's contemplated activity duplicative and unnecessary.

The PRA, codified in Title 44 of the U.S. code, addresses this objective in two ways. First, subsection 3506(d)(3) requires each agency to provide adequate notice when initiating, substantially modifying, or terminating significant information dissemination products. According to the House Committee Report, "[t]he purpose of the notice is to maximize the ability of the public to influence agency information plans at an early stage."[vi] Second, subsection 3506(d)(2) requires that each agency regularly solicits and considers public input on the agency's information dissemination activities.

With this information in hand, interested persons can make known their concerns and offer supportive or contrasting data and analyses. Soliciting and considering public comments helps ensure a reasonable opportunity for agency review of the proposed action in light of public concerns. Moreover, public notice and comment, and a written explanation for each significant decision pertaining to information dissemination, should be part of a meaningful, open, and workable compliance and review mechanism, one that avoids unnecessary, inappropriate government competition with the private sector.

If an information product or service available from other sources is equivalent, does it reasonably achieve the dissemination objectives of the information product or service that the agency is considering providing? If it does, then the method of dissemination chosen by the agency may not be necessary because the equivalent information products are otherwise available. Moreover, this examination will provide an Agency the opportunity to decide not only whether to create a product or service, but rather how best to create that product or service to meet an identified government information need that is not otherwise being met. Only after the government knows what else exists can it cost-effectively partner with the private sector or create government information products to meet the needs of the public.

In general, on the issue of encouraging a diversity of sources for government information, the legislative history of the 1995 PRA is replete with approving references to this principle. The House Committee Report, for example, states that agencies should "encourage a diversity of providers in the private and public sectors, while *avoiding unnecessary duplication of effort*"[ii] and should "also take advantage of *(and not unnecessarily duplicate)* private sector initiatives that may more efficiently or effectively serve the same ends."[iii] In discussing the requirement that agencies regularly solicit and consider public input, both the Senate and the House Committee Reports state that this agency obligation "also includes gathering information on information provided by other public or private sources, in order to *avoid needless duplication of effort.*"[iv]

While Agencies are hereby required to make available to the public a description of the proposed action and a detailed explanation of the reasons for it, this is a step that has all too often been ignored. Unfortunately, once a duplicative government initiative is created, it begins to cause economic harm to the private sector. Even more damaging, current law does not provide a mechanism to resolve and terminate such duplication and competition.

SIIA recommends that this E-government proposal seek to not only adhere to these policies, but to also add the ability to enforce them. We urge that two additions to this legislation to ensure better compliance with existing information policies. First, we recommend that the requirement for notice be restated more specifically, including an explicit requirement for Agencies to disclose the costs or savings associated with the proposal and alternatives to it. Second, we request that a responsibility of the Federal CIO be specifically identified to prevent and correct such duplication and competition with the private sector. Presently the system as designed has been ineffective, and as a result, we are moving quickly in the direction of limiting the diversity of sources for government information, and towards Federal Government involvement in the dissemination of non government information—an unprecedented and dangerous endeavor.

Finally, the "E-Government Status Report" created under Section 201(c) of this Act provides a good opportunity for Agencies to report annually on their actions, and therefore provide another mechanism for soliciting feedback from the Congress and the public. This is an important oversight provision.

Privacy protections – Sec. 218
SIIA views privacy as a fundamental concern for entities operating in the online space. Since 1997, SIIA has advised members and non-members alike to develop and strictly adhere to an organization-wide privacy policy. Similarly, SIIA encourages the government, in its collection of personally identifiable information, to implement high standards of privacy protection to ensure that consumers are protected and that public confidence and support for e-government initiatives remains high.

We further encourage the government to work closely with industry in the adoption of any requirements concerning machine-readable privacy statements. SIIA supports the use and development of such technologies believing that they will assist users in taking greater control of the protection of their privacy. The key is to avoid chilling innovation as a result of government mandates that favor particular technologies over others.

Compatibility of executive agency methods for use and acceptance of electronic signatures – Sec. 202
We note, with interest, the provisions in Section 202 ("Compatibility of Executive Agency Methods for Use and Acceptance of Electronic Signatures"). As a general proposition, SIIA is supportive of Federal agency efforts to implement effective methods of authentication and electronic signatures, including those relying on digital signature technology. We are mindful that such methods and technologies may be situation specific and that just like in the commercial sectors, appropriate levels of security and authentication must be dictated by the needs and circumstances of the transaction or communication. To that end, the efforts that are underway to support the bridge authority for digital signatures has been a positive response to meeting the challenge of Federal Agencies to implement consistent regimes. However, we express concern that, to the degree that "procedures and standards" are promulgated by OMB, that any authentication technologies implemented by Federal Agencies be market-based (and not government specific) standards and implementations and that Federal agencies' requirements are designed, to the greatest extent possible, to be met by the use of commercially available software and technology.

Conclusion

In summary, we are supportive of an e-government vision that remains within the realm of appropriate government services. That is, a vision that neither creates government e-commerce services, nor threatens the existing information infrastructure. In this effort, we look forward to working with supporters of this legislation to ensure that the transition to e-government set forth represents a positive step forward for the government, the public, and the private sector.

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[i] H.R. Report No. 37, 104th Congress, 1st Session. 46.

[ii] *Id.* (emphasis supplied).

[iii] *Id.* at 27 (emphasis supplied); S. Report No. 8, 104th Congress, 1st Session. 25 (emphasis supplied).

[iv] *Id.* at 48 (emphasis supplied); 1995 House Committee Report at 46 (emphasis supplied).

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ELECTRONIC GOVERNMENT

Challenges Must Be Addressed With Effective Leadership and Management

Statement for the Record by David L. McClure
Director, Information Technology Management Issues

GAO-01-959T

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to participate in the Committee's hearing on electronic government (e-government) issues and S. 803, the *E-Government Act of 2001*. Advances in the use of information technology (IT) and the Internet are continuing to change the way federal agencies communicate, use and disseminate information, deliver services, and conduct business. It has the potential to help build better relationships between government and the public by facilitating timely and efficient interaction with citizens. According to a January 2001 poll, nearly half of Americans have used a government Web site and almost three-quarters believe that e-government should be a high priority.[1]

Generally speaking, electronic government refers to the use of technology, particularly Web-based Internet applications, to enhance the access to and delivery of government information and service to citizens, business partners, employees, other agencies, and entities. At the federal level, agencies have identified 1,371 electronic government initiatives, ranging from those that simply disseminate information to those that are expected to transform the way the government operates. With respect to states, according to the National Association of State Chief Information Officers, government-to-business electronic interaction is well underway and government-to-citizen and government-to-government electronic interaction is rapidly increasing. At the local level, a survey in the fall of 2000 by the International City/County Management Association and Public Technology, Inc. found that about 83 percent of local governments had a Web site but that few local governments were providing interactive service delivery[2] on line, although many jurisdictions plan to offer such services.

While the Internet opens new opportunities for streamlining processes and enhancing delivery of services, federal executives and managers must also be cognizant of the responsibilities and challenges that accompany these opportunities. These challenges include (1) sustaining committed executive leadership, (2) building effective e-government business cases, (3) maintaining a citizen focus, (4) protecting personal privacy, (5) implementing appropriate security controls, (6) maintaining electronic

[1]Hart-Teeter poll reported in *e-government: The Next American Revolution* (The Council for Excellence in Government, February 2001). This was a nationally representative survey among 1,017 American adults for the Council conducted January 4-6, 2001. The survey findings have a margin of error of 3.1 percent.

[2]The survey defined interactive service delivery as two-way communications in which a Web site visitor can submit information or payment, as well as receive information.

records, (7) maintaining a robust technical infrastructure, (8) addressing IT human capital concerns, and (9) ensuring uniform service to the public.

Strong and focused central leadership could help overcome these challenges. A federal Chief Information Officer (CIO) could provide such leadership. We have long supported the establishment of a federal CIO to provide the leadership needed to address the major IT issues facing government, including those related to e-government and security. S.803 calls for the establishment of a federal CIO, who would report to the Director of the Office of Management and Budget (OMB) and would be responsible for a variety of information technology and management functions.

In my remarks today, I will (1) provide an overview of the status of federal e-government initiatives, (2) describe the key challenges the government faces in implementing its e-government initiatives, and (3) discuss the federal CIO approach proposed by S. 803, the *E-Government Act of 2001*. To provide additional information on our e-government work, I have also included, as an attachment, a list of pertinent GAO publications on e-government issues.[3]

Status of Federal E-government

As we testified in May 2000, the public sector is increasingly turning to the Internet to conduct paperless acquisitions, provide interactive electronic services to the public, and tailor or personalize information.[4] In particular, federal agencies have implemented an array of e-government applications, including using the Internet to collect and disseminate information and forms, buy and pay for goods and services, submit bids and proposals, and apply for licenses, grants, and benefits. The reach of e-government extends not just to citizens and the various communities of interest that represent them but to many other constituencies as well.

A recent evaluation of 22 countries' e-government development by Accenture—a private-sector management and technology consulting firm—found that the U.S. federal government was one of three "innovative leaders"[5] that stood apart from other countries due to the high number of

[3]These publications can be obtained through GAO's World Wide Web page at *www.gao.gov*.

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

[5]The other countries designated as innovative leaders were Canada and Singapore.

mature services offered online.[6] Accenture found that the federal government excelled in service maturity breadth, the level to which a government had developed on-line presence. However, according to the report, "the focus on building the volume of services and individual agency online sophistication has clearly not allowed time for agencies or the Federal Government to focus on incorporating ... [best practice] techniques." Accordingly, the U.S. government was deemed below average in delivery maturity, which indicates the sophistication of delivery mechanisms, such as a single point of entry and customer relationship management techniques.[7]

Status of Agency GPEA Implementation

The Government Paperwork Elimination Act (GPEA)[8] requires that by October 21, 2003 federal agencies provide the public, when practicable, the option of submitting, maintaining, and disclosing required information electronically. The act makes OMB responsible for ensuring that federal agencies meet the act's implementation deadline. OMB, in turn, required each agency, by October 2000, to develop and submit an implementation plan and schedule.

In recent testimony on the implementation of GPEA, the Director of OMB stated that "agency progress in going electronic is mixed."[9] Specifically, he stated that upon evaluating specific agency plans for compliance with the act, OMB found that some agencies were not prepared. According to OMB, the Departments of Defense, Health and Human Services, and Justice submitted plans that indicated that they have not fully adopted the goals of GPEA and do not have an agencywide commitment to moving into the electronic arena. In contrast, OMB cited the Departments of Housing and Urban Development and the Treasury and the Environmental Protection Agency as having developed solid plans for meeting the act's objectives.

[6] *eGovernment Leadership: Rhetoric vs Reality – Closing the Gap* (Accenture, April 2001). Accenture carried out its research in January 2001. It surveyed 165 national government services in nine major sectors—human services, justice and public safety, revenue, defense, education, administration, transport, regulation and democracy, and postal. Services were categorized into three levels of service: publish, interact, and transact. Within each level, services were scored to show the maturity that they had reached.

[7] Accenture's evaluation of the service and delivery maturity of each government were combined into an overall maturity level. In calculating the overall maturity level, Accenture assigned a weight of 70 percent and 30 percent to the service and delivery maturity levels, respectively.

[8] P.L. 105-277, Div. C, tit.XVII.

[9] Statement of Mitchell E. Daniels, Jr., Director, OMB ,before the House Committee on Government Reform, June 21, 2001.

Mr. Chairman, as you know, we are currently conducting a review of agency GPEA implementation plans at your request. While not complete, our work has found that, taken in isolation, agency GPEA plans do not provide sufficient information to assess agencies' progress in meeting the objectives of the act.[10] Specifically, the plans do not provide sufficient information with which to assess whether agencies have been engaging in critical activities such as (1) examining business processes that might be revamped to employ electronic documents, forms, or transactions, (2) identifying customer needs and demands as well as the existing risks associated with fraud, error, or misuse, and (3) evaluating electronic signature alternatives, including risks, costs, and practicality.

