

**THE NATIONAL TECHNICAL INFORMATION
SERVICE**

HEARING

BEFORE THE

SUBCOMMITTEE ON SCIENCE, TECHNOLOGY, AND
SPACE

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

OCTOBER 21, 1999

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ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

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THE NATIONAL TECHNICAL INFORMATION SERVICE

THURSDAY, OCTOBER 21, 1999

U.S. SENATE,
SUBCOMMITTEE ON SCIENCE, TECHNOLOGY, AND SPACE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:35 p.m., in room SR-253, Russell Senate Office Building, Hon. Bill Frist, chairman of the subcommittee, presiding.

Staff members assigned to this hearing: Floyd DesChamps, Republican professional staff; Elizabeth Prostic, Republican staff assistant; Margaret Spring, Democratic senior counsel; and Jean Toal Eisen, Democratic professional staff.

OPENING STATEMENT OF HON. BILL FRIST, U.S. SENATOR FROM TENNESSEE

Senator FRIST. Good afternoon and welcome to the Science, Technology, and Space Subcommittee hearing on the National Technical Information Service.

Today's hearing is particularly important because it concerns the potential closure of one of the Federal Government's largest scientific clearinghouses in the country. We will now move directly to Congressman James Moran's testimony, and then I will make an opening statement. There are votes currently going on in the House, and out of respect for the Congressman, I would turn to him immediately and hear his statement. Welcome.

STATEMENT OF HON. JAMES P. MORAN, U.S. REPRESENTATIVE FROM VIRGINIA

Mr. MORAN. Thank you very much, Senator. You set a standard for courtesy. I sure hope that Senators get treated half as well as you are treating me. We do have a series of five votes, and it is very thoughtful of you to allow me to testify right away.

Senator, I am troubled by the Department of Commerce's proposal for substantive and for procedural reasons. Procedurally, it is clear that no stakeholders were consulted before Commerce unveiled its plan. The Library of Congress was not consulted. The Government Printing Office, the largest distributor of government information in the world, was not consulted. The community that relies on NTIS documents was not consulted before making this decision. The National Archives was not consulted. And, perhaps most importantly, at least from our perspective, the Congress was not consulted.

Failure to meet with these stakeholders ensured that the proposal would be substantively, and perhaps fatally, flawed. The substantive problems with this proposal are numerous. Nevertheless, they all stem from a single source. This proposal was drafted without a clear concept of the role of the government and its agencies in the archival, retention, retrieval, and dissemination of scientific and technical information.

A proposal to reorganize or reinvent NTIS without such an understanding will ensure that important scientific documents are not properly retained. This is going to cause distress within the communities which rely on scientific data produced by the Federal Government. We can expect a corresponding decrease in the quality of new research if access to old data is substantially diminished.

First, although it is clear that some change is necessary at NTIS, it is not clear that a complete overhaul is necessary. For fiscal year 2000, NTIS needs a modest appropriation to pay for public functions. It is certainly appropriate to debate whether NTIS should be entirely self-funded or whether taxpayers pay for the services that benefit the public as a whole.

Yet, rather than address this issue, the Department of Commerce asked appropriators to provide \$9 million to close NTIS, even though no statutory authority for doing so exists. The Department of Commerce testified before the House Science Committee, arguing that new technology now made much of NTIS obsolete. Furthermore, the Department asserted that in attempting to fully fund its operations, NTIS had to charge such high fees that customers would either be unwilling to make a purchase or they would look elsewhere.

As an example, Senator, the Department referenced a particular report which NTIS would sell for \$29, which could be found in the Library of Congress. Interestingly, the Department did not mention that the Library's photo duplication service would charge the same amount to copy the document. Clearly, the Library does not offer an alternative to sell documents at substantially better prices. Furthermore, the Library is not authorized to charge patrons for materials. Its photo duplication service only exists as a self-funded entity as a result of a private grant.

The Department of Commerce argued alternatively that agencies should post scientific and technical information on the Internet, thus permitting easy, ready access to all. Certainly agencies should post all the information possible on the Internet, but despite Bill Gates' best efforts, there is still not a computer in every home. And in fact, the single biggest group of NTIS customers are libraries. Libraries make this vital information available to those who are technologically savvy and to those who must rely on paper products and microfiche. Clearly, the Internet will not provide access to everyone.

But let us assume for a moment that complete overhaul is necessary, that NTIS is now somehow unsustainable or outdated. The decision we must then make is to determine what functions of NTIS must be retained and determine who should perform them. Scientific information will continue to be produced. It is obviously valuable to have a central location to obtain this information. Can you imagine searching through every single government agency to

see whether a particular study had ever been done? You need a central location.

One serious problem with the Department's proposal is its failure to adequately address the fugitive document problem. Fugitive documents are those documents which are not part of the depository library system and are not indexed with other government documents. It is virtually impossible to index or search for these documents unless they are part of a well-known collection, such as that housed by NTIS.

While NTIS and the Government Printing Office have often done battle about the fugitive documents housed by NTIS, NTIS holds a collection which is well known within the community which uses scientific and technical information, and employs a staff to aggressively search for important documents that are not within its collection. Transferring the NTIS collection without transferring the staff responsible for tracking down documents will only ensure that more scientific and technical documents will escape from the system and be useless for future reference.

I am troubled by the Department's proposal that the Library of Congress assume some of the NTIS functions, especially since the Library was not consulted before making that suggestion. The Library can keep and maintain any collection of information, but they need to be complicit in such a decisionmaking process.

If the primary concern in transferring NTIS was maintaining its collection, the Library of Congress would be a good fit. But this ignores the role that the GPO performs in collecting and disseminating information. Unlike the Library, the Government Printing Office seeks to retain and disseminate all government information to every State. The Library of Congress does not retain all information and does not disseminate it broadly.

Similarly, the Library of Congress may not be best suited to take advantage of economies of scale. I urge this committee to carefully consider these complexities in determining which agencies are best suited to take on any NTIS functions which are transferred.

So, in closing, Mr. Chairman, let me suggest that the best approach might be to step back, take a hard look at the role of the agencies responsible for archival, retention, retrieval, and dissemination of scientific and technical information. And only after we take that hard look, only then can we assess where the function performed by NTIS should be today and where they should be in the future.

Mr. Chairman, obviously I have problems with the decision that was made, largely because of the way in which it was made. But I think it is far more complex than the solution that has been offered us. And I greatly appreciate your taking the initiative and giving this issue the kind of focus it deserves.

And, again, thank you very much for your consideration, Senator.

Senator FRIST. Thank you, Mr. Moran. I appreciate you coming by. I appreciate your written and oral testimony. As we proceed forward, we will be taking this into full consideration.

Mr. MORAN. Thank you so much, Mr. Chairman.

Senator FRIST. I know you need to get back and vote. Thank you very much. I appreciate you coming.

Mr. MORAN. Thank you.

[The prepared statement of Senator Frist follows:]

PREPARED STATEMENT OF HON. BILL FRIST, U.S. SENATOR FROM TENNESSEE

Good afternoon and welcome to the Science, Technology, and Space Subcommittee hearing on the National Technical Information Service (NTIS). Today's hearing is particularly important because it concerns the potential closure of one of the federal government's largest scientific clearinghouses in the country. Given the fact that the federal government is spending approximately \$40 billion in civilian research and development per year, a level which I have actively supported doubling over the next decade. I am very concerned about whether or not we are adequately capturing the results of this significant public investment. To me, this is the central issue that we must address in any restructuring proposal.

The NTIS, created by Congress in 1950, was designed to archive and disseminated scientific and technical information products at no cost to the United States taxpayer. While the clearinghouse now boasts a distribution system of more than 3 million products a year, the cost to the public has been increasing steadily since 1987.

In the President's FY 2000 budget, the Administration requested \$2 million to keep NTIS operating. This is a direct result of declining NTIS revenues over the past five years. Between 1993 and 1998, NTIS revenues dropped by 18 percent while sales of publications dropped by 43 percent. Over this same period, the number of reports received by NTIS from other agencies declined by 34 percent. These dramatic figures illustrate the difficulty that the agency has had in not only maintaining its archives in the information age, but also ensuring that the agency did not incur debt. It is also important that we step back from the declining numbers and profits and think about the importance of having a federally funded clearinghouse. I just made reference to our current information age in which access to the Internet has changed our daily lives. In this new economy, where instant information is a premium, we have the ability to peruse government documents directly on an agency's Web page. But we must also have a guarantee that the documents will be available next year, or 10 years from now. Our federal government currently spends approximately \$70 billion in research and development each year. Without a clearinghouse like NTIS, we won't have the ability to effectively archive and disseminate the results of our R&D to the public.

The Department of Commerce is here today to discuss its recent proposal to close NTIS and to transfer its collection and dissemination responsibilities to the Library of Congress. Unfortunately, the Library was unable to testify today, but will submit a written statement for the record. We are fortunate to have the Government Printing Office, the National Commission on Libraries and Sciences, and the National Federation of Federal Employees to offer insight into the realities of the closure and the Department of Commerce's proposal.

Senator FRIST. Representative Tom Davis will be by at some point. What we will do, in the interest of time, is proceed with our second panel, the Hon. Robert Mallett. You can come forward, I will continue with my opening statement, and then we will turn to the second panel.

Given the fact that the Federal Government is spending approximately \$40 billion in civilian research and development per year, a level which I have actively supported doubling over the next decade, I am very concerned about whether or not we are adequately capturing the results of this significant public investment. To me, this is the central issue to address in any restructuring proposal.

The National Technical Information Service, created by Congress in 1950, was designed to archive and disseminate scientific and technical information products at no cost to the United States taxpayer. While the clearinghouse now boasts a distribution system of more than 3 million products a year, the cost to the public has been increasing steadily since 1987.

In the President's fiscal year 2000 budget, the Administration requested \$2 million to keep NTIS operating. This is a direct result of declining NTIS revenues over the past 5 years. Between 1993 and 1998, NTIS revenues dropped by 18 percent, while sales of

publications dropped by 43 percent. Over this same period, the number of reports received by NTIS from other agencies declined by 34 percent. These dramatic figures illustrate the difficulty that the agency has had in maintaining its archives in this so-called information age, as well as ensuring that the agency did not incur debt.

It is also important that we step back from the declining numbers and profits to think about the importance of having a federally funded clearinghouse. I made reference to the information age in which access to the Internet has changed all of our lives. In this economy, where instant information is a premium, we have the ability to peruse government documents directly from an agency's web page.

But we must also have a guarantee that the documents will be available next year, or 5 years from now, or 10 years from now. The Federal Government currently spends approximately \$70 billion in research and development each year. Without a clearinghouse like NTIS, we will not have the ability to effectively archive and disseminate the results of our R&D to the public.

The Department of Commerce is here today to discuss its recent proposal to close NTIS, and to transfer its collection and dissemination responsibilities to the Library of Congress. Unfortunately, the LOC was unable to testify today, but they have submitted a written statement for the record. We are fortunate to have the Government Printing Office, the National Commission on Libraries and Sciences, and the National Federation of Federal Employees to offer insight into the realities of the closure and the Department of Commerce's proposal.

We will proceed with the second panel: The Hon. Robert Mallett, Deputy Secretary of Commerce, U.S. Department of Commerce. Welcome, Mr. Secretary.

**STATEMENT OF HON. ROBERT MALLETT, DEPUTY
SECRETARY, U.S. DEPARTMENT OF COMMERCE**

Mr. MALLETT. Thank you, Mr. Chairman. And thank you for inviting the Department to testify today on behalf of our proposed plan for the National Technical Information Service.

Every day, Mr. Chairman, we see new examples of how the Internet is changing the way Americans work, live and play. Now, Congressman Moran referred to a report that the Department of Commerce released in January, called "The Emerging Digital Economy 2," showing how dramatic these changes have been. And I can tell you from some experience that we are seeing those changes firsthand at the Department.

And he is correct in citing that if taxpayers visit the Department's Web site for that report, they can go to our electronic commerce Web page and download that report for free. He is also correct that if taxpayers go to the Department's NTIS Web page and order the report, it has a list price of \$27. Now, if it were my money, I know what I would do. And that, in a nutshell, sums up the problem facing NTIS.

For years, NTIS and the Department have struggled with how to ensure public access to government information at a reasonable cost, while keeping NTIS self-sufficient. Looking to the future, the

Department believes that the economics of the Internet will dramatically affect NTIS's ability to remain solvent. It already has.

The growth of the Internet has rendered outmoded the business model NTIS uses to carry out its core mission. Therefore, we undertook a serious and comprehensive review of our potential options to address this question. And we considered each option along three dimensions.

First, what impact would it have on the dissemination of science and technology information to the American people? Second, is it fiscally responsible? Third, what impact would it have on the employees of NTIS?

This spring, at the Secretary's and my request, the Department set up an internal working group, with the charge of developing long-term options for NTIS. And after careful consideration, we decided that the most appropriate course of action would be to propose closing NTIS at the end of fiscal year 2000. This was not a decision taken lightly, and it was not intended to harm anyone. But, looking down the road, we could see nothing but deterioration at NTIS, given the realities of the marketplace.

The proposal would transfer NTIS's collection to the Library of Congress, offer a buyout to NTIS employees eligible for retirement or early retirement, and take steps to help move remaining NTIS employees into other positions. And to ensure that the public continues to have the best possible access to government information at the lowest possible cost, we want to take steps to ensure that the government agencies provide technical and business reports to the public via the Internet.

Now, once the decision was reached, we made our intent public and we provided the outline of our plan. But before we submitted the draft legislation to the Congress, we wanted something in hand to begin our discussions with interested parties. And the draft legislation we have provided the committee reflects a number of comments from the stakeholders at NTIS. We propose several actions in the draft legislation.

First, we transfer the collection to the Library of Congress. If the Congress approves this, NTIS's paper, microfiche and digital collection and its bibliographic data base, nearly 3 million titles in all, would be transferred to the Library of Congress in order to maintain them and ensure they remain available to the public for years to come.

In addition, copies of current and future scientific, technical and engineering information would be electronically transmitted to the Library of Congress, where they would be electronically stored. The bill also provides that the chief information officer of each executive agency that produces scientific, technical and engineering information will report annually to the Congress on that agency's compliance with the relevant provisions. We believe that this policy mechanism will help to ensure that agencies provide new documents to the Library—a problem that we have had in the past at NTIS.

In addition, so that the American taxpayer has the best possible access to Federal Government information, the Department is working to ensure that government agencies post their technical and business reports on the Internet for at least 3 years. And that period of time is consistent with the Paperwork Reduction Act.

The American people will be able to use search engines of government Web sites that already exist to find the documents they want. There are more powerful search engines, electronic clearing-houses, and they continue to be developed so that the American people can more easily find the reports that they want.

Finally, Senator, as I noted, the Secretary and I are determined to minimize any adverse impact on NTIS employees resulting from implementation of this proposal. And I want to emphasize that if Congress approves the Department's proposal, we will take every available action to help NTIS employees move into other jobs within the government. We have already provided that kind of assistance to 46 NTIS employees. They moved to other positions within the Department of Commerce.

The Secretary also sent a memorandum to every bureau head within the Department, instructing them to work with us to be able to place employees. And we also have contacted the Office of Personnel Management, to offer any assistance that they can. We intend to offer buyouts for those employees who are eligible to retire, as well as those eligible for early retirement. Our record at moving employees has been strong, and we believe that our commitment is clear.

That is the highlight of the legislation, Senator. We have prepared a longer statement for the record. I am prepared to answer your questions.

[The prepared statement of Mr. Mallett follows:]

PREPARED STATEMENT OF HON. ROBERT MALLET, DEPUTY SECRETARY,
U.S. DEPARTMENT OF COMMERCE

Mr. Chairman, members of the Subcommittee, thank you for inviting me to testify today on our proposed plan for the National Technical Information Service.

Every day we see new examples of how the Internet is changing the way Americans work, live, and play. This past June, the Department of Commerce released a report—The Emerging Digital Economy II—showing how dramatic these changes have been. Indeed, growth in information technologies has accounted for more than one-third of our economic expansion since 1995, and the information technologies industry has helped cut the overall inflation rate by an average of 0.7 percentage points.