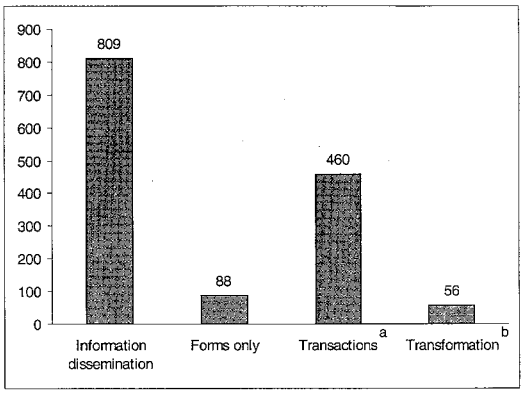
Agency E-government Initiatives

Federal agencies have implemented, or are in the process of implementing a wide variety of e-government initiatives. This variety is illustrated by chart 1, which depicts the types of federal e-government initiatives reported by 37 departments and agencies. The category[11] with the greatest number of initiatives is "information dissemination"—reported by the General Services Administration and the federal CIO Council to be the least technically complex; it involves implementing applications on the Internet that make electronic information readily accessible. In the next category—"forms"—agencies provide downloadable electronic forms. The "transaction" category is a more complex implementation of e-government and includes initiatives such as submitting patent applications via the Internet. Finally, in the last category—"transformation"—the e-government initiative is expected to transform the way the government operates. For example, the Navy's Virtual Naval Hospital initiative provides a digital science library, and is designed to deliver expert medical information to providers and patients at the point of care.

[10] *Electronic Government: Selected Agency Plans for Implementing the Government Paperwork Elimination Act* (GAO-01-861T, June 21, 2001).

[11] The report characterized these categories as the four phases of e-government based on a Gartner (a private research firm) model that demonstrates the progression of e-government.

Chart 1: Types of Federal E-government Initiatives



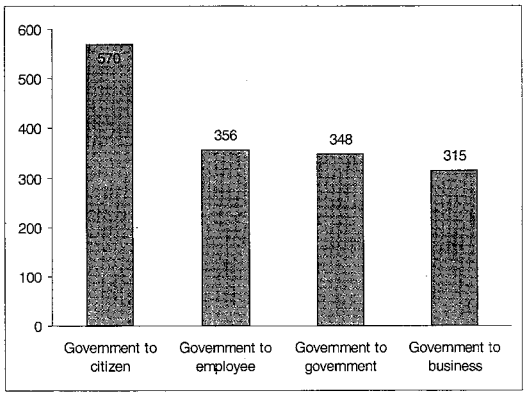
[a]Defined as end-to-end transactions completed electronically.
[b]Defined as initiatives in which the government has taken a global focus, government involvement is minimized, and citizens do not have to know the government organization to obtain the services needed.

Note: In some cases an agency listed the same initiative under more than one type. The total number of unique initiatives reported was 1,371.

Source: *An Inventory of Federal e-Government Initiatives* (General Services Administration in cooperation with the federal CIO Council, January 2001).

Chart 2 shows the constituencies that the e-government initiatives are targeting, with the greatest number serving the citizen.

Chart 2: Categories of Constituencies of Federal E-government Initiatives



Note: In some cases an agency listed the same initiative under more than one constituency category. The total number of unique initiatives reported was 1,371.

Source: *An Inventory of Federal e-Government Initiatives* (General Services Administration in cooperation with the federal CIO Council, January 2001).

For each type of constituency, let me briefly describe a few major e-government projects that agencies have implemented or plan to implement:[12]

- *Government-to-Citizen.* One of the major benefits of on-line and Internet-based services is that they provide opportunities for greater

[12]We have not performed an independent evaluation of these initiatives.

citizen access to, and interaction with, the federal government. Initiatives such as *Access America* provide Internet access and services organized to meet the needs of specific communities of interest. As part of this initiative, over 40 federal agencies have been working together on Web portals that provide information, news, and some capabilities for on line interactions with federal agencies and programs that serve the target groups. For example, *Access America for Seniors*—also called *FirstGov for Seniors*— is designed to be an entry portal for senior citizens to reach government services and information on such topics as benefits, taxes, health and nutrition, and consumer protection.[13] In another example, the Department of the Treasury's Bureau of Public Debt has partnered with Treasury's Financial Management Service, Mellon Bank, MasterCard, and IBM to build an Internet-based system—*Savings Bond Direct*—to sell U.S. Savings Bonds directly to the public. According to Treasury, the system generated almost $230 million in bond sales in its first 18 months of operation.

- *Government-to-Employee.* Electronic government can be used to more effectively interact with employees to enhance productivity and human resources management. The Office of Personnel Management's *Employee Express* is an automated system enabling federal employees to initiate the processing of certain discretionary personnel and payroll transactions. For example, using *Employee Express*, employees can change data related to their Thrift Savings Plan accounts and health benefits, thus offering an alternative to paper forms. An example of an agency-specific initiative is *lifelines*, the Navy's Web-based quality of life (QOL) program and services delivery system. Inaugurated in January 1999 (and redesigned in June 2000), *lifelines* is built on five core business areas, the (1) "QOL Network," which includes access to quality of life information and services, (2) "QOL News Center," which provides access to the news, (3) "QOL Broadcast Network," which brings stories and video clips to sailors, Marines, their families, and others using video streaming and electronic publishing technology, (4) "QOL Business Innovations Portal," which includes Department of Defense and Department of the Navy on-line administrative and service delivery processes, and (5) "QOL Gateway," which has thousands of links to service providers.

[13] *http://www.seniors.gov.*

- *Government-to-Government.* One goal of digital government is to provide access and interaction with government services on a functional or topical basis, rather than being focused on the specific agency or agencies responsible for administering programs and policies. For example, our February report on technology-based regulatory innovations noted examples of such innovations that involved interagency or intergovernmental cooperation.[14] In one case, the interagency Integrated Government-wide International Trade Data System is designed to enable various federal trade agencies to share a standard set of data to enable the more efficient electronic release of goods, conveyances, and crews. According to the developers, the system is expected to provide the primary inspector with "one look" at the truck, its goods, and the driver's compliance with key federal requirements before the truck enters the United States. In another example, the Environmental Protection Agency is working on an intergovernmental e-government initiative—*the National Environmental Information Exchange Network*—that the agency believes can improve both the quality of and access to environmental data. The exchange network is to be a voluntary, standards-based system that links different state systems and the Environmental Protection Agency's systems, using common language and secure connections through the Internet. In October 2000, a team comprising participants from the Environmental Protection Agency, individual states, and the Environmental Council of the States released a blueprint that lays out the network design and partnership agreements for implementing the network.

- *Government-to-Business.* E-government projects have also been initiated to more effectively work with businesses as suppliers of goods and services and as regulated economic sectors. For example, the General Services Administration's *FedBizOpps* has been designated as the single governmentwide point of electronic entry for access to federal government business opportunities greater than $25,000.[15] Using this Web site, sellers and service providers can access and download information such as solicitations. Moreover, after subscribing, vendors can receive various announcements

[14] *Regulatory Management: Communication About Technology-Based Innovations Can Be Improved* (GAO-01-232, February 12, 2001).

[15] This designation was published as an interim Federal Acquisition Regulation on May 16 (it is open for public comment until July 16, 2001). The interim rule gives federal agencies until October 1, 2001, to complete their transition to, or integration with, *FedBizOpps*. After October 1, all agencies must use *FedBizOpps* to provide the public access to notice of procurement actions over $25,000.

automatically via e-mail, including presolicitation and post-award notices and their amendments and notices of solicitation and solicitation amendment releases. According to the General Services Administration, as of mid-May, over 90,000 vendors were registered to receive notification of business opportunities from *FedBizOpps.* Another example of a government-to-business initiative is the Department of Labor's Employment Laws Assistance for Workers and Small Businesses, or *elaws* application.[16] *Elaws* provides interactive advice through the Internet to help small businesses and workers understand their rights and responsibilities under federal employment laws and regulations. Each *elaws* "advisor" imitates the interaction that an employer or employee might have with a Department of Labor employment law expert, asking questions and providing answers based on the responses provided.

Many Internet-based initiatives can be relatively easy to implement and have a potentially high payoff for increasing the speed and efficiency with which citizens and businesses interact with the government. For example, the immediate placement of high-demand documents or information on an agency's Web site can help improve citizens' satisfaction with government responsiveness as well as result in potential cost savings by reducing the need for distributing printed copies. One example of such an initiative is *FedForms.gov*, which provides "one stop shopping" for the forms needed for the top 500 government services used by the public. Other potentially high-payoff initiatives, however, may be more difficult and time-consuming to fully implement. For example, allowing citizens to more easily access their personal information maintained by government agencies, which can be beneficial to the individual, must address difficult privacy and security issues. Indeed, the Social Security Administration has been cautious in pursuing its on-line initiatives largely in view of the privacy and security concerns raised following its implementation of the on-line personal earnings and benefits estimate statement.[17] As I will discuss in a moment, risks involving issues such as privacy can be addressed and managed, with the implementation of appropriate management and technical policies and controls.

[16]GAO-01-232, February 12, 2001.

[17]The Social Security Administration's on-line personal earnings and benefits estimate statement was later put on hold. See *Social Security Administration: Information Technology Challenges Facing the Commissioner* (GAO-T/AIMD-98-109, March 12, 1998) and *Social Security Administration: Internet Access to Personal Earnings and Benefits Information* (GAO/T-AIMD/HEHS-97-123, May 6, 1997).

Significant Challenges in Transitioning to E-government

The many federal initiatives demonstrate the opportunities for the growing use of e-government to provide faster, more convenient, and more efficient on-line information access and services to citizens. However, past mistakes serve to remind us that technology solutions often involve varying levels of risks in addition to expected benefits. Let me address some of the areas needing attention as e-government moves forward. None are insurmountable, but they deserve attention and must be addressed to ensure successful e-government outcomes.

Sustaining Committed Executive Leadership

As in the case with well-run commercial entities, strong leadership and sound management are central to the effective implementation of public-sector policies or programs. Moreover, our wide-ranging work on federal management issues has shown that perhaps the single most important element of successful management improvement initiatives is the demonstrated commitment of top leaders to change.[18] Top leadership involvement and clear lines of accountability for making management improvements are critical to overcoming organizations' natural resistance to change, marshalling the resources needed in many cases to improve management, and building and maintaining the organizationwide commitment to new ways to doing business.

In our studies of leading private and public-sector organizations in IT management, we have also noted that effective top management leadership, involvement, and ownership are a cornerstone of any information technology strategy.[19] For example, we have previously reported that strong and focused leadership was a pivotal factor leading to the government's successfully meeting the Year 2000 computing challenge and that this lesson should be applied to other ongoing major management challenges.[20] We concluded that as the federal government moves to fully embrace the digital age and focuses on e-government initiatives, comprehensive and focused leadership is of paramount importance. We

[18] *Management Reform: Elements of Successful Improvement Initiatives* (GAO/T-GGD-00-26, October 15, 1999).

[19] *Executive Guide: Improving Mission Performance Through Strategic Information Management and Technology* (GAO/AIMD-94-115, May 1994) and *Executive Guide: Maximizing the Success of Chief Information Officers, Learning From Leading Organizations* (GAO-01-376G, February 2001).

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

have also emphasized the importance of strong senior leadership support in areas such as IT investment, performance measurement, and security.[21]

Earlier this year we reported on the need for agency leadership in the IT arena at the Departments of Veterans Affairs and Agriculture. In April we testified that successful implementation of the Department of Veterans Affairs' IT program requires strong leadership and management among a CIO and other senior executives to help define and guide the department's plans and actions.[22] To his credit, the newly appointed Secretary of Veterans Affairs had identified filling the department's CIO position as one of his top priorities, and at the time of the hearing, was conducting an extensive search to identify suitable candidates for the position, which requires Senate confirmation. At the April hearing, the Secretary of Veterans Affairs also stated that he was providing his "personal commitment that we will reform the way we use information technology" at the department and he emphasized his commitment to the development of an enterprise architecture and security issues.[23] At the Department of Agriculture, we reported[24] in February that the department had not assigned a senior-level official with overall responsibility and accountability for managing and implementing separate activities related to the Freedom to E-File Act (P.L. 106-222).[25] As a result of this and other concerns, we reported that, while Agriculture had made progress and had partially met the E-File Act's initial deadlines, it faced formidable challenges in meeting future deadlines.

Building an E-government Business Case

Agencies have reported expending over $41 billion in IT investments in fiscal year 2000 and have proposed to increase this to nearly $45 billion in fiscal year 2002.[26] A primary challenge for agencies in moving toward e-

[21] *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity* (AIMD-10.1.23, Exposure Draft, May 2000), *Executive Guide: Measuring Performance and Demonstrating Results of Information Technology Investments* (GAO/AIMD-98-89, March 1998) and *Executive Guide: Information Security Management* (GAO/AIMD-98-68, May 1998).

[22] *VA Information Technology: Important Initiatives Begun, Yet Serious Vulnerabilities Persist* (GAO-01-550T, April 4, 2001).

[23] Testimony of Anthony J. Principi, Secretary, Department of Veterans Affairs before the House Subcommittee on Oversight and Investigations, Committee on Veterans' Affairs, April 4, 2001.

[24] *USDA Electronic Filing: Progress Made, But Central Leadership and Comprehensive Implementation Plan Needed* (GAO-01-324, February 28, 2001).

[25] The Freedom to E-File Act (P.L. 106-222) requires the Department of Agriculture to establish an electronic filing and retrieval system to enable farmers and other agricultural producers to access and file paperwork electronically

[26] *Report on Information Technology (IT) Spending for the Federal Government for Fiscal Years 2000, 2001, and 2002* (OMB).

government is to implement and follow management practices that help ensure IT dollars are directed toward prudent investments that focus on achieving cost savings, increasing productivity, and improving the timeliness and quality of service delivery. Even with its legislatively mandated deadline, according to OMB's GPEA guidance, the act recognizes that building and deploying electronic systems to complement and replace paper-based systems should be consistent with the need to ensure that investments in information technology are economically prudent to accomplish the agency's mission, protect privacy, and ensure the security of the data.

Accordingly, like any other information technology project, electronic government initiatives should be supported by a well-developed business case that evaluates the expected returns against the costs. An explicit understanding of the costs and expected benefits up front provides the basis for a sound financial and strategic decision and creates a baseline for managers and executives to measure progress against. Moreover, improvements in quality, cost-effectiveness, speed of service delivery, or operational effectiveness should provide key information for investment decisionmakers. The business case provides the forum for the evaluation of the projects' costs, benefits, and integration with the agency performance and results strategy. In addition, the business case provides assurance to agency executives that key factors of the proposed system have been adequately thought out and planned for.

In government's rush to provide greater electronic service delivery, it is essential for agency executives to remember that fundamental principles and practices of good IT planning and management apply equally to effective customer-centric Web-based applications. As we noted in May 2000,[27] some of these fundamentals include

- developing a well-defined project purpose and scope and realistic, measurable expectations;
- understanding and improving business processes before applying technology;
- performing risk assessments and developing appropriate risk mitigation strategies;
- using industry standard technology and solutions where appropriate;

[27]GAO/T-AIMD/GGD-00-179, May 22, 2000.

- adopting and abiding by pertinent data standards;
- thoroughly training and supporting users; and
- reviewing and evaluating performance metrics.

Maintaining a Citizen Focus

Today, governments at all levels increasingly recognize the individual citizen and citizen "communities of interest" as customers. However, translating this growing awareness into better, efficient, and friendly services can be challenging. Just as the Internet and Web-based technologies should force organizations to rethink their business processes, they should also force organizations to reconsider their customers—specifically how their customers need, perceive, and digest information and services in a viewable, electronic format. For example, private industry Web sites are increasingly being tailored to allow for individual preferences and needs to restrict information only to those products and services desired. "Interactive" consumers meanwhile are starting to demand even more convenience and operational excellence from the on-line companies they deal with on a regular basis. These practices, however, pose privacy questions for the federal government, which I will discuss in the next section.

One initiative that seems to be an example of a citizen focus is the *Government Without Boundaries* project. Launched at a September 2000 meeting of federal, state, and local CIOs, this project recognizes that citizens and businesses may not differentiate among levels of government when seeking government services. As a result, the General Services Administration along with other federal agencies such as the Department of the Interior, are working with selected state and local governments with the goal to create a virtual pool of on-line government information and services from all levels. For example, the Virginia project under *Government Without Boundaries*, which is being conducted in association with Fairfax County and the city of Virginia Beach, is a model Web-enabled registry of youth services across all levels of government. The New Jersey project, being conducted with Monmouth County, is a pilot demonstration of a shared calendar of park events that contains information on local, state, and federal parks.

Maintaining a citizen focus does not stop with the implementation of Web sites. Another key component is developing customer support tools to assist the public's use of such mechanisms. For example, the National Electronic Commerce Coordinating Council suggests that organizations

implement a customer relations management structure that could include (1) a telephone support service to respond to user questions, (2) an on-line support function accessible directly from the Web site, (3) tools to monitor and track problems and user questions, and (4) processes to analyze user traffic.[28]

Protecting Personal Privacy

On-line privacy has emerged as one of the key—and most contentious—issues surrounding the continued evolution of the Internet. In particular, the federal government faces challenges in ensuring personal privacy while also continuing to implement and expand e-government. A national survey found that Americans believe that e-government has the potential to improve the way that government operates but a majority also had concerns about sharing personal information with the government over the Internet, fearing that the data will be misused and their privacy diminished.[29]

Federal agencies are required by law to protect an individual's right to privacy when they collect personal information. The Privacy Act of 1974, as amended, is the primary law regulating the federal government's collection and maintenance of personal information, and requires protection of personal information maintained in an agency's system of records.[30] Since the passage of the act, however, advances in information technology and the increasing use of the Internet have raised concerns about the adequacy of the act's provisions. In response to such concerns, Mr. Chairman, you and the Chairman of the House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations have asked us to conduct a comprehensive review of agency compliance with the Privacy Act and identify privacy issues that are not adequately covered by the act. This work is ongoing, and we expect to issue our first report early next year.

In addition to the Privacy Act, OMB has issued guidance specifically focused on Internet privacy. For example, in June 1999 it issued a memorandum directing executive departments and agencies to post clearly labeled and easily accessed privacy policies on their principal Web

[28] *E-Government Strategic Planning: A White Paper* (National Electronic Commerce Coordinating Council, December 13, 2000).

[29] August 2000 Hart-Teeter survey reported in *e-government: The Next American Revolution*, The Council for Excellence in Government, February 2001.

[30] P.L. 93-579, 5 U.S.C., section 552a.

sites. In September 2000, we reported[31] that most—67 of 70—principal Web sites we reviewed had posted privacy policies that were clearly labeled and easily accessed—a considerable improvement over a 1999 survey of selected federal sites by a public interest group.[32] However, we also found that of 31 high-impact agencies,[33] most did not post a privacy policy on all Web pages that collected personal information as required by OMB. In addition, of 101 on-line forms that we reviewed, 44 did not have a privacy policy posted on the Web page. We recommended that OMB, in consultation with the CIO Council and others, consider clarifying certain aspects of its guidance and determine whether existing oversight strategies were adequate to ensure agency adherence to the web site privacy policies.

OMB has also issued specific guidance concerning federal agency use of Internet "cookies." Cookies are text files that have unique identifiers associated with them, and are used to store and retrieve information that allows Web sites to recognize returning users, track on-line transactions, or maintain and serve customized Web pages. "Session" cookies expire when the user exits the browser, while "persistent" cookies remain on the user's computer for a specified length of time, which may be years. Although cookies can be used to enable electronic commerce and other applications, persistent cookies also pose privacy risks even if they do not gather personally identifiable information because the data contained in them can be subsequently linked to the individual. Because of such concerns, OMB issued guidance in June 2000 directing that cookies not be used on federal Web sites unless certain conditions were met, including a compelling need and approval by the head of the agency. In September 2000, in response to inquiries about the scope of the guidance, OMB further clarified its policy in a letter to the CIO Council stating that it applied only to persistent cookies.

Our work conducted within the past year on the use of cookies illustrates the challenges that OMB and federal agencies face in balancing increased use of the Internet to provide information and deliver services against

[31] *Internet Privacy: Agencies' Efforts to Implement OMB's Privacy Policy* (GAO/GGD-00-191, September 5, 2000).

[32] An April 1999 report by the Center for Democracy and Technology (*Policy vs. Practice: A Progress Report on Federal Government Privacy Notices on the World Wide Web*) stated that just over one-third of 46 federal agencies had privacy policies linked from their home pages, 8 agencies had privacy policies that were not on their home pages, and 22 agencies did not have privacy policies.

[33] The National Partnership for Reinventing Government identified 31 agencies as having high impact—that is they have 90 percent of the federal government's contact with the public.

concerns over privacy.[34] As we reported in April 2001, OMB's guidance on the use of cookies, while helpful, left agencies to implement fragmented directives contained in multiple documents. Further, the guidance itself was not clear on the disclosure requirements for techniques such as session cookies. We concluded that OMB's stated position that agencies were not required to disclose the use of session cookies could lead to confusion on the part of visitors to federal Web sites. As a result of these concerns, we recommended that OMB, in consultation with other parties, (1) unify its guidance on Web site privacy policies and the use of cookies, (2) clarify the resulting guidance to provide comprehensive direction on the use of cookies by federal agencies on their Web sites, and (3) consider directing federal agencies to disclose in the use of session cookies in their Web site privacy notices.

Implementing OMB's cookie guidance requires constant agency diligence and attention. In our April report we noted that, as of January 2001, most of the federal Web sites that we reviewed were following OMB's guidance on the use of cookies. However, of the 65 sites we reviewed, eight sites using persistent cookies did not comply with OMB's requirements for such use. These agencies all took or planned to take corrective action. Further, last month, the DOD Inspector General issued a report summarizing the results of 51 Inspector General reports from other agencies, which identified the use of 300 persistent cookies at 22 agencies' Web sites. In the vast majority of cases, these persistent cookies were not approved by the agency head, as required by OMB.

Privacy issues extend beyond what is disclosed on and the data captured by Web sites, and can involve complicated and controversial issues. An example is the implementation of the Department of Health and Human Services' (HHS) privacy regulations mandated by the Health Insurance Portability and Accountability Act of 1996.[35] As we testified this past February, this regulation represents an important advancement in the protection of individuals' health information.[36] At the same time, however, we noted that health care providers faced a complex new set of privacy requirements that were not well understood. In February, the Secretary of HHS requested public comments on this regulation, stating that this was

[34] *Internet Privacy: Implementation of Federal Guidance for Agency Use of "Cookies"* (GAO-01-424, April 27, 2001) and *Internet Privacy: Federal Agency Use of Cookies* (GAO-01-147R, October 20, 2000).

[35] P.L. 104-191, 264, 110 Stat. 1936, 2033.

[36] *Health Privacy: Regulation Enhances Protection of Patient Records but Raises Practical Concerns* (GAO-01-387T, February 8, 2001).

needed to help the department assess its "real-world" impact in health care delivery. During the 30-day comment period, HHS reported that it received more than 11,000 letters or comments. Just last week HHS issued the first of what is expected to be several technical assistance materials to clarify and help covered entities implement the regulation. In this guidance, HHS provided examples of some of the changes to the regulation that it expects to propose. For example, HHS stated that it would propose a change that would permit pharmacists to fill prescriptions phoned in by a patient's doctor before obtaining the patient's written consent.

Implementing Appropriate Security Controls

Security concerns present one of the toughest challenges to extending the reach of electronic government. Even if federal agencies adopt policies and procedures designed to protect the privacy of sensitive electronic information, that information could still be compromised if the security of the Web servers, operating systems, and software applications involved is inadequate. The rash of hacker attacks, Web page defacing, and credit card information being posted on electronic bulletin boards can make many federal agency officials—as well as the general public—reluctant to conduct sensitive government transactions involving personal or financial data over the Internet.

These concerns are not unjustified. We have designated information security as a governmentwide high risk area since 1997. Our latest high-risk report noted that progress in strengthening federal information security has been mixed.[37] Efforts to address the problem had gained momentum but audits showed that federal operations and assets continued to be highly vulnerable to computer-based attacks.

In recent years we have consistently found security weaknesses at many federal agencies, ranging from security program management to access controls to segregation of duties.[38] For instance security weaknesses at agencies such as IRS, the Centers for Medicare and Medicaid Services (formerly known as the Health Care Financing Administration), the Social Security Administration, and the Department of Veterans Affairs could place sensitive tax, medical, and other personal records at risk of unauthorized disclosure. As we recently reported, during the 2000 tax filing season, IRS did not adequately secure access to its electronic filing

[37] *High-Risk Series: An Update* (GAO-01-263, January 2001).

[38] For example, see *Computer Security: Weaknesses Continue to Place Critical Federal Operations and Assets at Risk* (GAO-01-600T, April 5, 2001) and *Information Security: Serious and Widespread Weaknesses Persist at Federal Agencies* (GAO/AIMD-00-295, September 6, 2000).

systems or to the electronically transmitted tax return data those systems contained.[39] Unauthorized individuals could have gained access to IRS' electronic filing systems and modified taxpayer data contained in those systems during the 2000 tax-filing season. IRS reports that it has substantially corrected the access control weaknesses cited in that report. Nevertheless, failure to maintain adequate security over IRS' electronic systems in the future could erode public confidence in filing tax returns electronically.