And I can tell you from experience that we are seeing those changes firsthand at the Department of Commerce. For example, if taxpayers visit the Department's web site, they can go to our electronic commerce web page and download this report for free. Alternatively, taxpayers can go to the Department's National Technical Information Service (NTIS) web page and order the report with a list price of \$27. If it were my money, I know what I would do. This, in a nutshell, sums up the problem facing NTIS.

For years, NTIS and the Department have struggled with how to ensure public access to government information at a reasonable cost, while keeping NTIS self-sufficient. Looking to the future, the Department believes that the economics of the Internet will dramatically affect NTIS' ability to remain solvent. The growth of the Internet has rendered outmoded the business model NTIS uses to carry out its core mission. The long-term strategic issue we were forced to deal with is: Does it make sense for NTIS to continue to perform its core functions of collecting, organizing, storing, and disseminating government scientific, technical, and engineering (STE) information as the organization is currently constituted, or can those functions be more effectively performed elsewhere in the government? Therefore, we undertook a serious and comprehensive review of our potential options to address this question.

We considered each option along three dimensions: first, what impact would it have on the dissemination of science and technology information to the American people; second, is it consistent with good fiscal management; and third, what impact would it have on the employees of NTIS?

After careful consideration, we decided the most appropriate course of action would be to propose closing NTIS at the end of fiscal year 2000, transfer its collection to the Library of Congress, offer a buy-out to NTIS employees eligible for retirement and early retirement, and take steps to help move remaining NTIS employees into other positions.

To ensure that the public continues to have the best possible access to government information at the lowest possible cost, we want to take steps to ensure that Government agencies provide technical and business reports to the public via the Internet.

Let me briefly explain to the Committee why NTIS' business model is no longer viable in today's environment. NTIS was created in 1950 to operate as a clearinghouse within the U.S. Government for the collection and dissemination of technical, scientific, and engineering information of all kinds. However, the rapid growth of the Internet has fundamentally changed the way NTIS' customers acquire and use information.

As the Department's Inspector General (IG) noted in March 1999, "Federal agencies are increasingly bypassing NTIS as a distribution channel, instead offering their publications directly to the public over the Internet." It is not surprising then that—largely because of these changes in the marketplace—the number of titles received from government agencies declined 34% over this period, and more significantly, sales of publications from the traditional NTIS clearinghouse declined from almost 2.3 million units in Fiscal Year 1993 to 1.3 million units in Fiscal Year 1998. As a result over the past several years, NTIS' clearinghouse lost millions of dollars.

It is important to note that, to offset losses, NTIS has significantly changed its business mix. Over half of its revenues are now derived from services provided to other government agencies, up from one-third only five years ago. NTIS has also ventured into other business products; one example is producing and selling a CD-ROM of IRS tax forms. Revenues from NTIS' other business lines in FY 1999 have offset Clearinghouse losses and has allowed the organization to show a profit. But, as the Department's IG stated earlier this year, "We are also concerned that in order to replace lost sales, NTIS is seeking business opportunities on the perimeter of its statutory mission, where it risks competing against private businesses." Others, including Members of Congress, have raised similar concerns.

To address NTIS' financial situation in the short term and to offset declining revenues from the Clearinghouse, the Department has asked Congress to provide a \$2 million appropriation in FY 2000. However, neither the House nor the Senate appropriations bills provide this funding.

I believe that the Department's draft bill—"The Access to Government Scientific, Technical, and Engineering Information Act of 1999"—is a fiscally responsible long-term approach that will provide the American public with continued access to government STE information and will minimize the impact on NTIS' employees.

We propose the following two actions in the draft legislation: first, we transfer NTIS' collection to the Library of Congress. If approved by Congress, NTIS' paper, microfiche, and digital collection, and its bibliographic database—nearly three million titles in all—would be transferred to the Library of Congress in order to maintain them and ensure they remain available to the public. The Department is currently working with the Library, the National Archives, and the Government Printing Office and other interested parties—so that the public will continue to have the best possible access to government information. Of course, the Department will comply with all of its responsibilities under the Federal Records Act and other relevant statutes.

In addition, copies of current and future Government STE information would be electronically transmitted to the Library of Congress, where they would be electronically stored. The draft bill provides for the Chief Information Officer (CIO) of each Executive agency that produces scientific, technical, and engineering information to report annually to Congress on that CIO's respective agency's compliance with the relevant provisions on an annual basis. We believe that this policy mechanism will help ensure that agencies provide new documents to the Library.

Second, so that the American taxpayer has the best possible access to Federal government information, the Department is working to ensure that Government agencies post their technical and business reports on the Internet for at least three years—consistent with the Paperwork Reduction Act.

The American people will be able to use search engines of Government Web sites that already exist to find the documents they want. And more powerful search engines—electronic clearinghouses—continue to be developed within the Government so that the American people can more easily find the reports they want.

Finally, as I noted, Secretary Daley and I are determined to minimize any adverse impact on NTIS' employees resulting from implementation of our proposal. I want

to emphasize that if Congress approves the Department's proposal, we will take every available action to help NTIS' employees move into other jobs within the Government.

The Secretary sent a memorandum to every bureau head within the Department instructing them to work with our Human Resources office to place employees in jobs consistent with their abilities, and when necessary, restructure open positions in order to place as many of the NTIS staff as possible. The Department also intends to offer buy-outs for those NTIS employees who are eligible to retire as well as those eligible for early retirement. Our record at moving employees has been strong: as part of our effort to keep NTIS from becoming deficient in FY 1999, we successfully moved 46 NTIS employees to other bureaus within the Department in just two months.

In the event that Congress approves closing NTIS and we cannot place every employee in another job within the Department, the Secretary has asked Office of Personnel Management (OPM) Director Janice Lachance for her assistance in placing and retraining NTIS employees for other jobs within the Government. She has assured the Secretary that OPM will do what it can, and indeed, we have already worked with OPM staff to draft provisions of the bill to help make the transition for our NTIS employees easier.

Thank you again for this opportunity to represent the Department's position. I would be pleased to respond to any questions.

Senator FRIST. Thank you, Mr. Secretary. Your entire written statement will be made part of the record.

You mentioned the process used by the Department in reaching its decision. Could you elaborate on the stakeholders who were consulted during the process?

Mr. MALLETT. During the process of reaching the decision, it was very much an internal working group, working with the financial and fiscal history of NTIS. I personally met with NTIS's advisory board to talk about the problem. But we did not at that time have on the table that we would be closing NTIS. It was a pretty drab picture we were painting of NTIS's financial position, but that conversation reflected that NTIS was having a clear financial problem.

I will have to say *mea culpa* to the charge that we did not meet with a great many outside stakeholders prior to announcing our intentions. However, what we decided to do, that we would not submit any legislation to Congress until we have that opportunity. So the legislation that we have developed has been modified as a result of our consultation with the stakeholders. We have had that opportunity now. We have talked to a number of users of the service at NTIS. We have ongoing conversations internally about this. And our legislation is in draft form because we continue to have that dialog.

The Library of Congress has since submitted a number of questions to us regarding the transfer of NTIS. And we have forwarded our answers to those questions to the Library of Congress. And I think we did that 2 days ago, if I am not mistaken. Because I wanted the opportunity to read them before they left the Department, and I had that opportunity 2 days ago.

Senator FRIST. The participation of the stakeholders obviously is an important aspect of this whole process and we appreciate your statement in that regard. Looking through the written statement in today's hearing from the Employees Union, it mentions that the employees are not permitted to be direct participants in the review and analysis process. So I would ask that you comment on this disparity, recognizing that the Department of Commerce's report on NTIS stated that the Department is sensitive to the needs and the concerns of the NTIS work force.

Mr. MALLETT. Senator, it would not be a true statement to say that we did not consult with employees of NTIS. We certainly did consult with the management at NTIS, there is no question about that, over a long period of time. In fact, the senior management at NTIS has been—we had a retirement and somebody was brought in. We brought in a new financial officer. We have had a lot of conversations with people at NTIS.

It would be, I think, a fair criticism to say that the Department was not deeply involved in consultations with the union about this. We did have meetings with the union. We did do some notifications about sort of the direction we were moving when we thought we were going to defer those. We did have conversations. But I think this is a criticism I am willing to take—that it would have been better for the Department to have a full-blown consultative process.

I do not think the positions would be different today had we done so, but I think it is a fair comment to say that more consultation is better than less. We now have that opportunity. We had that opportunity in the House, where we learned a number of things from the people with whom I shared the panel, from the Government Printing Office and a member of the advisory board for NTIS. I think, in our meetings, where we invited stakeholders from NTIS to comment to the Department, they met in my conference room, if I am not mistaken, and we had a pretty thorough session about that.

I think some of our senior management from the Secretary's office went to NTIS yesterday to sort of meet with the employees. All of this I think is productive and helpful in the posture we are in now. Because we can have a legitimate conversation about the proposal that is on the table. I think that is where we are now, and we are trying to sort of make up for misdeeds of the past.

Senator FRIST. The Government Printing Office has indicated their interest in receiving these functions. Would this transfer to GPO generate any concerns for the Department of Commerce?

Mr. MALLETT. Well, not particularly. I will note that GPO's position, which I was heartened when I read the testimony last night, is an evolved position. When we were at the House, I do not think they were quite as strong about it, and now they have made a statement. We strongly considered GPO. And our concern all along is that the collection remain intact. And the reason we did not choose GPO was that they did not have a centralized collection of scientific documents, unlike the Library of Congress, which has over 4 million scientific titles now, volumes. And our concern was that the collection remain intact.

I certainly think that GPO is an appropriate place for this to go, as well. That certainly depends on the wisdom of the Congress and, I think, further discussions with the stakeholders. But we staked out a position with the Library of Congress because, one, it has a history of making lots of documents available to the public. It has a 4-million-volume scientific collection now. And we believe that its public good functions could be carried out there.

It is not to say, and we did not mean to imply or suggest in any way, that GPO was not competent to perform similar functions.

Senator FRIST. Could you update the committee on the financial position of the NTIS through the end of fiscal year 1999?

Mr. MALLETT. Well, at the end of fiscal year 1999, NTIS had a surplus of \$650,000. And we were all very heartened to hear that. We were quite ecstatic about it. Because, during the course of the year, when we were nursing NTIS along and trying to figure out the actions we needed to take to keep it from being anti-deficient, at one time it even was projecting a \$600,000 deficiency. But, by the grace of God and a lot of, I think, internal management changes and cuts, program cuts, NTIS ended up with a \$650,000 surplus.

Its archival functions, however, its clearinghouse function, did remain in the red. But, overall, the rosy picture at the end of the year is one that we welcome. We were really pleased to hear it. When they brought me the news, to say that NTIS had a \$650,000 surplus, all I could was, hallelujah, praise the Lord. Because it was touch and go there much of the time.

Senator FRIST. So it would have no impact on your recommendation, your proposal to close the agency?

Mr. MALLETT. I think it is a factor to consider, but I do not think it would be dispositive, Senator. Looking back over the history of NTIS over the last few years, every year in the clearinghouse function there has been a deficit. As we look at the technology trend, as I think we as responsible stewards, we would have to do, the market is a little different than what it was when NTIS's mission was first derived.

I think there is a better way to do it than the current business model. And we believe we propose that in the legislation. We certainly welcome and are open to suggestions from others. But I think the marketplace has changed so dramatically that we simply have to recognize that this problem is not going to get better. It may worsen. So it would not change our view that we are proceeding along the right track.

Senator FRIST. You mentioned in your statement that NTIS is seeking business opportunities on the perimeter of its statutory mission, where it risks competing with private business. Could you elaborate on these activities that may be on the perimeter, or outside of the NTIS mission?

Mr. MALLETT. There are a number of functions that NTIS performs, its production functions, its brokerage function services that they perform that either the private sector could perform or other entities could perform within the government even. One of its, I think, lucrative governmental contracts is with the IRS, in providing forms to taxpayers. That is a wholly legitimate function that is a service to the taxpayers. But there is no uniqueness in NTIS being a provider of the service.

In fact, we are aware of some private sector entities—I do not know the name of them, and we will be glad to provide that for the record—that have suggested that they could perform a number of these functions. The very unfortunate thing is when you propose an agency closing, you are sort of put in the position of being against these employees and not wanting to see the government perform its legitimate functions.

That is not where we are. That is not our point of view. We recognize fully the legitimacy of the function, part of the function, that NTIS serves. It is a necessary and essential government function.

It can be performed elsewhere, some of the other, more private sector-like functions, performed by NTIS. Its Federal function could be performed by another government agency, for example.

So I would be glad to provide a more detailed statement for the record for you, Senator, outlining some of those private functions, and the amount of revenue that they have generated to help NTIS remain solvent. And we will be glad to do that.

Senator FRIST. That would be helpful.

[Note: The above material was not available at the time this hearing was sent to press.]

Senator FRIST. As you know, the \$2 million budget request for NTIS was not included in the Commerce, Justice, State appropriations bill that passed the Senate last night. What is the impact to NTIS of not receiving the \$2 million budget request?

Mr. MALLETT. Obviously this is going to make this year a much tougher year. But I am optimistic, Senator, that the budget process is not quite over yet. We have, I think, a few more discussions to have. And we are hopeful that we would be able to come to some understanding with the Congress, the Administration hopes it will be able to come to some understanding with the Congress, about how to handle this problem with NTIS.

Because what we see, if we are unable to begin the closure of NTIS and transferring its collection, what we see is another year of touch and go finances for the agency. We are hoping that this will become an issue that the Administration and Congress can come to agreement about before the budget process is over.

Senator FRIST. Also in your testimony you refer to the Department's Inspector General report, indicating that the number of titles received has fallen by 34 percent. Was this observed decline due to a reduction in the number of government reports produced, or neglect on the agency's part to report these documents to NTIS? And if it is the latter, what is the Administration doing to make sure that the agencies are providing documents to NTIS as required?

Mr. MALLETT. Our experience has been it is the latter. That agencies have simply stopped forwarding, at the appropriate volume, their reports to NTIS. As a result of that, NTIS has had to participate in a Web harvesting exercise, assigning employees to sort of go comb through Web sites of other agencies to find those scientific, technical and engineering documents. That is an unfortunate practice.

The mandate, the statutory mandate, is that each agency is to provide those documents to NTIS. It worked reasonably well in the beginning as I understand it. But as we have grown as a government and our scientific, technical and engineering expertise has grown and we produce more information, agencies have stopped forwarding that information to NTIS, and they have begun to use their own agency technology.

They simply post it on their Web site, believing that they are meeting the obligation because they are having it accessible to the public. That is a reasonable point of view, but it does not give us the opportunity to make certain that we have it in our permanent collection. And that is why NTIS has had to do very serious Web harvesting.

Our legislation takes a different tact. And this is part of our consultation with the stakeholders of NTIS. And they may want to propose something even more stringent than what we have. But what we have done is we have asked, because of the Klinger-Cohen Act, requiring that each agency have a chief information officer, that one of the responsibilities of the chief information officer is to report to the Congress on that agency's practice of complying with its responsibility to provide those documents to a central place so that we can have them in perpetuity.

Senator FRIST. Mr. Secretary, the National Commission on Libraries and Information Science sent me a letter about a month ago, in late September, arguing that the Administration and Congress lack an overall policy to guide electronic publishing. Did you consider the underlying principles of electronic dissemination in your decisionmaking process to close NTIS?

Mr. MALLETT. I had a chance to read the testimony of that organization last night. And I actually, to be quite blunt about it, I thought they had a very good point. And I think it is necessary for the government to come forward with some standards about this. And we are hoping that if we are able to move in the direction we propose that we get some report language or something, instructing the Administration, in consultation with the Librarian of Congress and any other interested parties, to develop standards for electronic formats, so that we could provide materials to the Congress.

It is a problem. And I think that it is a very well-taken suggestion by the Commission on Libraries and Information Science's that the government has not done well and that we need to come up with better standards to ensure that this information is in readable format, accessible and easy to retrieve, and understandable by users. So I think that is a very helpful suggestion.