A key element in promoting the expansion of electronic government is providing citizens with the capability to conduct the full range of their government business—including sensitive transactions such as benefit applications—on-line. Effective information security is essential to the increased implementation of electronic transactions. For example, unless special security features are properly implemented, electronic transactions can be more susceptible to fraud and abuse than traditional paper-based transactions. While a paper record of a transaction can undergo forensic chemical analysis to determine whether it has been altered, knowledgeable individuals can alter electronic records in systems virtually without detection. Further, physical access must occur before a paper record can undergo tampering but with the enhanced global systems interconnectivity made possible by the Internet, physical access is not necessary. Instead, electronic misuse and tampering can occur more quickly and with far greater impact if inadequate safeguards are not in place. Finally, human participation is required on both sides of a paper-based transaction, providing the opportunity for immediate human inspection and verification of the transaction. In contrast, electronic systems may readily process transactions that would be immediately suspicious to a human observer.

An important piece of the solution to the Internet-based security problem will be the development and implementation of so-called Public Key Infrastructure or PKI technology (a system of computers, software and data that relies on certain sophisticated cryptographic techniques to secure on-line messages or transactions). According to the Principal Deputy CIO of the Department of Defense, "the path to electronic transactions is closely coupled to the maturation and affordability of the PKI."[40] A properly implemented and maintained PKI can offer important

[39] *Information Security: IRS Electronic Filing Systems* (GAO-01-306, February 16, 2001).

[40] Joint Statement of John L. Osterholz, Principal Deputy Chief Information Officer, Department of Defense, and Norma J. St. Claire, Director, Information Management for Personnel and Readiness, Office of the Secretary of Defense, before the House Committee on Government Reform, June 21, 2001.

security services, including assurance that (1) the parties to an electronic transaction are really the people they claim to be, (2) the information has not been altered or shared with any unauthorized entity, and (3) neither party will be able to wrongfully deny that they took part in the transaction.

As we reported in February, progress has been made in seeding PKI technology throughout the government.[41] However, a number of substantial challenges must be overcome before the technology can be widely and effectively deployed. For example, it is not yet fully known whether this technology will be truly scalable[42] and interoperable[43] as its use grows. Further, the costs of building a PKI and enabling software applications to use it can easily add up to millions of dollars. Moreover, there is a range of policy and human capital issues to consider. In addition, because federal agencies are adopting different and incompatible implementations of PKI technology, the development of the Federal Bridge Certification Authority is critical. The federal bridge is being designed to link disparate agency PKI systems and promote PKI interoperability within and outside the federal government. Without a successfully functioning bridge, agencies will need to individually make arrangements to interoperate with other specific agencies in order to share secure information or transactions. Such a process would likely be tedious and impractical.

Maintaining Electronic Records

In implementing GPEA and moving toward e-government, executive-branch agencies and the National Archives and Records Administration (NARA) will be faced with the substantial challenge of preserving electronic records in an era of rapidly changing technology. Agencies must create electronic records, store them, properly dispose of them when appropriate, and send permanently valuable records to NARA for archival storage. For e-mail alone, this involves the huge volumes of e-mail agency employees now send and receive in performing their official duties. Moreover, staff members creating records need to be made aware of what constitutes an electronic record, how to save it, and how to archive it for future use.

[41] *Information Security: Advances and Remaining Challenges to Adoption of Public Key Infrastructure Technology* (GAO-01-277, February 26, 2001).

[42] Scalability is the ability to easily change in size or configuration to suit changing conditions.

[43] Interoperability is the ability of two or more systems or components to exchange information and to use the information that has been exchanged.

When deciding how to store electronic documents, agencies must take into account the legal viability of the records they create. The Department of Justice's guidance for federal agencies on designing and implementing electronic processes notes that the adoption of electronic systems or the conversion of paper-based records systems to electronic ones can present significant legal issues that need to be identified and addressed as part of the decision-making process.[44] As with paper-based records, electronic records need to be available, reliable, and pursuasive. According to Justice, some of the issues related to electronic records retention that need to be addressed include (1) providing the continued capability to access information from older technology, (2) having staff who are familiar and competent to work with the electronic processes necessary to read older data, and (3) ensuring that steps are taken to preserve passwords or other data to be able to retrieve information that was encrypted or otherwise protected.

The long-term preservation and retention of those electronic records is a challenge for agencies and NARA. For example, NARA, in its guidance, remarked that hardware and software obsolescence can make record-retention burdensome. Moreover, the NARA guidance developed in response to GPEA recognizes that records management involving records that have been created using electronic signature technology is a complex process, requiring training and knowledge on the part of both IT specialists and records management personnel. Further, NARA itself must be able to receive electronic records from agencies, store them, and retrieve them when needed. To do so, it must expand its capacity to accept an increasing volume of electronic records from agencies. In addition to the increasing volume, the variety of electronic records such as word processing documents, e-mail messages, databases, digital images, and Web site pages complicates NARA's mission to preserve these records. In response to this challenge, in July 1999 NARA initiated the Electronic Records Archives program. Under this program NARA intends to develop a system that would assemble, manage, preserve, and make available vast amounts of diverse electronic government records.

Maintaining a Robust Technical Infrastructure

An important key to success in e-government is to plan for and implement an adequate technical infrastructure that will support a user's experience of easy and reliable electronic access across government. Among the elements of a supporting technical infrastructure that are important to

[44] *Legal Considerations in Designing and Implementing Electronic Processes: A Guide For Federal Agencies* (Department of Justice, November 2000).

ensuring the successful implementation of e-government initiatives are the following:

- *Adequate network capacity, or bandwidth.* Government agencies need to consider the amount of electronic traffic that will be generated by an electronic offering and provide adequate resources to support that load. As we reported in September 2000, some Web sites have been completely overwhelmed and disabled when far greater numbers of users visited the sites than their developers anticipated.[45]

- *System and platform reliability.* The Web servers and other computer platforms that support e-government services—including their operating systems and the software that connects them—must also be capable of supporting potentially heavy user demands and must run reliably. The systems must reliably (1) confirm that a transaction is complete and (2) abort a transaction completely and consistently in the event that some problem arises. In the private sector, customers generally expect e-businesses to be up and running 24 hours a day, 7 days a week, providing smooth, efficient transactions without significant delays. Electronic government will likely need to meet this standard. Providing such continuous, reliable service for potentially large numbers of customers requires careful planning and design. Where heavy traffic is expected, for example, load balancers may be needed to intercept Web traffic going to an agency's site and efficiently distribute it among an array of servers to prevent any one system from becoming overwhelmed and to provide automatic immediate backup in the event that a particular machine fails.

- *Technology Alternatives.* As we noted in May 2000, the government's Web-based applications are not necessarily the only incarnation that e-government will take.[46] As more of the public moves to compact wireless devices, the government will need to ensure that its applications are accessible by more than just a small number of end-user systems, or platforms. In all likelihood, a variety of media will be needed for conducting transactions, from traditional paper-based methods on one end of the spectrum to small wireless receivers on the other.

[45]GAO/AIMD-00-282, September 15, 2000.

[46]GAO/T-AIMD/GGD-00-179, May 22, 2000.

- *Technology refreshment.* As technology continues to evolve, government will be challenged to enhance existing electronic applications to incorporate new technologies and provide better service. A good example is the federal government's *FirstGov* Web portal. Last year we noted that the inauguration of *FirstGov* represented a significant achievement in that an important and previously unavailable capability—searching the entire government's Web pages—was rapidly and successfully put into place.[47] Without detracting from that accomplishment, we also noted that *FirstGov's* search engine was not particularly context-sensitive. In other words, if a given search did not produce helpful information, it was up to the user to define and redefine the search in ways that might return more meaningful information. *FirstGov* officials are taking steps to improve their search technology, such as adding links to the states and defining and incorporating key words that will trigger predefined results. These and other enhancements will be needed as search technology advances. If *FirstGov* is not continually enhanced to provide better results to citizens' queries, the initial luster of the government's accomplishment may soon fade.

In addition, even a smoothly operating electronic delivery service will fail to fulfill the promise of e-government if it is isolated from or unable to work with other related applications. Many e-government applications clearly need to communicate among themselves and exchange relevant data—especially those involved in processing transactions. The Extensible Markup Language, or XML, is one recent technology development that may help in this regard, although its ultimate role is not yet known. Mr. Chairman, at your request, we are conducting a study on the use of XML in the federal government. Our work is not yet complete, however, at your request we are providing some information on this topic.

XML provides a standard way to tag or "mark up" pieces of information so that they can be readily identified and exchanged among disparate computer applications. XML holds the promise of facilitating transactions and bringing together data from computer systems that previously were difficult to access and integrate. For example, a pilot project is underway to enhance the successful *FedStats.gov* Web site through the use of an XML-based "content network." Instead of simply being a repository for statistical data that is updated only at certain specified times, the XML-based *FedStats* site would link users directly to the source data within

[47] *Electronic Government: Opportunities and Challenges Facing the FirstGov Web Gateway* (GAO-01-87T, October 2, 2000).

individual agencies, significantly enhancing their ability to access needed data.

Some formidable organizational challenges must be met before the potential of XML can be fully realized. XML, by design, stops short of defining specific data standards, such as the data fields that might appear on an electronic application form or the protocols necessary to conduct complete business transactions. Therefore, consensus must be reached—both in the private sector as well as in government—on how to set such standards and conform to them in a meaningful way. Moreover, a number of industry organizations are already using XML to define their own vocabularies for business relationships and transactions. Examples include electronic business XML (ebXML)—a set of specifications that together act as a complete, modular framework so that anyone can do business with anyone else over the Internet—and the Extensible Business Reporting Language (XBRL), a specification for reporting financial information that enhances the transfer and analysis of that information. The federal government will need to determine which of the many developing XML standards it intends to adopt, and agencies will need incentives to comply with the specific XML data formats that emerge as governmentwide standards.

A first step in this direction would be the establishment of a governmentwide registry, where specific XML data standards could be collected and referenced. Such a registry would allow early XML adopters to share information on the data formats they are using and could assist in determining what standards to adopt in the future. The CIO Council's XML Working Group has sponsored an effort with the National Institute of Standards and Technology and the General Services Administration to develop a pilot for such a registry, although work still needs to be done to define how the registry should be administered and maintained on an ongoing basis. The establishment of this registry will be critical to the success of XML as a broad facilitator of information exchange.

Human Capital: IT Workforce Management

The demand for IT workers is high and growing. The Bureau of Labor Statistics projects that the demand for computer systems analysts, engineers, and scientists will almost double between 1998 and 2008 and the demand for computer programmers will increase by 30 percent during the same time period.[48] In September 2000, we reported that to enhance

[48] *"The 1998-2008 job outlook in brief" (Occupational Outlook Quarterly, Bureau of Labor Statistics, Spring 2000).*

U.S. workers' ability to fill IT positions, the Department of Labor and the National Science Foundation were working to improve the IT skills of the U.S. workforce.[49] The employers we contacted told us that they are also trying to improve U.S. workers' IT skills, and identified a variety of short-term methods, such as retraining new or existing employees, to provide U.S. workers with the needed skills.

The need for qualified IT professionals puts governments in direct competition with the private sector for scarce resources. In addition, the increasing government reliance on private sector service providers and outsourced application development has created a growing demand in the federal workplace for more traditional skills, such as sourcing and contract management and project and program management.

With respect to the federal government, another major concern is that a substantial portion of the federal workforce will retire between fiscal years 1999 and 2006. We recently estimated that by 2006 about 31 percent[50] of 24 major departments and agencies' employees working in 1998 will be eligible to retire, and that through the end of 2006 about half of those eligible will actually retire.[51] In addition, all 24 major departments and agencies reported that the computer specialist series was considered mission-critical occupations and we estimated that 30 percent of employees in this series would be eligible to retire by the end of fiscal year 2006, and that 14 percent would retire by then.

To help address IT human capital issues, the CIO Council and the Administrative Office of the U.S. Courts asked the National Academy of Public Administration (NAPA) to study IT compensation strategies and to make recommendations on how the government can best compete for IT talent. NAPA has completed and reported on the first phase of this study. Table 1 summarizes NAPA's overall comparison of compensation and work factors among various sectors, which demonstrates some of the similarities and differences among the sectors. NAPA's high, medium, and low designations shown below are based on an overall evaluation of data

[49] *H-1B Foreign Workers: Better Controls Needed to Help Employers and Protect Workers* (GAO/HEHS-00-157, September 7, 2000).

[50] The eligibility estimate of 31 percent is based on cumulative data, which includes those already eligible and those reaching retirement eligibility between fiscal years 1999 through 2006, less the estimated 4 percent who are estimated to leave before they become eligible to retire.

[51] *Federal Employee Retirements: Expected Increase Over the Next 5 Years Illustrates Need for Workforce Planning* (GAO-01-509, April 27, 2001).

and information obtained for organizations in each sector in comparison with the other sectors.

Table 1: Overall Comparison of Compensation and Work Factors

Sector	Salary levels	Work-life benefits	Rewards/ recognition	Advancement/ training	Use of recruiting tools
Federal	Low	High	Low	Low	Low
State	Low	Medium	Medium	Medium	Medium
Local	Low	Medium	Medium	Low	Low
Nonprofit	Medium	Medium	Medium	Medium	High
Private	High	High	High	High	High
Academia	Medium	High	Medium	Medium	Medium

Source: *Comparative Study of Information Technology Pay Systems: Executive Study* (NAPA, March 2001).

NAPA's final report is expected to be completed by mid-September and will contain an evaluation of alternative compensation models and address recommended solutions.

Without fully developing staff capabilities, agencies stand to miss out on the potential customer service benefits presented by technology. Employees must have the training and tools they need to do their jobs. The process of adopting a new system can be made much less difficult by offering well-designed, user-oriented training sessions that demonstrate not only how the system works, but how it fits into the larger work picture and "citizen as customer" orientation. A significant challenge for all agencies is providing internal incentives for customer service, reducing employee complaints, and cutting the time employees spend on non customer-related activities.

Ensuring Uniform Service to the Public

An important policy consideration governments face is how to provide services and access to those segments of the population with limited Internet access and ensure their participation in this new electronic environment. While an October 2000 Department of Commerce report[52] found that the overall level of U.S. digital inclusion is rapidly increasing,

[52] *Falling Through The Net: Toward Digital Inclusion* (U.S. Department of Commerce, October 2000).

with gains being made by groups that have traditionally been digital "have nots," a digital divide remains or has expanded slightly in some cases. For example, (1) people with a disability are only half as likely to have access to the Internet as those without one, (2) large gaps for Blacks and Hispanics remain when measured against the national average, and (3) individuals 50 years of age or older are among the least likely to be Internet users.

The challenge for policymakers in the long run will be to determine whether any *continuing* disparities in the availability and use of the Internet among different groups of Americans threaten to offer citizens separate levels of service and access. This presents an immediate and complex leadership challenge confronting government policymakers and managers: the need to adopt informed strategies to guide agencies in how best to use the Internet to deliver services to all citizens and business partners. Multiple access methods to government services and processes—in person, by phone, via fax, using public kiosks—may be essential to supplement Internet use.

The Congress has taken action to address the digital divide that confronts people with disabilities. Specifically, the Workforce Investment Act of 1998[53] (section 508 of the Rehabilitation Act, 29 U.S.C. 794d) requires federal departments and agencies and the U.S. Postal Service to procure, develop, maintain, and use electronic and information technology[54] that is accessible for people with disabilities—including both federal employees and members of the public—unless an undue burden would be imposed on the department or agency. An April 2000 Department of Justice report[55] to the President on this law, which was based on section 508 self-evaluations conducted by federal agencies in 1999, indicated that while several agencies are models for accessibility, others need improvement. Justice also reported that (1) federal agency Internet and Intranet sites contained some barriers to access for people with disabilities, (2) almost all software applications contained some barriers to some people with disabilities, although most provided a fair degree of accessibility to most people with

[53]P.L. 105-220

[54]Electronic and information technology is defined as any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. It includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources.

[55]*Information Technology and People with Disabilities: The Current State of Federal Accessibility* (Department of Justice, April 2000).

disabilities, and (3) telecommunications posed specific accessibility issues for almost every community of persons with disabilities and few agencies were fully utilizing available services such as the Federal Information Relay Service (which allows deaf and hard of hearing people to communicate via telephone with people who do not have special equipment). The Department of Justice is due to submit another report to the President on this issue by August 7 of this year. This report is expected to focus on the accessibility of federal agencies' Web sites.

As called for by this law, on December 21, 2000, the Architectural and Transportation Barriers Compliance Board[56] published its final rule, which became effective on June 21, on electronic and information technology accessibility standards. A little over 4 months after these standards were published, the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council published a final rule amending the Federal Acquisition Regulation to incorporate these standards, which became effective June 25.

Recently, the National Council on Disability[57] reported that individual leadership and commitment on the part of officials and staff, particularly at federal agencies, largely accounted for the relative success in implementing pro-accessibility measures.[58] However, the council cautioned that the institutionalization of these practices and policies remains tenuous. Accordingly, the council made a series of recommendations for implementing and enhancing current laws and practices. For example, the council recommended that (1) OMB provide guidance on documenting the integration of accessibility considerations into agency information technology polices, practices, and decisions, (2) individual agencies and the Department of Justice develop a system for random periodic auditing of Web sites to ensure that standards of accessibility are maintained, and (3) the Department of Justice develop a procedure for verifying agency self-reporting of progress.

[56]The Architectural and Transportation Barriers Compliance Board is an independent agency whose primary mission is to promote accessibility for individuals with disabilities. The board consists of 25 members, 13 of whom are appointed by the President, a majority of who are required to be individuals with disabilities. The other 12 members are from various federal agencies, such as the Departments of Defense, Health and Human Services, and Veterans Affairs, and the U.S. Postal Service.

[57]The National Council on Disability is an independent federal agency with 15 members appointed by the President and confirmed by the Senate. The Council promotes policies, programs, practices, and procedures that guarantee equal opportunity for all individuals with disabilities and to empower individuals with disabilities to achieve economic self-sufficiency, independent living, and inclusion and integration into all aspects of society.

[58]*The Accessible Future* (National Council on Disability, June 21, 2001).

Proposed Legislation Would Establish a Federal CIO Who Could Address E-government Challenges

The many challenges associated with the effective implementation of e-government initiatives require strong central leadership to overcome. Mr. Chairman, in introducing S. 803, the *E-Government Act of 2001,* you have recognized this need and have sought to provide it through the establishment of a federal CIO.

As we have previously testified, the government's current information resources and technology management framework can be strengthened by establishing a central focal point, such as a federal CIO.[59] 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 e-government, security, and large-scale IT investments. A federal CIO could serve as this catalyst, working in conjunction with other executive 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 them.

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.[60] More recently, in September 2000 we called for the Congress to consider establishing a formal CIO position for the federal government to provide central leadership and support.[61] As we noted then and reemphasized in April,[62] 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 information technology and management

[59] *Federal Chief Information Officer: Leadership Needed to Confront Serious Challenges and Emerging Issues* (GAO/T-AIMD-00-316, September 12, 2000).

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

[61] GAO/AIMD-00-290, September 12, 2000.

[62] *Information and Technology Management: Achieving Sustained and Focused Governmentwide Leadership* (GAO-01-583T, April 3, 2001).

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 participate in establishing funding priorities, especially for crosscutting e-government initiatives such as the President's proposed e-government fund (estimated to include $100 million over 3 years), which is expected to support interagency e-government initiatives.

Consensus has not been reached within the federal community on the need for a federal CIO. Even individuals or organizations that support a federal CIO disagree on the structure and authorities of such an office. In addition, while CIOs or equivalent positions exist at the state level 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. Our research has also found that diversities in corporate missions, structures, cultures, and capabilities prohibit a prescriptive approach to information management leadership.[63] Instead, executives in leading organizations ensure that their CIO models are consistent with the business, technical, and cultural contexts of their enterprises. By defining mission improvement objectives, senior executives determine whether their organization needs a CIO who is a networking/marketing specialist, business change agent, operations specialist, policy/oversight manager, or any combination thereof.

In mid-June, OMB announced the establishment of an Associate Director for Information Technology and E-Government who will report to the Deputy Director for Management (the Deputy Director would act in the capacity of the federal CIO). According to the announcement from OMB, the Associate Director's responsibilities include (1) ensuring that the federal government takes maximum advantage of digital technology and best practices to improve quality, effectiveness, and efficiency, (2) leading the development and implementation of federal IT policy, and (3) directing the activities of the CIO Council. Since this is a new position, the specific authorities and duties of this official are unclear. For example, OMB's announcement stated that the Associate Director would be responsible for the e-government fund but was not specific as to whether this included, for instance, administering the fund and/or approving initiatives from agencies seeking to use the fund. It is also unclear how the Associate Director would relate to the Administrator of the Office of Information and Regulatory Affairs (OIRA) who has statutory information technology and

[63] GAO-01-376G, February 2001.

information resources management responsibilities under the Paperwork Reduction Act.

Your proposal, Mr. Chairman, would establish a federal CIO in statute. In this case, the federal CIO—appointed by the President and confirmed by the Senate—would report to the Director of OMB. The CIO would head a newly created Office of Information Policy and his or her responsibilities would include reviewing agency budget requests related to IT capital planning and investments, implementation of the Privacy Act, oversight of GPEA implementation, promulgation of federal information technology standards and guidelines, consultation with the General Services Administration on expenditures from its IT fund, and governmentwide statistical policy.

There are strengths associated with S. 803's federal CIO approach. Clearly, a single, central focus for information resources and technology management would exist in the federal government. A primary concern we have with OMB's structure as it relates to information resources and technology management is that, in addition to their responsibilities in these areas, both the Deputy Director for Management and the OIRA Administrator have other significant duties, which necessarily restrict the amount of attention that they can give to information resources and technology management issues.[64] A federal CIO, like agency CIOs, should be primarily concerned with information resources and technology management. Your bill would address this concern. Also, as the sole central focus for information resources and technology management, the federal CIO could be used to resolve potential conflicts stemming from conflicting perspectives or goals within the executive branch agencies.

Moreover, by positioning the federal CIO in OMB, the bill allows the CIO to leverage OMB's budget-review role in dealing with the agencies. A strong linkage with the budget formulation process is often a key factor in gaining serious attention for management initiatives throughout government, and reinforces the priorities of federal agencies' management goals.

Nevertheless, it is also important to note some potential challenges of having the CIO position located in OMB. Other legislative proposals have further elevated the visibility of the federal CIO by establishing a position

[64]While OMB's Director is responsible for these functions, they delegated to OIRA by the Paperwork Reduction Act. Under the Chief Financial Officers Act, the OIRA Administrator reports to the Director of OMB through the Deputy Director for Management.

that reports directly to the President and is also a Cabinet-level official.[65] The importance of such high-level visibility should not be underestimated. Our studies of leading public and private-sector organizations have found that successful CIOs commonly are full members of executive management teams.[66]

S. 803's federal CIO approach would also call for a delicate balancing act among the multiple areas requiring this individual's attention and involvement. In particular, the bill calls for the federal CIO to play a variety of roles in many of the bill's governmentwide initiatives, studies, and reports. For example, the bill calls on the federal CIO to (1) conduct a study and report on the feasibility of integrating federal information systems across agencies, (2) convene an interagency task force related to on-line access to federally funded research and development, (3) oversee the interagency initiative to develop common protocols for geographic information systems, (4) develop and establish a public domain directory of federal government Websites and post the directory on the Internet, and (5) promulgate standards and criteria for agency Web sites. Any one of these may be an appropriate role for the federal CIO, but they come coupled with the other functions specifically delegated to the CIO (such as the delegation of the OMB Director's responsibilities for the implementation of the Privacy Act) and the requirement that he or she be consulted on various issues. In order to fulfill such an ambitious agenda, the federal CIO will need to have sufficient and skilled staff and other available resources.

In addition to the establishment of a federal CIO, S. 803 contains many other important provisions. For example, the bill establishes the existing federal CIO Council in statute. Just as with the Chief Financial Officers' Council, there are important benefits associated with having a strong statutory base for the CIO Council. Legislative foundations transcend presidential administrations, fluctuating policy agendas, and the frequent turnover of senior appointees in the executive branch. Having congressional consensus and support for the Council helps ensure continuity of purpose over time and allows constructive dialogue between the two branches of government on rapidly changing management and information technology issues before it. Moreover, as prime users of performance and financial information, having it statutorily based can help

[65]H.R. 4670, the Chief Information Officer of the United States Act of 2000 and H.R. 5024, the Federal Information Policy Act of 2000.

[66]GAO-01-376G, February 2001.

provide the Congress with an effective oversight tool in gauging the progress and impact of the Council on advancing effective involvement of agency CIOs in governmentwide IT initiatives.