Senator FRIST. In the Department's proposal, it was mentioned that the evaluation would be based upon three objectives. First, the need for responsible fiscal management. Second, the need to provide continual public access. Third, the need to minimize the impact on NTIS employees. The evaluation section of the report did make a comparison of the various options for fiscal management. Can you compare the options against the other two objectives?

Mr. MALLETT. Yes. We considered three options when we were trying to decide what to do about this hemorrhage, fiscal hemorrhage, at NTIS. One, we could maintain the NTIS at the Department of Commerce and request annual appropriations every year, to digitize—at least request appropriations to digitize the last 10 years of the collection, and then an annual appropriation to fund the clearinghouse public good function of NTIS, and older documents could be transferred to another organization. When we looked at that cost over a period of about 5 years, from 2001 to 2004, we concluded that the cumulative cost would be about \$29 million.

The second option we looked at was that we would maintain current operations at NTIS while seeking an annual appropriation to supplement the declining revenues, while we would continue to do cuts at NTIS. The cumulative costs under that proposal we figured would be about \$31 million.

And then we looked at the option of trying to get a one-time appropriation to close NTIS, transfer its public good functions elsewhere, try to offer buyouts to employees eligible to retire, those who can take early retirement. And our projection of that cost would be about \$24 million. And those were the variance in cost estimates.

Senator FRIST. We are spending about \$70 billion per year on research and development. And the Department's mission to encourage technology transfer between the Federal laboratories and the private sector is an important one. Do you believe that the plays an important role in meeting the Department's objectives for technology transfer? If so, how do you plan on replacing that?

Mr. MALLETT. Well, obviously, the Department of Commerce is one of the elite scientific agencies of the government. We have the National Institute of Standards and Technology as part of the Department of Commerce, the National Telecommunications and Information Administration, the National Oceanic and Atmospheric Administration, the Patent and Trademark Office. We have a number of elite scientific agencies which produce lots of technical engineering information.

Regrettably, the Department itself, when it produces reports, and some of these other entities, we have not done a very good job of providing that information to NTIS, a sister agency of other agencies within the Department. What we believe at root is that NTIS, in its current form, is not the only way to get the job done of preserving scientific and technical information.

And right now, given its business model, it is not even the best way to do it. And that is why we are here today. No particular problems with the dedication of the employees and their hard work. It is a changing marketplace. And we are trying to recognize that. And I think we are a little late in doing so, to be quite frank about it.

Senator FRIST. So there is currently no role that NTIS plays in that overall technical transfer that needs to be played by some other agency?

Mr. MALLETT. None of which I am aware that cannot be satisfied under the proposal that we have submitted.

Senator FRIST. Your cost estimate, looking here for NTIS closure, does not include the cost that that would be incurred by other Federal agencies to maintain or create, if nonexistent, an infrastructure that can make available and store all the published technical information electronically. Can you comment on that cost or give the Subcommittee some sort of feel for what that cost might be and to what degree those infrastructures are already in existence?

Mr. MALLETT. You know, I have been perplexed by that question. In preparing for this hearing, I was trying to fully understand how there would be additional costs imposed on other agencies. One of the problems we already have seen is that other agencies are posting their reports on their own Web sites. They already do it. They are doing it today. And we want to encourage that. We want to encourage them to make reports available to the public.

So there is no particular cost in sort of making that document available to the Library of Congress or the Government Printing Office or whatever agency has the responsibility for maintaining

these documents. And there is a very full infrastructure in place at most Federal agencies with the use of the Internet. Most of them have Web pages. It is already being done. And in fact, NTIS has spent a considerable amount of money doing Web harvesting of these sites.

So maybe it is something I do not understand, and I would grant that I may not fully understand. But what we know is, one of the reasons we have had a decline in documents coming to NTIS is because the agencies have been bypassing NTIS, going straight to the public. So the mechanism for providing this information already in place, the infrastructure is already in place. What we simply want to do is begin to make someone accountable inside the agency to make that information available to the permanent depository.

Senator FRIST. Finally, and then we will move on to the next panel, do you see legislative changes that we have got to make to the Act of the Library of Congress to enable it to take on the additional function as suggested by your plan of closure of NTIS?

Mr. MALLETT. We believe that enactment of the legislation we have proposed, with any modifications the Congress deemed appropriate, would be as much legislative authority as is required. Now, having said that, I have not consulted with the lawyers about that. I am not an expert on that. And I would be glad to ask our general counsel to examine whether or not any other legislation would be necessary besides this draft legislation.

Senator FRIST. That would be helpful for the Subcommittee.

That completes my questions. We will keep the record open for submission of questions by my colleagues. And we appreciate, Mr. Secretary, your coming by and making your very honest presentation and discussion and helping us to understand why this is necessary.

Mr. MALLETT. Thank you, Mr. Chairman. And thank you for your interest.

Senator FRIST. Thank you.

At this juncture I will ask the third panel to come forward. Congressman Davis will be here shortly. What I would like to do is have the Hon. Michael F. DiMario, Public Printer, Government Printing Office; the Hon. Joan Challinor, Commissioner, United States National Commission on Libraries and Information Science; and Mr. Bill Clark, Executive Committee Member, National Federation of Federal Employees, all come forward.

We will have each of you, in that order, present your testimony. I do ask your forbearance when Mr. Davis comes. We will turn to him, since they are in a series of votes, at that juncture. I do want whoever is presenting when he arrives in to go ahead and complete your presentation.

Again, welcome to all three of you. I appreciate your preparation, your testimony, and I thank you in advance for helping us understand this proposal and the appropriate response by the U.S. Congress to the proposal that we have just heard.

Mr. DiMario.

**STATEMENT OF MICHAEL F. DIMARIO, PUBLIC PRINTER,
U.S. GOVERNMENT PRINTING OFFICE**

Mr. DIMARIO. Thank you. Mr. Chairman and members of the Subcommittee, thank you for inviting me to participate in this review of the Department of Commerce's plan to terminate the National Technical Information Service, or NTIS. In the interest of time, I will briefly summarize my prepared remarks, which have been submitted for the record.

As Public Printer, I am chief executive officer of the Government Printing Office. As my statement details, the GPO has a long-established responsibility for disseminating Federal Government information via sales, depository library distribution, and other programs. Since 1994, we have been electronically disseminating information from all three branches of the Federal Government over the Internet, through our GPO Access service. The public currently uses the service to download more than 20 million documents per month.

Because of our role in high-volume government information dissemination to the public, I am here today to ask that Congress consider the transfer of the NTIS collection and associated functions to GPO if NTIS is truly going to be closed down.

In my view, such a transfer would consolidate the government's primary information dissemination programs under a single agency, simplifying public access; provide for public access for the first time to the NTIS collection for STI through Federal depository libraries located in virtually every congressional district nationwide, thereby eliminating a major source of fugitive documents; end duplication and waste in the operation of dual government publication sales programs and potentially bring economies of scale to bear on the sale of Federal STI that may lower NTIS's document prices; revert the NTIS' performance of printing and publishing services for other Federal agencies to GPO where they statutorily belong; and otherwise ensure the continued availability of Federal STI to the public.

GPO has a strong interest in making the NTIS collection available to depository libraries. Most of the Federal Government publications in the collection have never been made available to depository libraries by their issuing agencies. As such, the NTIS collection currently constitutes the single largest known aggregation of fugitive documents. These documents should be available to the public through the depository library program, but are not.

We think the NTIS collection should be made available to depository libraries not only as a matter of law, but as a matter of good public policy. Inclusion of the NTIS collection in our depository library program would simplify and unify public access to government information through a single source.

We have had the opportunity to review a draft Commerce Department bill that would transfer the NTIS collection to the Library of Congress. In our view, the draft legislation has several drawbacks, including provisions that would seriously handicap the operation of the FDLP regardless of the final disposition of NTIS. Our comments are detailed in the attachment to my prepared statement.

I would also point out that the Library of Congress is a Federal depository library and would receive any documents from the NTIS collection that it requires if the collection were transferred to GPO. We have an excellent working relationship with the Library, and we would certainly make any arrangements that are necessary to provide them with everything they need.

Mr. Chairman, the similarities in function between GPO and NTIS, the prospect of providing free public access through depository libraries to the vast body of NTIS literature for the first time, the opportunity to consolidate and simplify public access to government information, and the potential for valuable synergies of technologies and staff expertise that could benefit public access to government information—all of these are reasons, in my view, for you to consider the potential realignment of NTIS functions with GPO.

Mr. Chairman and members of the Subcommittee, I thank you again for inviting me to participate in this hearing, and I would be pleased to answer any questions that you might have.

[The prepared statement of Mr. DiMario follows:]

PREPARED STATEMENT OF MICHAEL F. DiMARIO, PUBLIC PRINTER, U.S. GOVERNMENT PRINTING OFFICE

Mr. Chairman and Members of the Subcommittee, thank you for inviting me to participate in this review of the Department of Commerce's plan to terminate the National Technical Information Service (NTIS). Because of the similarities in information dissemination functions between GPO and NTIS, I am here today to ask that Congress consider the transfer of NTIS's collection of scientific and technical information (STI) and associated functions to GPO. In my view, such a transfer would:

- consolidate the Government's primary information dissemination programs under a single agency, simplifying public access;
- provide for free public access for the first time to the NTIS collection of STI through Federal depository libraries located in virtually every congressional district nationwide;
- end duplication and waste in the operation of dual Government publication sales programs which have frequently sold the same items, often at different prices, and potentially bring economies of scale to bear on the sale of Federal STI that may lower NTIS's high document prices;
- revert the NTIS's performance of printing and publishing services for other Federal agencies to GPO where they statutorily belong; and
- otherwise ensure the continued availability of Federal STI to the public.

GOVERNMENT PRINTING OFFICE

Mission. As Public Printer, I am chief executive officer of the GPO. GPO's operations are authorized by Title 44 of the U.S. Code. Our mission for more than a century has been to print, bind, and distribute the publications of the Congress and Federal departments and agencies. We have performed that mission using electronic printing and information technologies for nearly a generation. In 1993, our mission was amended by Congress to include statutory responsibility to provide online access to the Congressional Record, the Federal Register, and other Government publications. Today, our online service, *GPO Access* (at www.access.gpo.gov/su-docs) is one of the largest and most heavily used Federal web sites, with more than 20 million documents retrieved by the public every month.

Staffing. GPO currently has a workforce of approximately 3,300 skilled individuals in printing, procurement, electronic information technologies, documents dissemination, administrative, and related specialties. Most of our workforce is located in Washington, DC. We also have 20 procurement offices and 24 GPO bookstores nationwide.

Finances. Unlike most Federal agencies, GPO operates on a businesslike revolving fund. We are reimbursed by our customers for the cost of work performed. In FY 1998, GPO's revenues totaled \$723 million, yielding net income of \$1.4 million.

Only 15 percent of our annual revenues are derived from appropriated funds. These appropriations are provided through the Legislative Branch Appropriations Act, and include the Congressional Printing and Binding Appropriation, which covers the cost of work for Congress (\$74.5 million in FY 1999), and the Salaries and Expenses Appropriation of the Superintendent of Documents (\$29.3 million), which primarily pays for the cost of disseminating Government information to Federal depository libraries.

For FY 1998 (as in previous years) we received an “unqualified”—or clean—opinion on our finances in an audit by KPMG Peat Marwick, working under contract with the General Accounting Office.

GPO'S INFORMATION DISSEMINATION PROGRAMS

GPO operates the Federal Government's largest and longest-running information dissemination programs under the authority of the Superintendent of Documents—an official appointed by the Public Printer.

Sales Program. The larger of our dissemination programs is our documents sales program, which is authorized by chapter 17 of Title 44. The program offers about 12,000 titles for sale. Major bestsellers include IRS tax publications, health publications, publications about the Government such as the *U.S. Government Manual*, and a wide variety of other information produced by Congress and Federal agencies. With few exceptions, the titles are obtained by the program from the work that GPO produces or procures, and include publications in both print and electronic (CD-ROM) formats. Publication prices are established according to a statutory formula. Publications can be ordered via phone, fax, the Internet, or through our bookstores.

The sales program operates entirely from sales revenues and does not receive any appropriated funds. In FY 1998, the program sold approximately 19.1 million copies, generating revenues of \$60.1 million.

Depository Library Program. Another major dissemination program is the Federal depository library program (FDLP), which is authorized by chapter 19 of Title 44. With origins that date to 1813, the FDLP in reality is America's first “freedom of information” program.

The FDLP distributes Government publications to Federal depositories in approximately 1,350 public, academic, law, and Federal agency libraries nationwide. There is a depository library in nearly every congressional district. The libraries are designated as depositories by Senators and Representatives as well as by law. GPO makes available to the libraries copies of all Government publications that are not purely of an administrative nature, cooperatively sponsored, or classified for reasons of national security.

Publications sent to the libraries are funded by the Salaries and Expenses Appropriation of the Superintendent of Documents if they are produced by or through GPO (agencies must pay the cost of producing the publications if they are produced elsewhere than GPO, and GPO pays for the distribution costs).

In return for receiving the publications, the libraries make them available to the public without charge and provide necessary services, including storing the publications, assisting the public in locating information, and related services. Some estimates put the library community's share of the program at approximately \$10.00 for every \$1.00 spent by the Salaries and Expenses Appropriation. Depository collections are used by tens of thousands of students, researchers, businesspersons, academicians, and others every week. The majority of the depository libraries are selective depositories, which tailor their Government publications accessions to local needs, choosing from among 7,000 organizational and series categories. Fifty-three libraries, or roughly one per state (depending on size and resources, some States have no regional libraries while others have more than one), are regional depository libraries and receive every publication distributed by the program. They are required to retain the publications indefinitely, providing permanent public access to these resources. Regional libraries also provide inter-library loan and related services to other depository libraries in their regions.

In FY 1998, GPO distributed 14.4 million copies of more than 40,000 titles to depository libraries. Since 1994, when **GPO Access** began operations, the FDLP has been moving to an increasingly electronic basis. We estimate that approximately 47 percent of all titles that are currently available to the libraries are in electronic format.

Other Dissemination Programs. Under other provisions of Title 44, we catalog and index Government publications, an important ancillary function that helps the public locate information products and services; provide reimbursable distribution services for Federal agencies; distribute publications to recipients designated by law;

and distribute U.S. Government publications to foreign governments which agree to send copies of their official publications to the Library of Congress.

GPO ACCESS

Our long-standing information dissemination programs are supplemented by **GPO Access**, which is authorized by chapter 41 of Title 44, enacted by Congress as P.L. 103-40. **GPO Access** is one of the few Government web sites established by law and one of the longest running. It is virtually the only Government web site that provides easy, one-stop access to information from all three branches of the Federal Government.

GPO Access is available without charge to all users. Originally, we were authorized by P.L. 103-40 to provide free online access only to depository libraries and to charge reasonable fees to all other users. However, the expense of administering an online subscription system, the advent of the World Wide Web, and strong public expectations for free online access to tax-payer funded Government information led us to abandon efforts to collect fees. Today, **GPO Access** is funded principally through the Salaries and Expenses Appropriation of the Superintendent of Documents (the cost of this service is a fraction of what was originally projected in the committee report on P.L. 103-40, due to technology changes and improvements since its inception.)

GPO Access makes more than 100,000 individual titles available electronically from its own servers, and provides links to an additional 60,000 titles on other Federal web sites. Since the system began operation in 1994, the public has retrieved more than 400 million documents from GPO Access. Monthly document retrievals today average more than 20 million.

NTIS

We have reviewed a copy of the Department of Commerce's draft legislation, dated September 30, 1999, which would eliminate the NTIS and transfer its collection to the Library of Congress. In our view, the draft has several drawbacks, including provisions that would seriously handicap the operation of the FDLP regardless of the final disposition of NTIS. I have attached our comments on this draft legislation to my statement. The following are my general views on NTIS, which are similar to those I presented to the House Technology Subcommittee on September 14, 1999.