The bill also (1) provides for a variety of measures that require using Internet-based IT to enhance citizen access to government information and services, (2) emphasizes the need to set and implement IT standards, and (3) authorizes that $650,750,000 be appropriated to carry out several of its provisions through fiscal year 2004 (the vast majority of these funds–$600 million—are earmarked for the bill's E-Government Fund).

In conclusion, e-government offers many opportunities to better serve the public, make government more efficient and effective, and reduce costs. The federal government is making strides in trying to take advantage of these opportunities although many of the more challenging initiatives are not yet implemented. As these move forward, a strong focus on the costs, benefits, and risks of the initiatives should be part of every decisionmaking forum. While there are many challenges that could serve as potential stumbling blocks if not overcome, such as privacy concerns, security, and the technology itself, these risks can be managed with effective leadership and management. A federal CIO—as called for by S. 803—could provide such needed leadership. Your bill takes constructive steps toward creating a federal CIO position that would address the many opportunities and challenges posed by the government's increasing foray into e-government.

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 John Christian, Felipe Colón, Jr., Lester Diamond, John de Ferrari, Norman Heyl, Linda Lambert, and Henry Sutanto.

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TESTIMONY ON S.803
The E-Government Act of 2001

Submitted by
Martha B. Gould, Chairperson,
U.S. National Commission on Libraries and Information Science (NCLIS)

To
Committee on Governmental Affairs
United States Senate

July 18, 2001

Senator Lieberman and the other co-sponsors of S.803 are to be commended for their efforts in putting together a comprehensive bill addressing the management and promotion of electronic government services and processes, creating a Chief Information Officer for the Federal government to provide effective leadership for this effort, and establishing basic requirements for the use of Internet-based information technology to enhance the delivery of government information and services to the American people.

Congress created the National Commission on Libraries and Information Science 30 years ago in recognition "that library and information services adequate to meet the needs of the people are essential to achieve national goals and to utilize most effectively the Nation's education resources." The Commission is responsible for providing advice to both the President and the Congress on the implementation of national information policy. To accomplish this, it conducts studies, surveys and analyses of the nation's library and information needs, promotes research and development activities, conducts hearings and issues publications, and develops plans for meeting national library and informational needs and for the coordination of activities at the federal, state and local levels. The Commission also provides policy advice to the Director of the Institute of Museum and Library Services (IMLS) regarding Federal financial assistance for library services.

On March 27, 2001, NCLIS submitted a detailed description of a related legislative proposal, *The Public Information Resources Reform Act of 2001*. This legislative proposal was part of *A Comprehensive Assessment of Public Information Dissemination*[1] (hereinafter referred to as the *Assessment* report) that Senators Lieberman and McCain, both sponsors of S.803, requested from NCLIS in 2000. While there is some overlap and

[1] U.S. National Commission on Libraries and Information Science, *A Comprehensive Assessment of Public Information Dissemination*, Washington, DC: Government Printing Office, 2001. The report is published in 4 volumes. Volume 1: A Comprehensive Assessment of Public Information Dissemination; Volume 2: Legislative and Regulatory Proposals; Volume 3: Supplementary Reference Materials; and Volume 4: Compilation of Recent Statues Relating to Public Information Dissemination. These volumes are available at http://www.nclis.gov/govt/assess/assess.vol1.pdf, http://www.nclis.gov/govt/assess/assess.vol2.pdf, http://www.nclis.gov/govt/assess/assess.vol3.pdf, and http://www.nclis.gov/govt/assess/assess.vol4.pdf, respectively.

commonality in the subject matter of S.803 and the Commission's legislative proposal, the two pieces of proposed legislation complement, rather than duplicate, one another.

Four key public information management concerns are addressed by the *Assessment* report and its legislative proposal and S.803. These are the need for:

1. a clear and unequivocal statutory mandate to ensure that public information is made permanently publicly available and the historical government information electronic records are preserved;
2. the easy and reliable authentication of official public information;
3. effective policies and safeguards to protect against the obsolescence of the formats and/or mediums in which government information was initially created and is currently stored and utilized; and
4. measures addressing the education and training initiatives necessary to remedy the relatively low level of both computer and information literacy in the general population, which are formidable barriers to exploiting the full benefits of the Internet Age and contribute to the Digital Divide.

Title 1, Office of Management and Budget Electronic Government Services

Section 101, Federal Chief Information Officer

While the Commission concurs with the need for a Federal Chief Information Officer, we believe it would be unnecessarily confusing and counterproductive to establish a new Office of Information Policy in OMB while at the same time retaining the existing Office of Information and Regulatory Affairs (OIRA). Instead, we believe it would make more sense to designate the Administrator of a newly established Office of Federal Information Resources Management as the Federal CIO, consolidating the information responsibilities of OIRA with those of the proposed Office of Information Policy.

In the view of the Commission, the information collection component of Information Resources Management (IRM) that would remain with OIRA under S.803 and the information dissemination and the other components of IRM that would transfer to the new Office of Information Policy are integral and inseparable components of the same overall government information resources management life cycle. Therefore, OMB policy oversight responsibility over these components should be vested in the same office and under one individual. Such a newly configured office might more aptly be called the Office of Federal Information Resources Management, rather than the Office of Information Policy.

The Commission underscored in its *Assessment* report how the splintering and compartmentalization of leadership and management over the various stages of the government information life cycle has led historically to serious management problems. These include:

- gaps in government information policy;
- incompatibility in government information systems and lack of effective system, network, and platform interoperability;

- impairment of timely and efficient development of government information standards and guidelines; and
- the imposition of excessive paperwork and red tape burdens on the American public, businesses, and lower levels of government.

Twenty years ago the Commission on Federal Paperwork found that restraining government's insatiable appetite for collecting information from the public and reducing unnecessarily burdensome reporting, recordkeeping and regulatory requirements on the public must all be regarded as critical elements of government information policy. In short, paperwork reduction and information policy are both integral elements of the IRM, and therefore need to be managed together. Otherwise, IRM will ultimately fail.

Furthermore, the implementation of the CIO responsibilities in most agencies has been primarily focused on Information Technology (IT), separate from and to the exclusion of Information Content. The Commission feels strongly that Information Resources, both technology and content, must be managed together to optimize both types of resources for effective government and citizen access to government information and services. S.803 provides the opportunity to clearly link management of both technology and content and provide strong IRM leadership, not just strong IT leadership.

Section 103, Management and Promotion of Electronic Government Services

The creation of a Cross-Sector Forum (proposed 44 USC 3602(a)(12)) is an excellent idea. As the bill acknowledges, every sector of society has unique insights and experiences that can contribute to the success of Federal E-Government initiatives. The Commission supports the establishment of a framework to encourage the continuous, free, and open interchange of best practices and ideas, as well as to identify opportunities for collaboration across and among sectors.

The establishment of an E-Government Fund (proposed 44 USC 3604) is another constructive provision that the Commission strongly supports. The necessity for a reliable source of financing to support and test experimental ideas and encourage interagency information projects is essential, particularly since Internet technologies are rapidly evolving. Our *Assessment* recommended several very specific projects for such funding, including the development and testing of an integrated government information life cycle management software tool. However, the availability of this Fund to support "other innovative uses of information technology" should clearly allow for the development of software and for other related content initiatives that support IT applications. For example, the staff at FirstGov.gov has invested considerable intellectual effort in the development of taxonomies to organize the content of Government websites and facilitate searching by the public. Without this effort, the information technology will be less useful.

Title II, Federal Management and Promotion of Electronic Government Services

Section 201, Federal Agency Responsibilities

NCLIS fully endorses making greater use of the CIO Council (Section 201(b)) as a mechanism for continually assessing policy, program, and technical deficiencies that need to be studied and solutions identified for their resolution. The Commission's *Assessment* identified many technical areas where special task forces, standing committees, or ad hoc committees of the CIO Council could investigate problems and come up with suggested solutions, including:

- modernizing, upgrading, and integrating the Federal government's current awareness systems to keep the public continually and efficiently advised of new government information, the deletion of old information, or the changing of existing information products;
- making federal identifiers consistent for information across all agencies;
- harmonizing information identifiers for all levels of government – Federal, State, local, and tribal;
- evaluating pre-electronic government information for digital conversion;
- ensuring that "old" electronic government information, while perhaps removed from agency web sites for various reasons, nevertheless still becomes a part of the historical record;
- specifying metadata by which agencies classify records prior to archival retention or disposal; and
- requiring that data elements set forth in the Government Paperwork Elimination Act be tagged in XML.

Section 202, Acceptance of Electronic Signatures

The Commission's *Assessment* included extensive findings with respect to the need to respond quickly and effectively to the lack of reliable authentication policies, programs, and tools for attesting to the legitimacy of electronic government information. The Federal bridge certification authority for digital signatures is an excellent tool to address this issue.

Section 203, Online Federal Telephone Directory

Many Federal agencies have online directories with telephone numbers and e-mail addresses for all or selected employees. What is sorely needed, as recognized by S.803, is the integration and more efficient indexing of such government information services by broad, government-wide functional categories and sub-categories that transcend agency jurisdictions. Admittedly, this is a much more difficult, but necessary precondition of establishing a central, comprehensive, and authoritative online Federal Telephone Directory that can link to and utilize information from individual agency directories.

Section 204, Online National Library

While a special electronic collection of U.S. historical and cultural materials is a very worthy proposal, the name given to it in the bill may be confusing. The Library of Congress and the National Libraries (the National Library of Medicine, the National Library of Education, the National Agricultural Library) are digitizing their collections and providing them online, as are many other Federal libraries and information centers. The Commission believes that all of the National Libraries, the Library of Congress, and the other Federal libraries are, collectively, a de facto Online National Library.

The Library of Congress, the Smithsonian Institution and the National Archives and Records Administration (NARA) together house a very substantial portion of the government's historical and cultural materials. They should be have a mandate to strengthen their collaboration with one another and with other Federal libraries and information centers to ensure that collections and materials that are in digital form, or will be digitized, are better inter-related bibliographically and that their availability and online accessibility is streamlined. This effort must be coordinated and integrated with FirstGov, GPO Access and other government portals.

Section 205, Federal Courts

The Commission strongly supports strengthening the policies, programs, and practices of the Federal Judiciary so that its information holdings can be made more widely and easily available to the public. We note the absence of a comparable provision for Legislative Branch information and strongly recommends that one be added.

Section 206, Regulatory Agencies

The Commission strongly supports a broadening and deepening of the "government-in-the-sunshine" principles as applied to the information holdings and transactions of the regulatory agencies.

Section 208, Online Access to Federally Funded R&D

The Commission strongly believes that a single, central, authoritative and comprehensive bibliography of government information, both electronic and non-electronic, is a mandatory requirement of the Internet Age. Such a National Bibliography should be linked to a single, central, authoritative and comprehensive database of electronic government information.

In its *Assessment*, the Commission recommended that the Federal government reserve a small portion of its R&D expenditures for the identification and collection, bibliographic control, access and dissemination, and preservation of the results of federally funded R&D, not as a separate service, but as a means of funding the integration of this essential information into a single, central, authoritative and comprehensive National Bibliography and a corresponding database. The Commission does not see any virtue in fragmenting

that bibliography or the corresponding database into a multiplicity of artificial compartments, such as R&D information in one database and non-R&D information in another. Such unnecessary proliferation of government information databases is precisely the sort of historical development that has frustrated attempts to develop single, one-stop searching of government information across agency lines. It has created unnecessary duplication of effort among agencies and programs as well as opportunities for information to be missing from any of the competing services.

Providing for links to other databases is completely inadequate to the information management challenges that are implicit in proliferated databases, because each database tends to develop its own set of thesauri, selection criteria, file formats, data element definitions, records structures, etc. These may become incompatible and therefore not easily interoperable.

The National Technical Information Service (NTIS) of the Department of Commerce is not mentioned in this section, although it already has a statutory mission to collect, preserve and make accessible the results of federally funded R&D. The inference is that NTIS is no longer required because the CIO Council or the new OMB Office of Information Policy will be operating and maintaining the Federal R&D information database. We respectfully disagree. A strong operational capability is required. The functional challenges involved are not simply database-related or technical. Rather, they involve a myriad of day-to-day operational tasks that an oversight office or an interagency mechanism such as the CIO Council could not, in our view, deal with effectively and efficiently.