Continued Viability of NTIS Collection. I think the NTIS collection has significant value to the public. (I refer to the assemblage of titles as a "collection" and not an "archive" because, like a library collection, it has ongoing use.) Input we have seen from the library community and the Federal scientific and technical agencies takes the same position. The NTIS collection represents a single point of public sales access to this information.

While increasingly the collection includes documents in electronic format, its paper-format documents are still used. There still appears to be a number of sales of older titles. For persons without access to computers, or for those for whom downloading a lengthy technical report is burdensome, on-demand reproduction of these materials appears to provide a cost-effective method of dissemination.

Is there a future for this central collection given the increase in web postings of STI? I would say there is. The increase in web postings is a situation that everyone in the Government information community—disseminators and users alike—is facing. We are confronting it in the FDLP. An increasing amount of the information made available to depository libraries is in electronic format.

We have been discussing measures with the library community about how best—in this electronic era—to ensure that depository libraries are provided with access to all of the information that should be in the FDLP, whatever the format. Regardless of whether this discussion results in a requirement that agencies must notify GPO whenever a document that is eligible for inclusion in the FDLP is published on the web, or increased investment in an information-harvesting capability for the FDLP, it is clear that new approaches need to be devised for maintaining accessions for any collection in a web environment. Currently, both GPO and NTIS are proactively harvesting the web, seeking electronic publications on agency web sites that would be appropriate to their collections.

There are other reasons that a central collection of STI continues to be viable and necessary in a web-based environment. We are finding—and the library and user communities are finding—that with the increase in web postings there is a growing need to provide assistance to Government information users to locate what they want. The burgeoning use of the Internet increases the need for locator and pathway services, and for the management of Internet-based documents as a collection.

We have adopted an electronic collection plan for the management of information products in the FDLP. The public needs the same kind of management and services for the STI collection that currently resides at NTIS. The public should not have to experience confusion and frustration in finding Government information on the web. Since 1813, the Government has utilized libraries to provide the public with assistance in finding Government information. The same concept of assistance should be applied to web-based documents. That assistance is most cost-effectively provided through a centrally-managed collection of information.

In addition, the public needs the assurance that STI made available over the web will continue to be made available on a permanent basis. In the web environment, documents are put up and taken down by Federal agencies virtually at random. Without a policy of permanent access, there is no assurance that a document seen on the web by the public today will be available next week. A centralized collection, perhaps utilizing partnership agreements with other institutions (as the FDLP does with other libraries), provides a practical and efficient mechanism for ensuring ongoing availability.

The presence of the web does not argue against the continued utility of a central collection of STI. Instead, it means there is a growing need for centrally-managed services to collect, organize, provide search assistance, and make this collection available on a permanent basis to the public.

Provision of Access to Depository Libraries. GPO has a strong interest in making the NTIS collection available to depository libraries.

Most of the Federal Government publications in the NTIS collection have never been made available to depository libraries by their issuing agencies. NTIS considers the documents in their program to be "cooperative publications," which must be sold to be self-sustaining. They therefore do not assume FDLP responsibility since "cooperative publications" are exempt from depository distribution under current law. With respect to NTIS, this exemption has been upheld by the General Accounting Office.

The NTIS collection currently constitutes the single largest known aggregation of "fugitive documents," so called by the library community because they represent information that should be available to the public through the FDLP but is not.

NTIS has taken the position that it cannot distribute the publications to depositories because that would negatively impact on sales. We do not subscribe to that view. All of the titles we make available to the public through our sales program are also provided to the FDLP. We think the NTIS collection should be made available to depository libraries as a matter of good public policy. In fact, access to the bibliographic database describing the publications in the NTIS collection, as well as the ability to examine the STI publications in an FDLP library, should stimulate rather than limit sales of NTIS documents. Over the years, we have tried to negotiate FDLP access to the NTIS collection. Recently, we began a pilot project with NTIS to provide FDLP access to electronic image files of NTIS publications. The project is currently limited to 20 depository libraries, and as of mid-August there were about 42,400 titles in the program. However, we have been forced to accept, as a condition of the pilot, that there will be no reuse or redissemination of the image files outside the libraries that access them, presumably to protect sales of these documents. There are no limitations on reuse or redissemination of any public domain information included in the FDLP. We would like to see expansion of this project to all depository libraries and the inclusion of all public domain information in the NTIS collection in the FDLP without restrictions on reuse or redissemination.

Inclusion of the NTIS collection in the FDLP would also be a major step in simplifying and unifying public access to Government information through a single source. There is already substantial confusion among the public about where to find Government information, about differences in policies on for-free and for-fee access, and other issues. Aiding the public in finding Government information should be a major objective to be achieved in any plan for the future of NTIS and its activities.

I want to make it clear, however, that there would be an appropriations impact associated with making the NTIS collection available to depository libraries. As noted above, the FDLP is funded by the annual Salaries and Expenses Appropriation of the Superintendent of Documents. An increase in the amount of information products made available through the FDLP would increase the appropriation requirement, although in the absence of specific data it is not currently possible to project by how much. In the current year, the appropriation is for \$29.3 million. About \$25 million of this is for the FDLP (\$3.2 million is for cataloging and indexing, while the remainder is for statutory and international exchange distribution).

The amount of increase in the appropriation would depend on how the NTIS collection is made available to the libraries. Depending on the final plan approved for the disposition of NTIS, there may also be an impact on our statutory limitation

on full-time equivalent (FTE) employment. GPO operates under this limitation which is established annually in our appropriations legislation.

Sales of Government Information. On a philosophical basis, I think it is reasonable to provide for the Government sale of information products to those who want them and are willing to pay for them, as long as the Government ensures there is equitable, no-fee public access to the information through a mechanism such as the FDLP. Also, the price of the information products should be based only on the marginal cost of reproduction and distribution. This is the basis on which GPO's sales program operates. Objections to NTIS's sales have been raised because there is no other opportunity for access to the collection, and because there is a perception that its prices are too high. Making the NTIS collection available to the public through the FDLP would remove the first of these objections.

There is a potential opportunity for affecting the price of NTIS's products by consolidation with GPO's sales program, although we don't have sufficient data about NTIS's sales program to make a determination at this time. However, consolidation would certainly simplify access to Government information sales products by providing the public with a unified sales interface. It would unify pricing structures for products that both NTIS and GPO sell. It is conceivable that GPO's much larger sales program could provide economies of scale in the sale of STI products that might lower prices, but that would have to be verified by looking at the data.

A program consolidation would also end the wasteful competition between GPO's and NTIS's sales programs that has occurred in recent years. In providing duplicative sales outlets to the relatively well-defined market for Government information products, GPO and NTIS have simply split revenues for products they both sell. In my view, the competition has not expanded public access to sales products appreciably, nor has it lowered sales prices. Instead, it has jeopardized the continued viability of each program.

Like NTIS, GPO's sales program currently is sustaining operating losses, in part due to the impact of electronics, and in part due to the removal of several best-selling titles from the program by their publishing agencies and their subsequent availability through NTIS. Although we can cover temporary losses through retained earnings, it seems to me that a major step in a long-term solution for the continued health of Government publications sales programs would lie in eliminating this duplication of effort.

Printing Operations. NTIS offers priming and reproduction services to Federal agencies. The information we have seen suggests that the value of these services may be as much as \$1 million annually. I do not have an objection to the provision of printing services by agencies for their own quick turnaround internal administrative purposes. However, Title 44 clearly provides for printing related to Government publications (including forms) must be performed by or through GPO in order to control costs and ensure the public availability of Government information. More than 70 percent of all GPO printing is actually performed through private sector contractors. I hope that any realignment of NTIS activities will return their performance of printing and reproduction services for other Federal agencies to GPO.

Other Comments. The similarities in function between GPO and NTIS, the fact that both are experienced in operating on revolving funds, the potential for valuable synergies of technologies and staff expertise that could benefit public access to Government information--all of these are reasons for a realignment of NTIS functions with GPO.

This is not the first time a potential consolidation has been discussed. It was the subject of negotiations between GPO and the Commerce Department in the early 1980's and an agreement was very nearly concluded at that time. Several years later, when the Commerce Department attempted to privatize the information dissemination functions of NTIS but found no takers, GPO offered to give NTIS a home.

Certainly, more in-depth study of this matter is needed. However, I am concerned that the time for such study may be limited. If, as the Commerce Department plans, the projected closure date for NTIS is the beginning of FY 2001, and if GPO is to take on any NTIS functions, we would need to begin planning now. Our budget submission for FY 2001 will be due before the end of this calendar year. Also, the longer a study lasts, and the longer the uncertainty remains about the disposition of NTIS, the greater the negative impact is likely to be on the talented personnel of NTIS, who are its greatest resource. In order for NTIS to operate successfully wherever it is finally placed, they will be absolutely essential.

Mr. Chairman and Members of the Subcommittee, I thank you again for inviting me to participate in this hearing, and I would be pleased to answer any questions you might have.

Senator FRIST. Thank you, Mr. DiMario. I appreciate your superb testimony. I want to turn now to Senator Robb, then we will proceed back to the panel.

**STATEMENT OF HON. CHARLES S. ROBB, U.S. SENATOR
FROM VIRGINIA**

Senator ROBB. Thank you, Mr. Chairman. I thank you for holding this particular hearing. Testimony on my behalf has already been submitted. I had a bill that I was testifying on in front of the Judiciary Committee at this same time, and I did not think I would be able to get over here. I will stand by my written testimony. I am very pleased that you are holding the hearing.

I regret, frankly, that we did not have a hearing before the announcement was made that a very valuable institution and about 260 fine employees would be placed in a position of great uncertainty before we could have this full public hearing. So I commend you and thank you for the hearing. I thank you for giving us an opportunity to be heard on some of these issues. And I will, as I say, stick to the written statement that I have already submitted.

Again, I thank you. And I thank our witnesses.

[The prepared statement of Senator Robb follows:]

PREPARED STATEMENT OF HON. CHARLES S. ROBB, U.S. SENATOR
FROM VIRGINIA

I'm pleased to offer my statement before the Science, Technology and Space Subcommittee today and thank Chairman Frist and the Committee for allowing this discussion on such an important topic. The final outcome of this subject is a critical one for the scientific, research, librarian and other communities who value the services National Technical Information Service (NTIS) provides and also for the over 260 dedicated employees that work for NTIS.

NTIS serves a crucial need as a federal clearinghouse to collect and disseminate scientific, technical and engineering information, most of which has been funded in whole or in part by the federal government. But recently, questions about financial health of NTIS has resulted in a hasty decision to close NTIS before all the facts have been considered. This hearing gives us the opportunity to fully assesses NTIS' mission and how well that mission has been fulfilled.

I believe the current plans for NTIS' closure are premature. As I understand, the NTIS would close, shift its functions to the Library of Congress and somehow ensure that all federal agencies publish their technical and business reports on the Internet without fully examining if the Library of Congress is the best place to transfer NTIS' archives and databases and exactly how such a move would transpire.

While I appreciate the Secretary's efforts to inform me and others of the closure, I remain concerned that the Department of Commerce announced—rather than consulted with—the employees, about the urgent need to close. The Department didn't even consult with the Library of Congress, who would have the considerable responsibility to execute the core mission functions of NTIS.

Only when it is shown that NTIS cannot fulfill its core mission is it appropriate to discuss alternatives to replicate what NTIS has done. And those plans should be undertaken in a methodical and thoughtful way. As it stands now, the announcement of NTIS' closure could harm those individuals and organizations who depend on NTIS' services and products, and most certainly has caused anxiety among the fine employees working at NTIS.

Finally, I appreciate the opportunity to make my statement on this matter and I'm heartened that there will now be an opportunity to better examine the Department of Commerce's plans. I'd again like to thank the Chairman and the committee for holding this hearing today. I hope this will be the first step the Committee takes to evaluate the situation now facing NTIS and answer these very important questions before committing to only one plan of action.

Senator FRIST. Thank you very much. I appreciate your written statement. A number of people have submitted written statements,

which are very useful as we continue this discussion. Thank you very much.

Dr. Challinor.

STATEMENT OF JOAN CHALLINOR, PH.D., MEMBER, U.S. NATIONAL COMMISSION ON LIBRARIES AND INFORMATION SCIENCE

Dr. CHALLINOR. Good afternoon, Mr. Chairman and members of the subcommittee. My name is Joan Challinor, and it is my privilege to be a Commissioner for the National Commission on Libraries and Information Science. The commission's first concern is the library and information needs of our Nation. And the second is translating those needs into policy recommendations to the Congress and the President. That is exactly the responsibility Congress assigned the Commission at its creation in 1971.

I am grateful for the opportunity to discuss with you the issue of closing the National Technical Information Service. We have submitted written testimony, and I request that it be included in the record of this hearing.

Senator FRIST. Without objection.

Dr. CHALLINOR. I will address some of the points in the written testimony in a moment, but, first, I would like to share some personal thoughts on the unusually weighty issues facing Congress as it deals with the Department of Commerce's proposal to close NTIS.

I am a historian. And for 45 years I have been married to a scientist. This combination of disciplines gives me a unique perspective on some of the issues involved in the NTIS proposal. I understand the relationship between science and communication and the value of prior research. Isaac Newton credited his success, in part, to the work of his predecessors. "If I have seen further," he wrote to a colleague, "it is by standing on the shoulders of giants."

I understand the need to communicate prior research to future scientists, and that this communication must occur over decades, perhaps centuries. I was shocked to see in the draft legislation the requirement that agencies maintain access to their scientific, technical or engineering information for not less than 3 years.

In our written testimony, we make three major points: First, the Commission, as part of its broad mandate, has long been concerned with issues affecting government information programs. Most recently, we concluded a survey of government agency practices as information dissemination moves from a mostly ink on paper world to a system of electronic distribution. (This study was undertaken at the request of the Government Printing Office and was funded with the approval of Congress' Joint Committee on Printing. A copy of our report, "Assessment of Government Information Products," was provided to the subcommittee.) We discovered an across-the-board lack of government information policy to guide electronic publishing. We saw that there was no uniform understanding of the concept of permanent public access to government information. And we noticed a clear lack of coordination of publishing initiatives at all levels, even within agencies. At the same time—and this is the good news—we saw agencies making significant strides in

using modern information technologies to expand broadly the quantity and quality of information made available to our citizens.

Our second point is that the issues faced by the proposed organizational changes for NTIS closely correlate with the issues discovered in our recent survey. Accordingly, Congress should recognize that it will be making decisions that are far more consequential than a simple government reorganization that shifts boxes on an organization chart. We face an opportunity to write anew the basic policy for creation, use, storage, distribution, and long-term disposition of one of the most valuable resources, perhaps the most important, in our government's possession—information. We urge Congress to address these issues in a thoughtful and deliberate manner, even if that means a slower pace than the Commerce Department might wish.

It would be well for Congress to keep in mind the problem of unintended consequences while it decides the next steps for NTIS.

Indeed, the requirement that Congress imposed on NTIS, that it be self-funding, led to the unintended consequences of expanded entrepreneurial activities in the hope that revenue from these new activities would cover the cost of the original basic functions. While nobody has a crystal ball, it nevertheless remains possible to conceptualize a range of consequences for each policy proposal, and thus take steps to minimize unintended consequences.

Our third point is to offer the assistance of NCLIS. When the House of Representatives held a hearing on the closing of NTIS, a number of witnesses proposed that Congress order a formal study of the issues before taking action affecting the future of NTIS. We respectfully suggest that NCLIS is the appropriate mechanism for undertaking this study. In fact, our statutory charter clearly envisions this role. Indeed, it was because of this role and the independent point of view that we can provide that the GPO selected us to perform our study. In 3 to 6 months, NCLIS could review the historical record of NTIS, invite comment from a broad range of affected constituencies and bring together a panel of experts to develop a cohesive, consensual approach to the proposal. NCLIS could then provide Congress with the policy advice needed to take wise action.

Even before the 13 Colonies became the United States, our science commanded the attention of remarkable citizens. Benjamin Franklin, as Postmaster for Philadelphia, sent journals and scientific information free of charge to other scientists because he knew that only by the widespread dissemination of information could flourish.