Furthermore, federally funded R&D falls within the scope of the Federal Depository Library Program (FDLP) and the *Monthly Catalog of U.S. Government Publications* (*MoCat*), both administrated by the Government Printing Office (GPO). By statute *MoCat* is a National Bibliography of government information, both public and internal. It is neither necessary nor desirable to create a duplicative program for bibliographic control of the results of federally funded R&D or to segregate the information into a database in a manner that could potentially continue to exclude it from public access through the FDLP.

The Commission stands by the recommendation in its *Assessment* that the operational functions for collection, bibliographic control and permanent public access of the Superintendent of Documents at GPO, NTIS and FirstGov.gov, among others, be consolidated within the Executive Branch to improve public access, enhance interoperability of systems, and reduce duplication. Provisions for government services like NTIS to be self-sustaining must be amended to recognize the responsibility of the Federal government to fund functions such as collecting, abstracting, indexing,[2] so that all sales of government information are priced at the incremental cost of dissemination.

[2] In its *Assessment*, the Commission identifies a list of inherently governmental functions performed by NTIS that benefit the general public and, therefore, should be treated as inherently government functions and funded with appropriated funds. These are: (1) the collection or acquisition of reports; (2) the indexing, abstracting, cataloging, and preservation of these reports; (3) the further processing of reports by scanning,

Section 209, Common Protocols for Geographic Information Systems

The Commission strongly supports the continued coordination of common protocols for geographic information.

Section 211, Enhancing Crisis Management Through Advanced Information Technology

The Commission supports the provisions for the Federal Emergency Management Agency (FEMA) to explore ways to strengthen the use of IT in the government's disaster assistance programs. However, rather than directing FEMA to contract with the National Research Council (NRC) of the National Academy of Sciences (NAS), we recommend that FEMA be authorized to work with the National Science Foundation (NSF) to develop the research criteria and identify a variety of academic and research institutions, including NAS, that are capable of performing the research.

Section 212, Information Technology Training of Government Personnel and Federal Information Technology Training Center

NCLIS strongly supports the establishment of a Federal Information Technology Training Center to ensure that government IRM and program personnel are kept abreast of the rapidly changing technologies. Very substantial private and public sector traditional higher education and commercial training programs exist. These additional resources should be tapped to supplement Federal in-house education and training capabilities. Also, distance education and distance learning are ideal uses of the Internet,[3] and the Office of Personnel Management (OPM) should investigate their application to the Federal workforce training and incorporate them wherever appropriate.

Section 213, Community Technology Centers

We strongly support the idea of a study on the best practices of federally funded Community Technology Centers (CTC) and request that the Commission be a designated participant in such a study. However, this provision seems to emphasize community technology capabilities, rather than emphasizing both the technologies and the information services that they deliver. Neighborhood and community centers and public and other local libraries, especially libraries that have been designated as Federal Depository Libraries, already provide a broad range of electronic government information and services. Libraries have long been recognized as "the court of first resort" by ordinary citizens who want to know something about their government, such as specific entitlements, available services, and, most importantly, how to find information they need. Local libraries are widely regarded by citizens as their best local gateway to

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microfiching and archiving; (4) the creation and maintenance of the database that provides searching and locating information for this report collection, including the maintenance of a PURL or comparable system to maintain accessibility to reports on agency websites; (5) the mounting and maintaining of the searchable database on a website for free public access; (6) the mounting of the full text of the reports—to the extent they are not available on agency servers—on servers for free public access; (7) the maintenance of archive files to insure permanent, but not necessarily free, public access to material not otherwise available.

[3] Is there a difference between distance learning and distance ed?

government information and services. These libraries are ideally positioned to serve as the nucleus of community information and referral centers both for access to technology and the content that its can deliver. The Commission has already joined with the Institute of Museum and Library Services, the Department of Education, the American Library Association, and the Benton Foundation to develop a community technology center database that could be expanded to address the purposes of Section 213(b)(4). That database can be accessed by placing a zip code in the "Get Connected" box at http://www.digitaldividenetwork.org/content/sections/index.cfm.

Section 214, Disparities in Access to the Internet

The report required by this section infers that access to the Internet is the central problem. We respectfully disagree. Dealing with computer access and modem requirements is only the beginning of the problem. Even if citizens become highly computer literate, the majority of them remain significantly disadvantaged if they have not also been trained in the skills of information literacy—to effectively identify, find, retrieve, organize, evaluate, and utilize the information they want and need. Therefore, the Commission strongly recommends that the study include an examination of information literacy deficiencies in Internet access, not just hardware, software, systems, and network deficiencies. We recommend that the legislation direct NCLIS to undertake this study, which clearly falls within our mission and capabilities. The Commission has a strong history of initiatives in information literacy, and we are currently working with the Department of State, the Department of Education, and UNESCO to prepare for a global conference on information literacy.

Section 215, Accessibility, Usability, and Preservation of Government Information

While the Commission is delighted to see a section in this bill devoted to accessibility, usability, and preservation of government information, we respectfully disagree that creating an Advisory Board on Government Information is the most effective way to deal with the myriad public information management challenges involved. The agencies creating the information systems must be directed to ensure that each system is simple, intuitive and self-instructing. In addition, agencies must ensure ready access to customer support by telephone or e-mail.

First, the Commission acknowledges the necessity for addressing the problem of incompatibility of agency bibliographic standards and thesauri. An interagency committee is an appropriate mechanism to identify specific incompatibilities and other factors that impede interoperability. However, a committee is not an effective mechanism to resolve the differences, nor is it an effective mechanism to ensure that agencies comply with standards. While the Board would be a practical mechanism to identify inconsistencies and suggest appropriate solutions, a central agency, responsible for government-wide cataloging and indexing standards and their implementation is essential to maintain the efficacy of such an initiative over time. In addition, the Commission believes that the public is best served if these bibliographic records are aggregated and preserved in a National Bibliography so that they can be searched effectively.

Second, despite use of the term "usability" in the title of this section, there is no substantive mention of how usability of government information is to be improved. Usability is extremely important because many citizens have never been trained in the skills necessary for information literacy. One of the key recommendations in the *Assessment* was that OMB, working through the Federal WebMasters Forum and the CIO Council, lead an effort to explore the design, development, and pilot testing of a comprehensive public information current awareness system to enable affirmative dissemination of public information. The Commission believes that such a mechanism depends on the Federal Government's ability to identify systematically what government information the public truly needs and wants, how such needs are currently met, and pinpoint gaps that should be filled.

Third, despite use of the term "preservation" in the title of this section, there is no substantive mention of how government information could and would be preserved. On the contrary, there seems to be confusion over two key terms: permanent public availability and preservation. The two concepts, while closely related, are distinct. The term "permanent public access" describes the condition whereby government information is retained permanently and is made available to the public. The term "preservation" refers to the function of periodically refreshing technology formats and mediums to guard against obsolescence and to ensure the integrity, authenticity and security of information over time.

Furthermore, the provisions for permanent public access do not acknowledge the statutory roles of NTIS and GPO as central information service agencies to ensure permanent public access to a wide variety of government information, nor the role of the National Archives and Records Administration (NARA) in the preservation (in an archival sense) of such information as it deems appropriate under the Federal Records Act. Agencies are more likely to comply with requirements for permanent public access and preservation if these requirements can be harmonized. In the *Assessment*, the Commission recommended the design and development of an integrated government information life cycle software product to manage different requirements, such as permanent public availability and preservation. Application of information life cycle management seems to us to be the best overall information resources management framework to accomplish this objective.

Fourth, this section calls for agency inventories of web site directories and sub-directories to identify "classes of information" available to the public. The requirement to create inventory records is in the provisions for the Government Information Locator Service (GILS) in the Paperwork Reduction Act and in OMB Circular A-130 and has never been enforced. It is unclear how the same or a similar provision in S.803 will motivate agency compliance or what guidance and assistance will be provided that could result in a useful product that can be maintained and kept current over time. To be useful, inventories must be at the level of the individual public information product or service, yet while this section does not preclude records of individual documents, it does not encourage or require such specificity.

In Conclusion

In its *Assessment*, the Commission made 36 recommendations, 16 of which were identified as strategic recommendations. The primary strategic recommendation is that public information should be formally recognized by the United States as a strategic national resource. Recognition of public information as a strategic national resource must result in diffusion of that knowledge by optimizing timely and permanent public availability of the information for its owners, the people of the United States.

A corollary recommendation is that the Congress and the President direct the inclusion of a standard provision in the enabling legislation for each agency incorporating public information dissemination as a primary agency responsibility, integral to its mission and that this requirement apply to all entities in all three branches of the federal government. While the Commission is reluctant to specify precise language for a standard clause, the provision in 7 *U.S.C.* 2201 that directs the Department of Agriculture (USDA) to "...diffuse among the people of the United States, useful information on subjects connected with Agriculture..." reflects the spirit of the Commission's recommendation.

The Commission urges the Committee to consider the incorporation of both of these recommendations into S.803. Although the belief that government information is a strategic national resource is implicit in many of the provisions of S.803, it should be an explicit statement in the findings and purposes of the Bill and in its legislative provisions.

A third strategic in the Assessment recommendation is that the Congress should authorize and fund a consolidated independent agency in the Executive Branch, which the Commission calls the Public Information Resources Administration (PIRA). This agency would assume relevant operational responsibilities of NTIS, GPO, GSA and other agencies for permanent public access to government information and be the lead agency for a National Bibliography and National Database. It would be a strong, operational agency focused on the management of public information as a strategic national resource.

In the Executive Summary for its *Assessment*, the Commission stated:

> Public ownership of information created by the federal government is an essential right. It not only allows individuals to fulfill their civic responsibilities, but also contributes to an overall improvement in their quality of life. Current information technology not only brings with it expanded opportunities for using government information but also a number of difficulties, including adequacy of finding tools, technological incompatibilities, and sometimes just the overwhelming amount of information.
>
> Government agencies are trying to use the World Wide Web to ensure availability of information, and emerging efforts in development of indexing tools and web portals offer some hope. However, not all needed information is available on the Internet nor do users of public information necessarily have the professional skills to use what is available in any format. Also, government information made

available electronically can disappear as quickly as it has appeared. No policy is in place for long term or permanent public access to web-based public information.

Electronic government as envisioned by S.803 encompasses delivery of both services and information to citizens electronically. This cannot be accomplished without information technology. However, information technology is not an end in itself. It is an essential tool in the creation, management, organization, access and dissemination, and preservation of government information, as well as in the delivery of services to citizens.

The Commission feels strongly that Government Information Resources, both the technology and the content, are inextricably interrelated and must be managed together to optimize both types of resources for effective government citizen access to government information and services. Historically, there has been a disproportionate emphasis on IT, because of the substantial financial resources that are invested and the fact that it is easier to address the hardware and software than it is to address information content. However, failure to manage both information content and the information technology through a coherent, balanced Information Resources Management Program cannot result in effective government or good service to citizens.

A useful analogy may be found in the molecular structure of water (H_2O). There are two hydrogen atoms and only one of oxygen. The oxygen atom is larger and heavier than the two hydrogen atoms together. Which element is more important? The answer is that both are essential to create water. If either one is removed, water no longer results. There is a symbiotic relationship between information content and the technology to store, process and disseminate it. They are inseparable if effective government and good service to citizens are to be obtained, just as hydrogen and oxygen are inseparable in the creation of water.

In summary, the Commission appreciates very much the opportunity to comment on this important legislative initiative, and commend Senator Lieberman and the co-sponsors of S.803 for taking the first step in establishing a strong legislative basis for the Federal Government's movement toward E-Government. Certainly such movement is inevitable, and it will benefit the American people. However, the Commission believes that provisions of the S.803 must be very carefully crafted to balance information technology management with information content management in order to achieve a complete Information Resources Management program for the Federal government and to ensure appropriate government information life cycle management. The technology alone will not, as if by magic, solve the content challenges. We urge the Committee to consider incorporation of additional provisions related to the information content or development of a parallel and complementary bill to ensure that both sides of this complex issue are adequately addressed. This is essential to optimize management of internal information and information technology resources and to ensure the maximum possible public access to this strategic national asset.

Attachment

The *Executive Summary* of the Commission report, *A Comprehensive Assessment of Public Information Dissemination,* is attached to this testimony for inclusion in the hearing record.

A COMPREHENSIVE ASSESSMENT OF PUBLIC INFORMATION DISSEMINATION

FINAL REPORT: EXECUTIVE SUMMARY

JANUARY 26, 2001

The Commission recommends that the United States Government formally recognize and affirm the concept that public information is a strategic national resource

NCLIS
U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW, Suite 820, Washington, DC 20005-3552

U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW, Suite 820, Washington, DC 20005-3552
Telephone: 202-606-9200; Fax: 202-606-9203; Web: www.nclis.gov

The National Commission on Libraries and Information Science is a permanent, independent agency of the federal government, established in 1970 with the enactment of Public Law 91-345. The Commission is charged with:

- advising the President and the Congress on the implementation of policy;
- conducting studies, surveys, and analyses of the library and informational needs of the nation;
- appraising the adequacies and deficiencies of current library and information resources and services; and
- developing overall plans for meeting national library and informational needs.