This subcommittee and Congress itself are now being asked to make decisions that will also have an effect on whether science flourishes in this country. Today's hearing is evidence of the seriousness with which you address this issue. I thank you for allowing NCLIS to be part of today's hearing, and I look forward to the Commission's continued involvement with you on this issue. I would be glad to respond to any questions from members of the subcommittee, and I thank you.

[The prepared statement of Dr. Challinor follows:]

PREPARED STATEMENT OF JOAN CHALLINOR, PH.D., MEMBER, U.S. NATIONAL
COMMISSION ON LIBRARIES AND INFORMATION SCIENCE

Mister Chairperson and Members of the Subcommittee, thank you for inviting the National Commission on Libraries and Information Science to participate in this review of the Department of Commerce' plan to close the National Technical Information Service (NTIS). I am Joan Challinor, a Member of the National Commission and I appear here today at the request of our Chairperson, Jeanne Hurley Simon, who would be here herself but for the fact she is undergoing treatment for cancer in her home in Illinois.

NCLIS

NCLIS is an independent agency created by a far-sighted Congress in 1970 when it passed PL 91-345. The Commission is comprised of Presidential appointees who meet four or five times a year for the specific purpose of developing advice for the President and the Congress on matters pertaining to library and information needs of the nation. Therefore, it is appropriate for us to provide testimony, and offer further assistance if the Congress wishes, on the NTIS proposal, a matter that we believe is of critical importance to the information needs of the people of the United States.

REFORMS NEEDED IN PUBLIC INFORMATION DISSEMINATION

The entire question of government information dissemination needs a thorough-going discussion. On September 23, 1999, we wrote to the Chair of this Subcommittee that the Department of Commerce' proposal to close NTIS provides a very timely opportunity to consider ways to strengthen the overall policy, as well as the organizational and legal machinery for delivery of Federal information to the public. Greater understanding of the entire question of government information must precede discussion on the future of NTIS. The Commission is very concerned that the short-term measures that must be taken to transfer authorities, functions, and resources of NTIS by the end of Fiscal Year 2000 *not* cause the Congress to defer the more substantive considerations relating to the need for basic reforms in government information dissemination.

NCLIS has been heavily involved since its establishment nearly thirty years ago in examining Federal information dissemination policies, programs and projects. Included in the material we recently sent to this subcommittee was a copy of the final report of our most recent study "Assessment of Electronic Government Information Products." This study is an in-depth investigation, undertaken by a contractor (Westat, Inc.) under our supervision, of the plans and practices of Federal agencies to migrate ink-on-paper and microform Government information products to electronic formats and mediums.

We worked directly with the Government Printing Office (GPO) on this two-year study completed on March 30, 1999. The study is a direct outgrowth of Congressional concerns over the impact of electronic publishing on the ability of citizens to obtain access to Government information, particularly through the Federal Depository Library Program.

The heart of the study was a nine-month survey which enjoyed the active support and participation of all three branches of government. Twenty-four different Federal entities participated, including the Supreme Court, several committees of the Congress, one regulatory commission, and 19 executive branch agencies (including most of the cabinet departments). In addition to this broad and diverse participation, an impressive 74% of the survey forms (242 out of 328 sent to the agencies) were returned completed, which is a highly unusual rate of return for what was a very complex questionnaire with over 100 questions.

Among the key findings of the survey was the observation that there is an overall lack of government information policy to guide electronic publishing and dissemination, permanent public access to Federal information holdings, and other information policies as they relate to agency missions. Also, there is a lack of overall coordination of these initiatives at the governmental, branch, and even at the agency level. The study found that responsibility for electronic publishing within agencies is decentralized, diffuse and unclear. Some agencies either could not identify or had difficulty identifying the individual within their own agency who was responsible for a specific electronic product.

CORRELATION OF NCLIS STUDY TO NTIS CLOSURE

It is fair to ask "What do the findings of the aforementioned NCLIS study have to do with the planned closure of NTIS?" We believe there are at least four connections.

First, the public good represented by the NTIS collections—which are owned by the people of the United States—must remain accessible to them irrespective of where those collections are organizationally housed within the Federal structure. The Department of Commerce has made it very clear that it does not believe it should continue to house and manage these kind of data and document holdings, even if a way could be found to make the program break even. The question is, "Where is the appropriate location—is it the Library of Congress, the Government Printing Office, some combination of the two, or another as yet unidentified organization?"

Second, the nation's 1350 federal depository libraries which, under law, are supposed to be the "first line of defense" in providing government information to citizens, are "not in the loop." These institutions need to be assured that agency information is systematically, routinely, and regularly identified, cataloged and made available to them quickly after it is published, and that information is not discontinued from an agency web site without warning.

Senators John Warner and Wendell Ford of the Senate Committee on Rules and Administration, during the 105th Congress, wrote in their letter directing the NCLIS study on electronic information products, "the Federal Depository Library Program served, and continues to serve the American public by insuring localized access to federal government information. The mission continues to be as important today to the fundamental success of our democracy as it was when that program was first created. The program's original mandate, to assist Americans regardless of economic, educational, or geographic considerations, is one that must not be lost as we strategically and thoughtfully use the tools of the electronic age to enhance that mandate."

The NTIS closure will certainly exacerbate the problems being faced by users of the federal depository libraries, as well as users of public and private libraries across the country who are already worrying, waiting to find out who the new Federal provider(s) of scientific, technical, and engineering information will be.

Third, Federal agency chief information officers (CIOs) do not regard public information dissemination as a high priority. They are, understandably, far more consumed in the day-to-day challenges of dealing with the Y2K problem, and replacing rapidly obsolescing information handling hardware and software with state-of-the-art versions. They are coping with the very difficult challenge of trying to ensure that their information technology expenditures are paying off in terms of their primary agency missions—an area for which they are regularly reviewed by their own inspectors general, the White House, the Congress, and the General Accounting Office. Even though the Office of Management and Budget (OMB) strongly supported the NCLIS study, it is not surprising that front line information managers give a lower priority to information dissemination and long-term availability.

Last but by no means least, federal information management policies are a patchwork quilt of disconnected concerns that have not been harmonized into a unified Federal information policy fabric. Here we are talking about matters of privacy, copyright, security, authentication, encryption, permanent public access, permanent records retention, the use of metadata tools such as the Government Information Locator System (GILS), and many other areas. NCLIS found in its survey that agency personnel were unaware of many of the policies; they were bewildered and confused on how, if at all, the concepts and requirements they do know about fit together in an overall information life cycle context as required by the Paperwork Reduction Reauthorization Act of 1995 and other legislation. In short, while there are individual Federal agency CIOs in each agency, there is no CIO of CIOs at the Executive Office of the President level who is charged with overall Federal information policy and program planning, coordination, management, and control.

WHAT DOES NCLIS PROPOSE?

We believe that the matter of transferring the NTIS holdings out of the Department of Commerce should *not* be addressed by the Congress and the President in an ad hoc manner, disembodied from the overarching consideration of strengthening overall Federal information management policy in the areas of public information dissemination and electronic publishing. We applaud the gigantic strides being made by the Government in migrating ink-on-paper and microform holdings to electronic formats and mediums, especially to agency web sites, but we are very concerned that in the absence of strong leadership and guidance, there is a real risk

that public information dissemination will continue to fragment. Its cost-effectiveness and efficiency will erode along with that fragmentation and compartmentalization. The public is now confronted with a daunting array of Federal information indexes, indexing systems, gateways, cataloging schemes, software protocols, hardware platforms, and URL addresses that defy understanding except by the most sophisticated computer and information literate experts. The ordinary citizens, including even some librarians on the firing line, don't have a chance!

NCLIS proposes to be given an opportunity to make a three to six month assessment of overall Federal information dissemination policies, programs, authorities, responsibilities, functions, and other considerations, and how the proposed NTIS closing fits into this framework. We would then make a series of specific recommendations to the President and the Congress on how to simplify, streamline and harmonize this critically important area as we move further into the Internet era. Such an assessment could be done in a time frame that would still permit the Department of Commerce to meet its timetable with respect to the transfer of NTIS.

Thank you Mr. Chairman for affording our Commission this opportunity to share our views, and we would welcome the opportunity to discuss our findings and recommendations in more detail with you at your convenience.

Senator FRIST. Thank you, Dr. Challinor.

We will turn to Representative Tom Davis. I think it is important, for the record to mention the fact that about a year ago he was the fastest United States Congressman running in the Marine Corps Marathon. And I know, in about 3 days, he is going to beat that time.

Mr. Davis.
[Laughter.]

**STATEMENT OF HON. THOMAS M. DAVIS, III,
U.S. REPRESENTATIVE FROM VIRGINIA**

Mr. DAVIS. Thank you very much. But we ought to mention that you were the second fastest.

[Laughter.]

Mr. DAVIS. I would ask unanimous consent my entire statement be put in the record, and also an article from Federal Computer—two articles—they are written by the same person. One was written August 30th, where the gut reaction was: NTIS, a relic that led Feds into cyberspace and called for its dissolution, and then, after examination, says: No compelling yet to close NTIS. So someone independently has looked at that and reversed their position.

Senator FRIST. Without objection, both will be made a part of the record.

Mr. DAVIS. Thank you.

Let me just note a few things. NTIS was created by an act of Congress in 1950. They have been the Federal repository for all science and technical information since that time, and they have amassed a collection of over 3 million pieces. NTIS is threatened by an innovation they helped to foster, the Internet. We have to work together to develop a reorganization that considers the important public functions that the NTIS performs. We must also consider what financial burdens the government should bear and what can be continued to be supported by the NTIS user community.

Today we are reviewing the proposal brought forward by the Department of Commerce. I am pleased so many of my House and Senate colleagues have included me in the process of working on NTIS's future. As the Member of Congress representing many of these employees at NTIS, I look forward to working with my colleagues to develop a solution to the problems that we face at NTIS.

But I am puzzled that the Commerce Department refused to include me in the discussions on the future of NTIS. Even though I, along with Senator Warner, from Virginia, requested that we be part of the process, Commerce has never shared their draft legislation with me. I think it is because the draft bill still poses more questions than it does answers.

Commerce has not addressed the clearinghouse function performed by NTIS. They want Congress to make the Library of Congress take over these functions so that we can be responsible for their proposal. The Library of Congress, though, cannot effectively disseminate information on demand. The same report that the Department of Commerce uses, called "The Emerging Digital Economy 2," that they hold up and say this is free on Commerce's Web site and it would cost an individual \$27 to order it from the NTIS, would cost an individual \$29 to order it from the Federal duplication here at the Library of Congress.

That report could be delivered by NTIS to an individual within 24 hours if necessary, or it would be delivered in 5 to 7 business days. It would take the Library of Congress 4 to 6 weeks to deliver the report. So it costs more and a longer delivery time. If the Library were to take on these functions from NTIS, they would need additional congressional authorization, as well.

Commerce's recommendations create greater inefficiencies. NTIS provides a valuable public function by cataloging all scientific and technical information for the government. We have to find the most efficient way to perform this function. And I think we need to explore where and how we can create economies of scale that make NTIS more efficient.

Any reorganization proposal needs to look at the fugitive document issue. For instance, in fiscal year 1993, NTIS received 64,000 documents from Federal agencies. But, 5 years later, they received only 42,000. Where are those 20,000-plus documents going? Commerce requires that Federal agencies be responsible for submitting this information on their own Web sites for up to 3 years.

But with a lack of uniform standards, will agencies know what they should and should not post? Will customers know where to find the information? Will the Library have to develop the ability to track down this information and catalog it as NTIS does, with an abstract? Or will the Library develop their own system for cataloging this information?

Commerce has continued to ignore that two-thirds of the documents requested from NTIS are 3 to 10 years old. Additionally, I would just add that I think the bottom line that is driving Commerce on this is the fact that they get rid of Federal employees and they can hold it up and say: We have fewer Federal employees. Really, we ought to be talking about: Are there any savings to the taxpayers on this? You do not measure it by number of employees and so on if they are paid for by fees and other items. And we ought to get away from that and look at the best way and the most cost-effective way to look at this. We want to continue to be part of that dialog.

And, Senator, I very much appreciate the opportunity to share these views with you.

[The prepared statement and information of Representative Davis follows:]

PREPARED STATEMENT OF HON. THOMAS M. DAVIS, III,
U.S. REPRESENTATIVE FROM VIRGINIA

Mr. Chairman, I would like to thank you for inviting me to participate in this hearing today. The National Technical Information Service (NTIS) is at an unfortunate crossroads, and the House and the Senate must now consider the future of an organization created by Congress fifty years ago to collect all scientific and technical information for our government. After World War II, our government struggled to collect and organize the materials brought to us by German and Japanese scientists. The government then had to determine how to best use the scientific information that had been collected. It became readily apparent that the United States government needed to form an organization charged with collecting, cataloguing, and archiving all scientific and technical information (STI). It was also the goal of our Nation to share much of this information with the public in order that it benefit the greatest number of people. NTIS was created by Congressional legislation in 1950, and in 1952 began its' role as the repository for all federal scientific, technical, and engineering information.

Since its' creation, NTIS has followed its' mission faithfully and has amassed a collection of over three million pieces. Today, NTIS is threatened by one of the many technological innovations it helped to foster. The ease with which we may now access information through the Internet has hindered the ability of NTIS to remain a self-sustaining organization. Now we must work together to find out what can be done to protect the important public functions NTIS performs and determine what financial burdens should be borne by the federal government, and those that should be borne by NTIS customers.

Today, we have the opportunity to review the proposal brought forth by the Department of Commerce in their draft legislation. I am grateful to this Committee for holding a hearing that allows us to take a more in-depth look at the proposal that the Department first brought to my attention in August. Since I was first contacted about the possible closing of NTIS, I have been heartened by the efforts of my House and Senate colleagues to include me in this debate. We have truly been working on crafting a bi-partisan solution that looks at the many different functions that NTIS performs. I have worked with my colleagues from the region to address the very real concerns of the NTIS employees worried about their futures. I have met with the House Committees on Science and on Administration majority and minority members to listen to their thoughts on the future of NTIS. I am also honored to be testifying before your Subcommittee today on the problems facing NTIS.

However, I remain perplexed by the actions of the Department of Commerce. On August 11, I sent a letter cosigned by Senator John Warner from Virginia asking to be included in discussions involving the future of NTIS. The Department has never contacted me since their preliminary discussions with me at the beginning of August. I understand they have shared their draft legislation with the relevant Congressional committees but have ignored my request to be involved. Nevertheless, I have reviewed the draft legislation, and I think I know why the Department did not share it with me. It continues to present more questions than answers.

For instance, they have neglected to address the important clearinghouse function that NTIS performs for both federal agencies and the public. They have ignored the comments of NTIS customer communities who expressed concern about limiting access to STI, and they have ignored the concerns of the Library of Congress. Instead, I have been told that the Department has told Members of this body that it is okay if the Library does not want to take on these new functions, Congress can make them do it. The Department is now asking us to be responsible for their ill-conceived proposal.

Since the September 7th Technology House Subcommittee hearing, I have met with the Library of Congress to explore some of the assertions made by the Department regarding the Library's ability to disseminate information on demand. I was particularly interested in finding out about the photo duplication unit that the Department said performed functions similar to NTIS. I was interested to discover that the Library had already calculated how much it would cost for them to make "*The Emerging Digital Economy II*" available to a customer. I am sure many of you are familiar with that report—it is the one the Department has cited as the reason NTIS has outlived its useful existence—that report is free at Commerce's website, but costs \$27.00 if you order a hard copy from NTIS. The Library estimates that same report would cost them \$29.00 to reproduce for a customer, and would take them an average of four weeks to get to the customer. NTIS' turnaround time is

next day if necessary, or five business days including in-house processing. We have not even begun to compare the high volume that NTIS reproduces versus the relatively small number of requests handled by the Library of Congress. Additionally, in the opinion of the General Accounting Office, the Library would need additional Congressional authorization in order to perform the same functions as NTIS.