The Commission also advises federal, state, and local governments, and other public and private organizations, regarding library and information sciences, including consultations on relevant treaties, international agreements and implementing legislation, and it promotes research and development activities which will extend and improve the nation's library and information handling capability as essential links in the national and international networks.

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Executive Director

Judith C. Russell
Deputy Director

Assessment Co-coordinators:
F. Woody Horton
Sarah T. Kadec
NCLIS Consultants

EXECUTIVE SUMMARY

It was a simple announcement on a summer day. It appeared to be a straightforward proposal to solve a serious problem. Constrained by a statutory requirement for self-funding and facing a new paradigm in information dissemination, the National Technical Information Service (NTIS) was failing. As federal agencies distributed reports at no cost on the World Wide Web—reports that formerly NTIS had distributed—NTIS was unable to collect revenue sufficient to cover its costs of cataloging and maintaining its collection. The proposal put forth in August 1999 by the Department of Commerce (where NTIS is organizationally located) was to close NTIS and move its collections and functions to the Library of Congress.[1]

The National Commission on Libraries and Information Science (NCLIS) immediately recognized this proposal to be far more significant than it first appeared. Fundamental issues regarding how the government used, disseminated and valued its information resources were at stake. The Commission stepped forward and prepared a preliminary assessment of the proposed closure of NTIS, which it delivered to the President and Congress.[2] This report recommended a number of steps to keep NTIS operational, but it also stated that a much broader assessment of the underlying issues involved in public information dissemination throughout government was needed.

A number of Congressional leaders in both the House of Representatives and the Senate urged NCLIS to prepare such a report; Senator John McCain, Chair of the Senate Committee on Commerce, Science, and Transportation, and Senator Joseph Lieberman, Ranking Democrat on the Senate Committee on Governmental Affairs, both sent letters to the Commission formally requesting a review of reforms needed for the federal government's public information dissemination practices. This report is the response to those requests.

A. THE ROLE OF NCLIS

The National Commission on Libraries and Information Science is an independent agency in the Executive Branch, created by law (Public Law 91-345, 20 *U.S.C.* 1501 et seq.) in 1970. Its statute calls for it to "advise the President and the Congress on the implementation of national policy" pertaining to the library and information needs of the people of the United States.

Throughout its history, NCLIS has addressed government information issues. In 1998, at the request of the Government Printing Office (GPO), the Commission surveyed federal agencies to

[1] U.S. Department of Commerce, "Commerce Secretary William M. Daly Announces Intention to Close National Technical Information Service," Press Release, Washington, D.C.: Department of Commerce, August 12, 1999; http://204.193.246.62/public.nsf/docs/FFF05791D63331D1852567CB00693643; and U.S. Department of Commerce, "Providing the American People Information for the 21st Century: The Commerce Department Proposes to Close NTIS and Ensure That People Can Receive Technical Information for Free Over the Internet," Fact Sheet, Washington, D.C.: Department of Commerce, no date; http://204.193.246.62/public.nsf/docs/EA7BD28117EEF74D852567CB006B7D20.
2 U.S. National Commission on Libraries and Information Science, *Preliminary Assessment of the Proposed Closure of the National Technical Information Service (NTIS): A Report to the President and the Congress*, Washington, DC: U.S. Government Printing Office, March 16, 2000; http://www.nclis.gov/govt/ntis/presiden.pdf

understand how the formats, mediums and standards these agencies employed were significantly changing as they moved from an era in which most government information took the form of ink-on-paper to a time when electronic information technology is increasingly used.[3]

When NCLIS received the requests from Senators McCain and Lieberman to perform a comprehensive assessment of public information dissemination, it started a number of actions. A study plan outline was produced and published. Individuals were recruited to form four study panels addressing focused aspects of the issue (the NTIS business model; federal agency needs for central information services; public needs for government information, and; partnerships between the public and private sectors for public information dissemination); each panel submitted a report on its topic. A group of experts was assembled; many of these individuals prepared White Papers in their subject specialty and each reviewed various documents as the project progressed. A number of past reports dealing with government information were reviewed and many were made available to the panel members, experts and interested members of the public. A web site devoted to the project was created as part of the NCLIS web site and numerous drafts and documents were made available electronically through that means.[4] The Commission met to review the findings, conclusions and recommendations that would comprise the assessment report. A public meeting, announced beforehand in the *Federal Register*, provided a members of the public and interest groups the opportunity to ask questions and state concerns regarding the NCLIS effort. The Commission provided a draft copy of the report to the Office of Management and Budget (OMB) and OMB further distributed the draft to other agencies. Throughout this process, NCLIS received statements in support of some findings, conclusions and recommendations and others in opposition. The Commission benefited greatly from the many comments received throughout the project and incorporated many, but not all, of the suggestions received. Nevertheless, this report represents the opinions and recommendations of the Commission, not of the current or former Administration or any of the stakeholders who participated in its development.

B. FINDINGS AND CONCLUSIONS

Based on both its historical efforts and the extensive recent activities, the Commission confidently set forth a large number of findings and conclusions that describe the current state of government information. These observations are explained in detail in the full body of the report and are summarized below.

Public ownership of information created by the federal government is an essential right. It not only allows individuals to fulfill their civic responsibilities, but also contributes to an overall improvement in their quality of life. Current information technology not only brings with it expanded opportunities for using government information but also a number of difficulties, including adequacy of finding tools, technological incompatibilities, and sometimes just the overwhelming amount of information.

Government agencies are trying to use the World Wide Web to ensure availability of information, and emerging efforts in development of indexing tools and web portals offer some hope. However, not all needed information is available on the Internet nor do users of public

[3] Westat, Inc., *Report on the Assessment of Electronic Government Information Products*, prepared under a contract issued by the National Commission on Libraries and Information Science and commissioned by the Government Printing Office, March 1999; http://www.access.gpo.gov/su_docs/nclisassessment/report.html

4 The Assessment web page is http://www.nclis.gov/govt/assess/assess.html

information necessarily have the professional skills to use what is available in any format. Also, government information made available electronically can disappear as quickly as it has appeared. No policy is in place for long term or permanent public access to web-based public information.

Special populations, especially individuals with disabilities, but also those who, for whatever reason, find it difficult to use computers and computer networks, exist throughout the nation. Such populations clearly can benefit from information technology but special efforts need to be taken to guarantee the availability to them of appropriate information technology and government information content.

The federal government has a critical role in formulating and overseeing public information dissemination policy. Hundreds of laws establish the requirement and authority of agencies to disseminate public information, but there is little distinction made between "passive dissemination" and "proactive dissemination." Moreover, the authority of agencies differs widely in terms of how broadly they are permitted to disseminate information to the public. It is evident that there are costs involved in managing and disseminating public information resources, but the manner of paying these costs is inconsistent and, at times, invisible across government. There are existing central service agencies, such as GPO, NTIS and the National Archives and Records Administration (NARA), who, in partnership with individual agencies, play a crucial role in information dissemination. However, there is no effective enforcement mechanism to use when these partnerships fail.

There will always remain a strong need for central information service agencies, but these agencies need new business models that reflect the realities of the Internet and the World Wide Web. Overlap and competition among these agencies is unnecessary and wasteful. There are efforts to improve coordination—for example, through interagency committees—and these efforts should be continued and strengthened.

Everything that has been learned about problems and opportunities affecting *federal* government information is likely to apply to public information at the state and local government levels. Such information is just as important to the people as is federal government information. However, the inconsistencies and incompatibilities among programs at the different levels of government need to be eliminated.

The private sector plays a key role in further distributing public information and enhancing its value. This group consists of commercial firms as well as a host of libraries and not-for-profit organizations. Both the for-profit and the not-for-profit sectors need to strengthen their partnership arrangements with government.

The approach the United States takes with regard to public information is a source of great strength and the approach should be widely promoted to all nations around the world.

C. RECOMMENDATIONS

Based on the findings and conclusions, the Commission is setting forth thirty-six recommendations. These recommendations are stated more fully and discussed in the main body of the report. The list that follows is intentionally designed to be a shorthand reference and certainly does not capture the subtlety or complexity that the full recommendation contains.

Strategic Recommendations

1. Adopt the national goal that public information is a strategic resource.
2. Establish the Public Information Resources Administration (PIRA).
3. Include broad, explicit public information dissemination authority in all agencies' missions.
4. Implement an Information Dissemination Budget.
5. Enact "The Public Information Resources Reform Act of 2001."
6. Establish the Congressional Information Resources Office (CIRO).
7. Establish the Judicial Information Resources Office (JIRO).
8. Extend key provisions of the Paperwork Reduction Act to the Legislative and Judicial Branches.
9. Encourage state, local, and tribal governments to adopt comparable policies and programs for their public information resources.
10. Retain, temporarily, the National Technical Information Service (NTIS) in the Commerce Department.
11. Provide funding for the public good functions of NTIS and other comparable information service agencies.
12. Update the NTIS business model.
13. Partner with the private sector, both for–profit and not for-profit, to perform public information disseminations functions.
14. Remove barriers to public information for individuals with disabilities and for other special populations.
15. Coordinate the information dissemination activities among the Legislative, Judicial and Executive Branches.
16. Improve training of librarians and other information professionals to better assist users of public information.

Other Recommendations

17. Implement recommendations regarding NTIS in the Commerce Department.
18. Improve Congressional oversight of public information dissemination laws.
19. Review and harmonize all laws that deal with public information resources.
20. Strengthen cooperative efforts to promote public information sharing.
21. Improve "Government Information Life-Cycle Planning and Management."
22. Modernize current awareness systems for public information.
23. Make consistent federal identifiers for information across all agencies.
24. Harmonize information identifiers at all levels of government—federal, state, local and tribal.
25. Evaluate pre-electronic government information for digital conversion.
26. Develop guidelines regarding the availability of public information by branch and level of government.

27. Develop a comprehensive inventory and database of public information resources.
28. Specify the metadata by which agencies classify records prior to archival retention or disposal.
29. Partner broadly, in and outside government, to ensure permanent public availability of public information resources.
30. Identify the public's most critical unmet requirements for public information resources.
31. Identify the federal government's most critical requirement for technologies to manage public information resources.
32. Involve the Office of Science and Technology Policy in the effective management of scientific and technical information.
33. Monitor cooperation between PIRA and the National Archives and Records Administration.
34. Require that data elements set forth in the Government Paperwork Elimination Act be reported in XML, and review the impact of this requirement regularly.
35. Ensure the availability of a trained federal workforce with skills in Internet Age technologies.
36. Advance the recommendations of this Assessment report to other nations worldwide.

It should be emphasized that the foregoing recommendations are just that, recommendations. The Commission believes that implementation of these recommendations will vastly improve the condition of government information dissemination in the United States, but it also recognizes that others have different views. It is up to the President and Congress, as the recipients of this report, to determine whether and to what extent these recommendations should be implemented. The Commission stands ready to fulfill its statutory obligation to provide advice to the President and Congress in whatever way may be helpful.

A Comprehensive Assessment of Public Information Dissemination is published in 4 volumes.

Volume 1 is available in electronic form at http://www.nclis.gov/govt/assess/assess.vol1.pdf and in print. It contains the executive summary, the report and Appendices 1 through 10.

Volume 2 is available in electronic form at http://www.nclis.gov/govt/assess/assess.vol2.pdfand in print. It contains Appendices 11 and 12, the Legislative and Regulatory Proposals.

Volume 3 is available only in electronic form at http://www.nclis.gov/govt/assess/assess.vol3.pdf. It contains Appendices 13 through 34, the Supplementary Reference Materials.

Volume 4 is available only in electronic form at http://www.nclis.gov/govt/assess/assess.vol4.pdf It contains Appendix 35, Compilation of Recent Statutes Relating to Public Information Dissemination.

The Commission web page containing other documents related to *A Comprehensive Assessment of Public Information Dissemination* is at http://www.nclis.gov/govt/assess/assess.html This Executive Summary is at http://www.nclis.gov/govt/assess/assess.execsum.pdf

U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW, Suite 820, Washington, DC 20005-3552
Telephone: 202-606-9200, Fax: 202-606-9203; Web: www.nclis.gov

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