If we follow Commerce's recommendation, we are essentially creating greater inefficiencies and asking the Library to develop new skills. This will not save the taxpayers money. If this is an honest discussion about reorganizing NTIS, let's work together to come up with a solution best for all involved. Let's start by stating what we know—NTIS provides a valuable public function. They catalog all scientific and technical information so it is more readily available to the public. This costs money—some reports are catalogued that do not make money or subsidize themselves. In order to support this function, NTIS has continued to shop for other functions it can perform that are at the periphery of its' mission. If we believe something similar to NTIS should exist, then we must make a future commitment to appropriate dollars for the public functions. We can also ensure that we find the most efficient way to perform those functions.

A 1998 Arthur Andersen report commissioned by the Department of Commerce looked at how to make NTIS more efficient. That report came up with a number of suggestions that ignored NTIS' role as a public agency. It focused solely on making NTIS an efficient business like Amazon.com, or Borders Books. We cannot ask a public agency to become solely profits-driven without anticipating that it will compete with the private sector, or believing it is a function the private sector should perform. However, we can find out the most efficient way for NTIS to operate in our information technology society. We should explore where and how we can create economies of scale that make NTIS' functions more efficient.

Therefore, any reorganization proposal should examine the fugitive document issue, and how the government intends to effectively capture this information to assure that it is not only available to the public immediately, but available three years from now, and ten years from now. A critical statistic that has been overlooked in the early debate on the future of NTIS is: **two-thirds of the documents requested from NTIS are more than three years old, and fall in the three to ten year age range.** Federal agencies cannot be expected to have information in that age range readily available to the public. Most agencies simply do not have the resources available to them to perform that type of function. Additionally, agencies need to be held accountable for their role in creating fugitive documents. For instance, in FY 1993, NTIS received 64,000 documents from federal agencies but in FY1998 they received only 42,000. Where are those 20,000 plus documents going?

Any future plans for NTIS must also consider the many ways in which NTIS has adapted to changing technology. The Department of Commerce has neglected to mention the many successes that NTIS has accomplished in recent years. NTIS currently maintains an extensive electronic database for demand printing of technical publications. It is my understanding that NTIS employs one of the most advanced digital print on demand technology which is equal, if not superior, to many private sector printers. Additionally, the Department of Commerce has highlighted that it will cost \$30 million to digitize all of the reports contained in NTIS' archive but neglects to mention that 30% of the archive has already been placed in digital format. NTIS has been digitizing reports each time they are requested instead of immediately updating and digitizing all information in their archive. I do not believe that the Department has requested that the Library of Congress immediately digitize the entire NTIS archive. Moreover, Commerce again neglects that it is estimated that anywhere from 30 to 50% of information requests are for copies of rare and hard to find technical documents not readily available on the Internet, or in any bookstore.

I greatly respect the Department of Commerce's concerns about NTIS expanding its functions beyond its core mission. I do not advocate privatizing NTIS, nor do I support allowing a federal agency to compete with the private sector in order to sustain itself. The employees at NTIS have worked diligently to find new opportunities to sustain agency operations. I appreciate their continued efforts to find ways to offset the significant cost of cataloging, and archiving federal research and technical information. However, I think we need to reestablish the preeminence of ensuring the ready availability of scientific and technical information to the public, and determine at what cost to the government that function should be performed. NTIS carries out a clearinghouse functions for all agencies of the federal government. It would be immensely difficult to ensure that agencies are able to provide information to the current users of NTIS in a timely manner. While many federal agencies have developed websites that are comprehensive and user friendly, the lack of uniform standards and lack of knowledge within agencies regarding which reports should be

made available to the public could potentially result in the loss of thousands of reports.

The legislation proposed by Commerce would only further complicate this problem. It would require that all agencies post STI materials on their websites for three years than transmitted to the Library of Congress. This problem could mean that the Library develop another skill that NTIS already has—tracking down STI. If we are honest about what happens today and what we would like to have happen in the future, we can eliminate the problems out there and develop real solutions for NTIS and work together on the availability of information to the public.

Again, Mr. Chairman, I would like to thank you for holding this hearing today. I am hopeful that this hearing will assist all of us in finding out the needs of the affected communities, and laying out the various options available to NTIS and its devoted employees. As I stated at the September 7th House hearing, I am confident that we can find the best solution for all involved by working through this public process to understand the concerns of the American public at the potential loss of this valuable service.

ATTACHMENT 1

NO COMPELLING REASON—YET—TO CLOSE NTIS

OP-ED FEATURED IN FEDERAL COMPUTER WEEK, OCTOBER 18, 1999

COLUMN BY J. TIMOTHY SPREHE

Just weeks ago, we all thought we were bidding farewell to the National Technical Information Service. NTIS was known to be in trouble financially, and the Commerce Department secretary had said he would send Congress legislation to close down the agency. Now it appears everyone may have been too hasty in delivering eulogies.

Commerce's handling of the issue has been ham-handed. Having announced that the department would give NTIS' information holdings to the Library of Congress, deputy secretary of Commerce Robert Mallett then stated in a congressional hearing that the department had not consulted with the library in advance. Cavalierly asserting that NTIS was following an obsolete business model because agencies could now post their publications on the Internet, Commerce failed to note the healthy market for print publications. Mallett also said that Commerce had not talked to the NTIS user community either.

If you begin to suspect Commerce has not done its homework on closing NTIS, you're dead right.

Commerce is going it alone on this issue. The White House and the Office of Management and Budget have been silent about the future of NTIS. Members of Congress are voicing outrage or genuine concern for NTIS and its employees. The only vocal supporter of the closure is the Government Printing Office, which salivates over the prospect of picking at the NTIS carcass.

Commerce has floated a draft bill to abolish NTIS. Even if the bill is introduced, it may go nowhere, in part because it is so poorly thought out. These days, Congress does not look with favor on proposals for employee buy-outs, which is what the department is asking for.

Other agencies are asking the basic questions Commerce should have addressed in the first place. LOC has asserted that the government must examine which of NTIS' functions are sufficiently effective and desirable to merit continued federal support. The question is, how and where can the needed functions best be sustained to guarantee the uninterrupted acquisition and preservation of scientific and technical information?

NTIS occupies a stable position among scientific and technical agencies, operating as a service bureau or fulfillment house for a wide range of government information programs. The effects of axing NTIS would ripple through many other agencies with deleterious consequences. The financial liability removed from Commerce could cause far greater liabilities for other agencies.

The tragedy would be if the Commerce declaration became a self-fulfilling prophecy. Despite the fact that statute requires agencies to send their scientific and technical publications to NTIS for clearinghouse and distribution purposes, many fail to do so now. Agencies that do use NTIS are making contingency plans. With the handwriting on the wall, even more agencies may look to other information dissemination channels.

On the other hand, it is never easy to eliminate a government agency. Jobs are at stake, and people also begin to discover that the agency performs valuable functions. That is happening right now with NTIS.

Will Commerce succeed in closing NTIS? I doubt it. For the near term, Congress probably will have to appropriate several million dollars to support NTIS. For the long term, Congress should heed the advice of the library community: NTIS should not be closed, nor its services transferred elsewhere, until there is a thorough assessment of NTIS services, of alternatives for providing the services and of the requirement that the agency be self-supporting.

Sprehe is president of Sprehe Information Management Associates, Washington, D.C.

Attachment 2

NTIS: A RELIC THAT LED FEDS INTO CYBERSPACE

ARTICLE FEATURED IN FEDERAL COMPUTER WEEK, AUGUST 30, 1999

BY J. TIMOTHY SPREHE

The Commerce Department has announced its intention to close down the National Technical Information Service. Secretary William Daley said he would submit legislation to Congress for this purpose, and the department announced that it had started talks with the Library of Congress about taking over the NTIS information holdings.

Rep. Tom Davis (R-Va.) issued a press release decrying the Commerce move. NTIS lies in his district, and Davis is doing what any good representative would: protecting jobs on his home turf.

However lamentable, closing down NTIS is not surprising to those who have followed its recent fortunes. The agency's enabling legislation required it to support itself from fees generated by sales of its publications and services. NTIS was expected to break even financially, but for the past few years, the agency had run several million dollars in the red.

In the past year, Commerce began to downsize NTIS aggressively, outplacing personnel to other departmental components in an effort to avoid violating the Anti-Deficiency Act. The law states that agencies may not spend money they do not have, and NTIS was not generating the revenue necessary to cover its operating costs. Downsizing has not stemmed the financial hemorrhaging, and the economics of the situation dictate closing NTIS.

NTIS started shortly after World War II as a clearinghouse for the vast output of scientific and technical information (STI) federal agencies were creating. The basic idea was that the so-called STI agencies would voluntarily give NTIS copies of their publications. NTIS would subsist by selling the publications to the worldwide STI community, pricing its products at the cost of reproduction plus a markup to cover NTIS' operating costs. In return for sending their publications, agencies received a guarantee that NTIS always would have the them available for sale to the public.

Over time, NTIS expanded its reach beyond the STI world to any and all federal information resources it could obtain. It also expanded beyond paper and microfiche to electronic publishing, including magnetic tapes and CD-ROMs. For other agencies, NTIS acted as a fulfillment house, filling orders for publications, billing customers and collecting revenues.

Over the past decade, NTIS led the way from old-style publishing into cyberspace with innovations in electronic information dissemination. What we came to know as FedWorld started out as a general utility electronic bulletin board, a single source for users to find and download federal agency database files. FedWorld was a trail-blazer for public access to government information. Its critics quibbled over NTIS' pricing, wanting the information for free, and its customers grouched at the chronic inefficiency of the agency's fulfillment services.

Yet no one can question that, for a few shining years, FedWorld showed the rest of the federal establishment what the future of government information services would look like.

NTIS and the Internal Revenue Service failed in their bumbled venture into electronic tax filing. But at least NTIS was out in front trying to break new ground, succeeding more often than not.

NTIS' size and revenues always were tiny compared with the Government Printing Office's, but it grew to equal stature in the public mind. The two agencies have been bitter rivals. GPO always had far greater business volume yet always seemed to play catch-up to NTIS' innovations. Ultimately, NTIS showed the way to its own demise, ushering the federal establishment into the Internet theater of information access.

Daley aptly characterized NTIS as having a flawed business premise. The premise was sound in 1950 at the agency's birth. But in the 1990s, the Internet made the

virtual clearinghouse a reality, enabling every agency to make major information products instantly available for free. Now everyone can routinely do what once was unique to NTIS, and they can do it at no cost to the consumer.

The show is over for NTIS, but it was a good one for the half-century it lasted.

Senator FRIST. Thank you, Mr. Davis. I appreciate your counsel as we further consider it. Thank you for coming by.

Mr. Clark.

STATEMENT OF BILL CLARK, EXECUTIVE COMMITTEE MEMBER, NATIONAL FEDERATION OF EMPLOYEES, LOCAL 1627

Mr. CLARK. Good afternoon, Mr. Chairman and members of the Senate Subcommittee on Science, Technology, and Space.

The Union at NTIS wishes to thank you for the opportunity to address the future mission of the National Technical Information Service. As the representative for NTIS's bargaining unit, Local 1627, it is both a privilege and honor to be testifying on behalf of labor.

I would begin by stating there is no valid reason for closing NTIS—and I will say that again—no valid reason. The proposal is flawed and potentially damaging. It jeopardizes the many critical functions NTIS performs, while placing an additional burden on taxpayers to cover the cost of transferring NTIS's functions to the Library of Congress. If the proposal is implemented, the ultimate losers will be the users of NTIS's products and services, taxpayers, as well as more than 240 dedicated NTIS employees.

NTIS's mission to acquire, archive and disseminate a collection of more than 3 million government information products is accomplished at no cost to the taxpayer. The quality of U.S.-sponsored research is known worldwide. Much of NTIS's collection is made up of highly specialized technical reports used by corporations, academic and government researchers, and even internationally based companies and governments, all of whom pay fees to offset the cost of dissemination.

These functions are vital in today's growing information-based economy. At a recent House of Representatives hearing on the future of NTIS, the Union heard powerful testimony by members of the library and information community, as well as by government officials in support of the functions NTIS now provides.

The Department's process used to evaluate NTIS is flawed. One of the most disturbing aspects of the Department's decision is the fact that we were not permitted to be direct participants in the review and analysis process even though the Union and the employees it represents were in the best position to assess NTIS's problems, challenges and strengths.

The Department's public statements distort NTIS's mission and financial position. This fact, combined with flaws in a private consulting firm's report on NTIS's business model, raise serious doubts about the quality of the Department's extensive review and analysis.

Since early August, the Department has predicted impending financial disaster. It also attempted to raise doubt about the usefulness of NTIS's mission. Their reasoning to close NTIS is not based in fact. If the Union had been able to provide any feedback to the

Department prior to the closure announcement, we might not be sitting here today.

In January, a new management team took over at NTIS, and worked closely with the Union to restore NTIS's financial health. The success of this Union/management partnership enabled NTIS to address its difficult issues, including the reduction of labor costs through the outplacement of 46 NTIS employees to other Commerce agencies.

NTIS has much to be proud of. It annually distributes over 1 million products in a variety of formats. This includes several electronic data bases reaching millions of potential users. NTIS's FedWorld office hosts the two most widely used government Web sites. And that is out of over 12,000 government Web sites.

NTIS also uses its resources to assist other government agencies. Recently, NTIS's FedWorld staff shared their online security experience with the U.S. Senate IT staff.

On the financial side, the Department's dire predictions did not materialize. Instead, NTIS was solvent during fiscal year 1999, and finished with a surplus of \$650,000. NTIS also reduced its annual cost by 10 percent. This year's cost savings alone should total more than \$3 million. Our financial position is very positive.

In closing, it is clear that there are no valid reasons to eliminate NTIS or its valuable functions. It is not on the verge of bankruptcy. Its mission is as important as ever, and it is a vital contributor to this Nation's research community. And it accomplishes this important mission at no cost to the taxpayer.

I want to thank the subcommittee and you, Mr. Chairman, for this opportunity to provide the Union's perspective on the public good functions that NTIS performs. I would request that my written testimony become part of the public record, and I am available to address any questions the subcommittee might have regarding my testimony.

[The prepared statement of Mr. Clark follows:]

PREPARED STATEMENT OF BILL CLARK, EXECUTIVE COMMITTEE MEMBER,
NATIONAL FEDERATION OF EMPLOYEES, LOCAL 1627

Mr. Chairman and members of the Senate Subcommittee on Science, Technology and Space, I want to thank you for the opportunity to speak to the Subcommittee on the issue concerning the future mission of the National Technical Information Service (NTIS). As the representative for NTIS' bargaining unit Local 1627, it is both a privilege and honor to be before this committee testifying on behalf of labor. My testimony will bring an employee perspective to the ongoing debate about the future of the organization and its functions. I should also add this is the first opportunity for NTIS' bargaining unit to provide its position on the Department of Commerce's closure proposal. To the dismay of many, the bargaining unit representing the interest of all NTIS employees was not part of the Department of Commerce decision-making process regarding the closure proposal.

INTRODUCTION

I will begin my testimony by making a statement shared emphatically by my NTIS colleagues. There is no valid justification for closing NTIS. The Department's decision to disband NTIS is a flawed and potentially damaging proposal. It jeopardizes the many critical functions NTIS performs, while placing an additional burden on U.S. taxpayers to cover the costs of moving NTIS functions to the Library of Congress. Continuing to support these functions would require significant annual appropriations. If the Department's proposal is implemented, the ultimate losers will be the users of NTIS products and services, U.S. taxpayers, as well as the more than 240 dedicated NTIS employees.

As you are aware, NTIS is a non-appropriated agency. NTIS' mission to archive and disseminate a collection of more than 3 million government information products is accomplished at no cost to the U.S. taxpayer. The quality of U.S.-sponsored research is known worldwide, and NTIS has been the premiere conduit for distributing this content for more than 50 years. Much of NTIS' collection is made up of highly specialized technical reports used by corporations, consultants, academic and government researchers, and even internationally-based companies and governments, all of whom pay user fees to offset the cost of dissemination. The functions NTIS performs are vital in today's growing information-based economy. I was fortunate to attend a recent House of Representatives' hearing on the future of NTIS where I heard powerful testimony by members of the library and information community, as well as by government officials in support of the strong broad-based support for the information dissemination mission NTIS performs.

FLAWED PROCESS

To NTIS employees, one of the most disturbing aspects of the Department's decision to close NTIS is the fact its employees were not permitted to be direct participants in the review and analysis process. Instead, this responsibility was handed over to a private consulting firm and Department of Commerce management. This process undermined the fact that NTIS employees were in the best position to assess NTIS' problems, challenges, and strengths, and would have been an invaluable resource throughout the entire review and analysis process.

Therefore, in order to set the record straight, and to defend the important contributions NTIS employees make to the public good, I must address several issues pertaining to the Department's proposal to eliminate NTIS. A major concern to NTIS employees is that the Department of Commerce's public statements are distorting NTIS' financial position and mission. This fact, combined with flaws in a private consulting firm's report (the Andersen Report) on NTIS' business model raise serious concerns about the "Extensive Review and Analysis" quoted in the Department's August 12, 1999, press release and fact sheet proposing to close NTIS.

The Department's press release and fact sheet predicted impending financial disaster for NTIS. NTIS employees familiar with the organization's recent financial situation through August 1999 believe otherwise. The Department and Andersen Report's projected NTIS financial losses do not ring true. Many NTIS employees suspect that the Department has relied too much on flawed and outdated analyses, and not on current financial data being reported by NTIS. Moreover, had NTIS employees been able to provide feedback to the Department prior to the August 12th closure announcement, we might not be sitting here today.

Despite the Department's dire predictions the facts are:

- NTIS was solvent during FY99 and finished with revenue \$650,000 in excess of costs (see attached Table 1).
- NTIS reduced its annual costs by 10% due to a successful employee outplacement program and office consolidation resulting in about \$700,000 in cost savings during FY99.
- The Clearinghouse recovered all of its costs during August and September 1999.
- Costs savings in FY2000 should total more than \$3,000,000.
- Conservative projections anticipate NTIS further improving its financial status in FY2000.
- Clearinghouse revenues increased in FY99 over FY98 (see attached Table 2). NTIS' financial position is clearly improving.

ANDERSEN CONSULTING REPORT

The bargaining unit welcomed the opportunity for an independent analysis of NTIS' business practices to improve future financial performance. Improving the long-term financial health of the organization would be in the best interest of NTIS and its employees. The results contained in the Andersen Report were published on November 25, 1998, under the title "Developing a Market-Driven Growth Strategy." The Andersen Report included some valuable assessments of NTIS capabilities. Nevertheless, the Report has a major flaw. Its Statement of Work did not adequately address NTIS' need to reduce its costs. This may be why the consultants placed more emphasis on an aggressive business strategy to grow NTIS out of its deficit, which the consultants projected to be \$3,000,000 in FY99.

The Report recommends a product development and marketing strategy requiring NTIS to generate \$25,000,000 through the distribution of 1,000,000 best seller products in order to break even. This recommendation came with an implementation

price tag that could cost NTIS up to \$13,000,000. It's clear that the consulting team's inability to simultaneously address cost as well as revenue problems made rightsizing NTIS impossible (had that been their goal). Then too, the Andersen Report best seller growth strategy and legislative suggestions were summarily rejected by the Department of Commerce and the Department's Office of the Inspector General. This was due to inherent conflicts with NTIS' status as a government agency. While their strategies might be appropriate to a private sector corporation, they are contrary to NTIS' enabling legislation.

MISUSE OF THE ANDERSEN REPORT

From the employee's perspective, the main concern with the Andersen Report is that the Report's business strategies and financial projections are based on outdated information. NTIS' successful cost reduction effort made many of the Report's recommendations obsolete. Nevertheless, the Report continues to be used by the Department to justify closing NTIS. During the past several months NTIS has taken action to reduce its costs by about 10%. The Andersen Report's flawed growth strategy and projected NTIS financial losses are no longer relevant. They prove inconsequential when looking at NTIS' current financial health.

INSPECTOR GENERAL'S REPORT TO CONGRESS

The Department's August 12, 1999, announcement to close NTIS quotes the Inspector General's Office and a statement from its "March 1999 Commerce IG Semi-annual Report to Congress" to support its decision. However, it is important to return to March 1999 to understand what was happening at NTIS at the time of the Inspector General Office's report. NTIS was showing a cumulative FY99 loss of \$416,447 through February 28, 1999. At that time, the Inspector General's Office (IG) was relying on the Andersen Report for direction on NTIS' near term financial status. The Andersen Report contained information which might cause any IG great concern. The most immediate concern to the IG may have been the Andersen Report's projection that NTIS would lose \$3,000,000 by the end of FY99, especially since the report was submitted to the Department less than four months earlier. Understandably, the IG could have been open to severe criticism if it had not raised concerns about NTIS' financial status in its March Report. It was the proper action for the IG to take at that particular time.

Unfortunately for NTIS and its employees, the results of the Andersen Report referenced by the IG could not have taken into consideration the significant changes taking place at NTIS since January 1999, when a new management team was installed and cost reductions instituted.

NTIS UNDER NEW MANAGEMENT

At the behest of the Department, the new NTIS Management Team was installed on January 4, 1999. Mr. Ron Lawson officially took the leadership position of Director of NTIS, while Mr. Alan Neuschatz became its Associate Director for Financial and Administrative Management. The team's first task was to put NTIS' financial house in order, while minimizing the impact on NTIS' ability to carryout its dissemination mission.

The plan attempted to provide the most favorable environment for NTIS' more than 300 employees to remain employed as part of the Federal workforce. As part of this process, the new team forged a close and successful partnership with the Union at NTIS, and all parties immediately put their shoulders to the wheel to reclaim NTIS' financial stability. This included a review of the overall NTIS cost structure. Changes were made to maximize the efficiency of the organization. Quick action produced swift results. The process began to trim costs from the budget. Office space was consolidated; travel was limited; and a hiring freeze was enacted. These actions alone achieved more than \$300,000 in savings in FY99. The Union commends the Inspector General's Office and Andersen Consulting for getting the Department's attention regarding NTIS' financial position. While the Andersen Report's best seller growth strategy is inappropriate for NTIS, the Department's actions resulting from the Report had the positive effect of reducing NTIS' costs.

LABOR COSTS

The next major hurdle was reducing NTIS' labor costs. Creative solutions were necessary to balance the organization's ability to generate revenue and provide quality service. Within just a few short years, NTIS has moved from being a provider of primarily paper products to a hybrid organization supporting both paper and electronic product dissemination. To their credit, the Union, NTIS Management, as well

as the Department of Commerce developed an innovative program to outplace 61 employees from NTIS to open positions within other Department of Commerce agencies. To date approximately 46 employees have been successfully relocated allowing NTIS to reduce its labor costs significantly. While the need for the outplacement program brought about an unsettling time for NTIS and its employees, the program offered displaced staff the opportunity to transition to open Department of Commerce positions matching their skills to vacant positions. The result was a win-win situation for all parties:

- The Department filled its open positions with proven talent.
- NTIS Management was able to reduce its costs.
- The Union was able to protect the interests of NTIS employees.
- Approximately 46 displaced employees secured positions within other Commerce agencies.

The Secretary of Commerce's Management Team was an active participant in this innovative program, and it should be commended for its overall success.

DEPARTMENT'S ATTEMPT TO ELIMINATE NTIS

In early August, the President of the Union at NTIS was informed about the Department's decision to close NTIS. This decision was made without any input from the Union representing NTIS employees. This is despite the fact the Union played a pivotal role in reducing NTIS' labor costs through the successful outplacement program.

More disheartening was the August press release from the Secretary's office that falsely depicted the organization as an anachronism not in touch with today's current technology. To the contrary, NTIS provides many state-of-the-art services in order to promote the public good. For example:

- The annual fulfillment of more than 1,000,000 products in a variety of formats.
- Electronic databases reaching millions more users than their print-based predecessors.
- The NTIS Database containing over 2 million records that is updated weekly.
- FedWorld technical expertise, including the FedWorld Web site, that has been publicly referred to as the 2nd most widely-used Government Web site.
- Expertise and resources to assist government agencies with their information dissemination missions.
- Strong partnerships with private sector organizations to leverage non-government resources.

DISBANDING NTIS FUNCTIONS AND THE POSSIBLE IMPACT

The Department's proposal to close NTIS and move its functions to other parts of the federal government would require significant annual appropriations. Then too, it could risk the loss of important capabilities that NTIS now carries out ultimately reducing public access to government information. Government agencies, as well as consumers of NTIS information products, depend upon NTIS for public dissemination of government information. The testimony to the United States House of Representatives Subcommittee on Technology on September 14, 1999, provided by the Honorable James H. Billington, the Librarian of Congress, addressed the need to continue NTIS' important information dissemination functions stating:

"Editorials and commentaries on NTIS' imminent demise seem to accept the conclusion that electronic access to, and agency-based rather than centralized dissemination of, scientific and technical information have rendered an NTIS-type operation obsolete. Librarians and business and academic researchers are not so likely to concur with this conclusion. In many ways, the growth of electronic access and automated databases have greatly expanded the demand for reference services that are integrated with document delivery, such as the services provided by NTIS, as well as those provided by the private sector information industry. The question of how optimally to meet those demands in a rapidly changing environment is squarely before this subcommittee.

As this Subcommittee explores the best way to proceed, I hope you will consider, by their component parts, the full spectrum of operations involved in collecting, organizing, and supplying scientific and technical information. NTIS provides or acquires a wide array of services, including publication, acquisition, indexing, abstracting, translation, digitization, distribution, and archiving of information from many sources and in several formats. NTIS not only provides centralized access to scientific and technical U.S. government information, but it also acquires these types of materials from non-governmental and foreign sources and provides reference and dis-

tribution services for these as well. These functions dovetail with activities carried out by the Commerce Department, the Library of Congress, and other federal agencies in assisting the nation academic and commercial entities to capitalize on research and development of the United States and the world, and to push innovation to the next level. The fact that some of NTIS' functions apparently cannot be sustained on a cost-recovery basis does not necessarily mean that all or even most of its functions should be discontinued"

The Librarian of Congress' testimony also raised concerns about some of the important government information dissemination responsibilities performed by NTIS in relation to the Library of Congress' current mandate. The Librarian of Congress stated:

"However, such NTIS functions as high volume document distribution, brokering agency databases to the information industry, and publication (print or electronic) of information products of executive agencies, are beyond the Library's current mandate."

It is clear that the Department's proposal is not considering the many valuable functions that NTIS performs in its mission to disseminate government information. Eliminating NTIS could result in the loss of these important functions.

LONG TERM OPTIONS FOR NTIS

During the September 14, 1999, House of Representatives' hearing on NTIS, the Department of Commerce distributed a report entitled "The Department's Report on the National Technical Information Service (NTIS)." The Department's Report proposes three options regarding the long-term status of NTIS. The Union considers each to be flawed:

Option 1: Maintaining NTIS at Commerce and request annual appropriations to digitize the most recent ten years of its collection and to fund the Clearinghouse's "public good" functions. This first option suggests that NTIS requires an annual \$7.4 million appropriation to digitize the latest 10 years of its collection, and annual \$4.9 million appropriation to support the acquisition, organization, and preservation of the information products to be added to its collection. This simply is not true. NTIS more than covered its costs during FY99 and should be in a better financial position during FY2000 based upon conservative budget projections. While funds allowing NTIS to digitize its complete collection would make NTIS more cost-effective, it is not a necessity. NTIS will continue to digitize its older materials as it receives orders for these products.

Option 2: Maintain current NTIS operations while seeking annual appropriations to supplement revenues in the Clearinghouse while continuing to cut costs where possible. The second option projects a \$31.2 million NTIS loss through 2004. This is based upon the false assumption that NTIS Clearinghouse revenue is declining. NTIS Clearinghouse revenue actually increased during FY99 compared to the previous year. It also does not take into account NTIS' \$3,000,000 cost reduction effort. The fact is NTIS' Clearinghouse actually recovered all of its costs during August and September of 1999. NTIS does not anticipate any further losses.

Option 3: Obtain one-time appropriations to close NTIS and transfer its "public good" functions elsewhere. This option proposes to shut down NTIS and comes up with a \$15-17 million cost projection to accomplish this task. The union considers this estimate to be much too conservative. In addition, Option 3 does not consider the hidden costs that NTIS' closure could have as a result of discontinued functions NTIS now performs. However, the Department's Report did hint at a possible reduction in service by stating: "This estimate is based on an analysis of the Clearinghouse's current cost of performing different activities, some of which can be scaled back depending on the organization to which the collection is transferred."

THE UNION RECOMMENDS A FOURTH OPTION

In the best interest of the public good, including consumers of NTIS products and services, federal agencies who depend on NTIS to disseminate their products, as well as the U.S. taxpayer, the Union recommends the following alternative option:

Union Option: Permit NTIS to move forward with fully implementing its restructuring plan in support of its "public good" mission. While not suggested by the Department, this option would allow NTIS to proceed with its restructuring plan without an appropriation. NTIS' management team has already proven itself by fightsizing NTIS' cost burden, and bringing financial stability back to the organization. NTIS has regained control of its financial position, while eliminating an appropriations burden on the taxpayer. In light of the recent cost reduction

measures, NTIS more than recovered its costs during FY99 and will be in a better financial position during FY2000 as \$3,000,000 in overall cost savings are realized. NTIS should be allowed to proceed with its restructuring strategy while completing its mandated mission as the nation's Clearinghouse for scientific and technical information.

Permitting NTIS to continue to serve the public good as a self-sustaining agency is significantly more cost-effective when compared to the Department Report's costly proposals:

DEPARTMENT REPORT OPTIONS	COST THROUGH FY2004
Option 1:	\$29 Million
Option 2:	\$31.2 Million
Option 3:	\$15-17 Million

ACCESS TO GOVERNMENT INFORMATION: FEE VS FREE

A major misconception within government today is that Web access to government-sponsored information sources is free. On one hand, the important government information dissemination efforts such as provided by the Library of Congress' Thomas online service, the Government Printing Office's GPO Access, the National Library of Medicine's MEDLINE Database, and the Department of Energy's Information Bridge promote themselves as providing free access to government information. However, what is not mentioned is the fact this free access is paid for by millions of taxpayer dollars which go toward the development and support of these systems.

On the other hand, NTIS operates under a different model mandated by Congress where the agency maintains its specialized collection of the U.S. government's scientific and technical information and disseminates its findings at no cost to the U.S. taxpayer. Instead, both domestic and international consumers of this information pay the nominal costs associated with supporting ongoing access to this collection. NTIS places an important emphasis on partnerships with the private sector to expand dissemination of its content and provide for ongoing technological innovation, again at no taxpayer expense.

The final result is another win-win situation for U.S. citizens. They have the benefit of the ongoing availability of the items within the NTIS Clearinghouse and improved access to the NTIS Collection through technological innovation spurred by private-sector investment as opposed to taxpayer dollars. This is accomplished without the need for an appropriation from Congress. If NTIS were eliminated and all agencies were required to cover the additional burden of disseminating their government research information, additional taxpayer resources would be required.

WHERE DO WE GO FROM HERE?

NTIS' successful Union/Management partnership has helped NTIS to significantly reduce costs. However, now that NTIS' financial crisis has subsided, the outplacement program and other staff reductions from faster-than-expected attrition have left NTIS with 10-15 fewer employees than planned. This has resulted in NTIS having a shortage regarding the skill mix required to provide its full range of services to the public and other agencies, and to generate the necessary revenue. The Union recommends that NTIS have the opportunity to move forward with its restructuring plan. This would include the lifting of a hiring freeze now imposed upon the agency by the Department. These actions would support NTIS' ongoing use of technology to complete its public good mission, while further reducing costs. In addition, the Union urges Congress and the Executive Branch to complete a review of current government information resources (i.e., NTIS, the Government Printing Office, the Library of Congress, etc.) to develop an overall "information policy" which can best utilize these invaluable government assets.

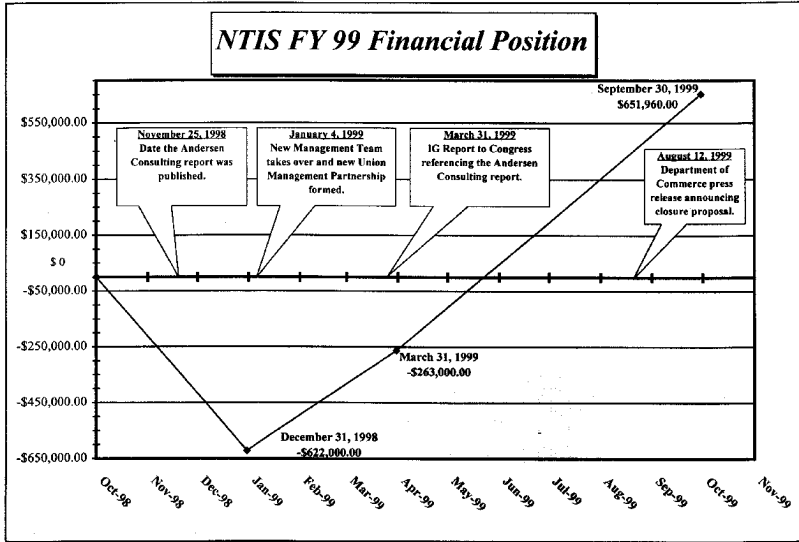


Table 1

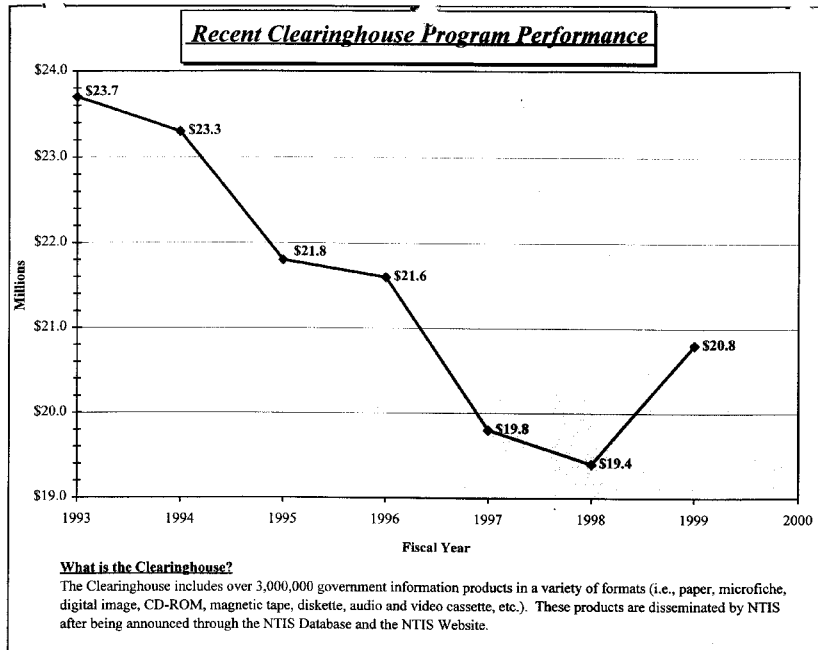


Table 2

Senator FRIST. Thank you, Mr. Clark.

All of the written statements will be made a part of the permanent record.

Mr. DiMARIO, could you elaborate a bit further on the impact that one NTIS transfer would have on your existing operations?

Mr. DiMARIO. Well, the impact would be, if we were to enlarge the depository library program and the distribution through that program of documents that are not included in it, we would need an additional appropriation to do that. The current appropriation, which is \$29.3 million, is for predominantly the distribution of documents that are already in the program and the electronic system that we operate, known as GPO Access. And that is approximately \$25 million of that \$29.3 million.

There is \$3.2 million that we allocate for cataloging and indexing, and the remainder of the money is for the international exchange program, where we exchange documents with other countries, pursuant to a treaty that is in existence. And the Library of Congress, in turn, receives those documents from the other countries and helps to build its collection in that way. So it is a cooperative arrangement.

But if we were to bring the NTIS collection into the program, to the extent that there would be additional distribution, would require an appropriation, since it is a program that operates not on a self-sustaining basis but based on a specific appropriation for salaries and expenses in the office of the Superintendent of Documents.

Senator FRIST. Are there any estimates for those costs?

Mr. DiMARIO. I really do not have any estimates because, at the present time, I do not know what that kind of distribution would be. Even if you talk in terms of the numbers of documents, the actual documents distributed would be much smaller than the total collection because it would probably be an on-demand distribution. What we would probably do is identify in a bibliographic data base all of the publications.

That is what the libraries want right now. They want to know what documents are available in NTIS, by receiving that bibliographic data base. And then they would make selections as to what documents they would want. And then we would make the distribution of those documents based on the selection.

For the most part, the distribution might be electronic or, in certain instances, it might be in paper. But it is very hard to put a number to that figure at the present time.

Senator FRIST. Dr. Challinor, for the record was the Commission consulted on the Department's proposal to eliminate NTIS?

Dr. CHALLINOR. I do not believe so, but I will turn to our Executive Director—the answer is no.

Senator FRIST. The answer is no. You have commented and you have touched upon it in your opening statement, there is a real risk that public information dissemination will continue in the future to be fragmented. Could you elaborate on that risk?

Dr. CHALLINOR. I think the best thing for me to do would be to get a copy of our report, which we brought with us, and to enter it into the subcommittee's record.

Senator FRIST. Is there a summary of that report?

Dr. CHALLINOR. Yes. And it shows, as I said, that government information is in no way cohesive. Everyone is doing their own thing at the moment.

Senator FRIST. Why don't we, again, for the record, cite the report. And we will introduce, if there is an executive summary in the beginning, three pages of the executive summary, and we will cite the report for the record.

[The information referred to follows:]

STATEMENT OF ASSESSMENT OF ELECTRONIC GOVERNMENT INFORMATION PRODUCTS
BY WESTAT, ROCKVILLE, MARYLAND

EXECUTIVE SUMMARY

The Federal Depository Library Program (FDLP) has served and continues to serve the American public by ensuring localized access to Federal Government information. The mission continues to be as important today to the fundamental success of our democracy as it was when the FDLP was created. The FDLP's original mandate, to assist Americans regardless of economic, education, or geographic considerations, is one that must not be lost as we strategically and thoughtfully use the tools of the electronic age to enhance that mandate.

Letter to Michael F. DiMario, the Public Printer, from Senators John Warner and Wendell Ford of the Senate Committee on Rules and Administration, May 24, 1996.

BACKGROUND

Congress established the antecedents to the Federal Depository Library Program (FDLP) in the Act of 1813 to ensure that the American public has access to its Government's information. The mission of the FDLP, part of the Superintendent of Documents (SuDocs) in the Government Printing Office (GPO), is to assure current and permanent public access to the universe of information published by the U.S. Government. Depository libraries safeguard the public's right to know by collecting, organizing, maintaining, preserving, and assisting users with information from the Federal Government. GPO provides that information at no cost to designated depository libraries throughout the country. These depository libraries, in turn, provide local, no-fee access to Government information in all formats in an impartial environment with professional assistance. Any member of the public can visit these depository libraries and use the Federal depository collections.

In order to administer the FDLP, as required by the enabling legislation for the program, 44 U.S.C. Chapter 19, the SuDocs is responsible for the acquisition, classification, format conversion, dissemination, and bibliographic control of tangible and electronic Government information products; the inspection of depository libraries; and the continuing education and training initiatives that strengthen the ability of depository library personnel to serve the public. An emerging new responsibility is to ensure that electronic Government information products disseminated through the FDLP, or incorporated in the FDLP Electronic Collection, remain permanently accessible to the public. Under 44 U.S.C., Sections 1901-1903, and Office of Management and Budget (OMB) Circular A-130, Management of Federal Information Resources, Federal agencies should make all their publications in all formats available to SuDocs for distribution to depository libraries.

This study to assess electronic medium and format standards for the creation and dissemination of electronic information products is an essential step toward ensuring a successful and cost-effective transition to a more electronic FDLP. The three goals of this assessment were to:

- Identify medium and format standards that are the most appropriate for permanent public access;
- Assess the cost-effectiveness and usefulness of various alternative medium and format standards; and
- Identify public and private medium and format standards that are, or could be used for products throughout their entire information life cycle, not just at the dissemination or permanent public access stage.

The Superintendent of Documents will use the results of this work effort to continue to plan and implement the transition to a more electronic FDLP. The five major *specific objectives* are:

- First, with respect to *electronic publishing practices* and plans for Federal agencies (including ways in which the FDLP can best accommodate them), the objective is to provide an analysis of current practices as well as future plans for creating, disseminating, and providing permanent public accessibility to electronic information products, and to identify the standards for software and electronic mediums and formats that are used throughout the product's information life cycle, from creation to archiving but especially at the stage of dissemination for permanent public access.
- Second, with respect to *cost-effectiveness* of various dissemination mediums and formats that are, or could be utilized, the objective is to gather information on standards (whether mandated or consensual) that will assist the FDLP in making near-term decisions regarding the cost-effectiveness of alternative mediums and formats for all FDLP participants. This information should also assist participants in long-term planning for permanent public accessibility, and the collection and analysis of overall information life cycle costs.

Third, with respect to the *practical utility* of various electronic mediums and formats to depository libraries and the public, the objective is to identify *preferred standards* used in various mediums and formats that depository libraries will need to support.

Fourth, with respect to utilizing standards employed in mediums and formats that can be used throughout all stages of the information life cycle (including creation, composition, computer terminal display, encryption, secure digital signature with non-repudiation, and secure transmission capabilities), for electronic dissemination, but especially permanent public accessibility, the objective is to assess standards for basic security services in order to provide for secure and reliable transmission and document interchange.

Fifth, with respect to standards that are being developed and used in the private sector, the objective is to identify existing and planned standards for the purpose of determining what the FDLP must do to accommodate their adoption in terms of hardware/software requirements, staff and user education and training, and budgetary impacts.

METHODOLOGY

The study utilized both quantitative and qualitative data collection activities: a survey of a cross-section of 314 Government information products from 24 agencies and interviews with experts. The response rate for the survey was 74 percent. *This cross-section of products was not a randomly selected sample due to cost and time constraints.* Instead, NCLIS and GPO—assisted by various groups, including the library associations represented by the Inter-Association Working Group on Government Information Policy (IAWG), the Federal Library and Information Center Committee (FLICC), the Depository Library Council (DLC), and the Interagency Council on Printing and Publication Services (ICPPS)—developed and refined the criteria for product selection. NCLIS, GPO, and the other organizations asked knowledgeable members of these groups to identify products that met one or more of six criteria.

NCLIS distributed the list of preliminary products to agency Chief Information Officers (CIOs) who were asked to validate and coordinate the final selections with their appropriate agency personnel. In addition, NCLIS asked CIOs to select an agency coordinator. The coordinator's role was to oversee the distribution of product questionnaires to the appropriate respondents and to encourage respondents to complete the questionnaire and return it to Westat.

Product selection was based on six criteria:

- Increased emphasis on electronic dissemination, rather than continuation of paper and microform dissemination;
- Replacement of older electronic mediums and formats with state-of-the-art technologies;
- Adoption of mandated (Government or private sector) and consensual (common agency practice) medium and format standards;
- Adoption and use of preferred mediums or formats that have widespread support from agency, depository library, and user communities;
- Exemplified cost-effective mediums and standards, especially those that can be used throughout the entire information life cycle, rather than the use of expensive customized or shelf packages; and
- Exemplified awareness of the important impact of medium and format decisions on permanent accessibility, authentication, and/or security encryption protection.

The survey requested information on four main topics:

- General information about the product and agency that produced it.
- The product's *current* profile including the kinds of data the product contains, mediums in which it is produced, formats and online approaches used (if applicable); and searchability and retrievability of the product.
- *Future* plans for the product including changes in its data, mediums, and formats.
- Other issues including metadata, permanent public access, permanent retention, authenticity, updating/upgrading plans, user fees, licensing, and public domain.

The qualitative data collection included site visits to three depository libraries, meetings with representatives of five Government agencies, and telephone interviews with six experts. The qualitative data collection included site visits, agency meetings, and expert interviews. Westat conducted site visits to three Federal depository libraries:

- McKeldin Library, University of Maryland College Park, College Park, Maryland
- Washington College of Law Library, American University, Washington, D.C.
- Montgomery County Rockville Regional Public Library, Rockville, Maryland

The purpose of the visits was to discuss the effects of the transition to a more electronic Federal Depository Library Program on the end user and on the services and resources of each library.

Meetings with agency representatives had a twofold purpose:

- To collect qualitative data about electronic Government information products, such as cost-effectiveness of standards, use of locator tools, results of user surveys, etc., that were not covered in the survey; and
- To discuss the procedures for distribution of the questionnaire.

In addition to inviting agency coordinators and respondents, the statement of work specified that Westat invite representatives of the following offices to attend the meetings:

- Public affairs or communications offices
- Agency printing and publishing units
- Information technology or electronic information systems offices
- Agency libraries, and
- Relevant program offices.

The following six agencies agreed to schedule a meeting: Department of Health and Human Services, Department of Education, U.S. Supreme Court, Department of Commerce, Environmental Protection Agency, and the National Archives and Records Administration. Only four of the six agencies chose to discuss the qualitative questions at the meeting. The other two agencies discussed the questionnaire only and agreed to respond to the discussion questions in writing, although only one actually submitted their written questions.

Finally, Westat held four telephone interviews with six content experts. The experts included two webmasters (Linda Wallace from the Internal Revenue Service, and Jerry Malitz from the National Center for Education Statistics); two preservation specialists (Evelyn Frangakis from the National Agricultural Library, and Abby Smith from the Council on Library and Information Resources); and two professors in information resources management (John Bertot and Charles McClure). The purpose of expert interviews was to:

- Solicit opinions of experts on topics not adequately covered on the survey or in the agency meetings,
- Ask questions to provide a broader context in which to view the issues, and
- Explore current initiatives and future directions.

KEY FINDINGS

These findings reflect the major results of the survey and qualitative data collection:

POLICY AND PLANNING ISSUES

1. There is an overall lack of Government information policy guiding electronic publishing, dissemination, permanent public access, or information life cycle management, especially as information policy relates to agency missions. Also, there is a lack of overall coordination of these initiatives at the Governmental, branch, or even agency level (pp. 68-69).

2. Responsibility for electronic publishing within agencies is decentralized, diffuse, and unclear. Some agencies either could not identify or had difficulty identifying the proper respondent within their own agency, or even the person who was responsible for the product (pp. 11 and 14).

3. Some Government agencies are monitoring the information needs of their users to enhance current access to electronic Government information products (p. 65).

4. There is a lack of specific planning for product development and technological migration (pp. 34-36; table 23 on p. 42).

5. There is a lack of planning for or consideration of web design approaches that comply with the Americans with Disabilities Act (ADA) (table 6a, p. 29)

PERMANENT PUBLIC ACCESS

6. The concept of permanent public access (PPA) is not well understood. Respondents also had difficulty distinguishing between PPA for electronic products and archiving electronic Federal records with the National Archives and Records Administration (tables 18-20, pp. 39-40).

7. Metadata and their importance to public access are not well understood, particularly as they may affect PPA. Only 27 percent of respondents reported having a metadata record for the products surveyed (table 19, p. 39).

8. For some products, PPA results from the agencies' use of a host disseminator, as GPO Access (p. 11).

AUTHENTICITY

9. There is a lack of understanding of what ensuring authenticity entails, and a lack of planning for or consideration of ensuring authenticity of electronic Government information products (table 21, p. 41).

PRODUCT CHARACTERISTICS

10. Fifteen percent of the products surveyed are not in the public domain, for all or part of the product (table 27, p. 45). In addition, user fees are charged for 30 percent of the products (table 24, p. 43).

11. The most prevalent types of mediums are the web, paper, CD-ROM, and bulletin board systems (table 3a, p. 22); the most prevalent formats are HTML, PDF, GIF, JPEG, TIFF, and ASCII (table 4a, p. 25).

12. The most prevalent types of data contained in the products surveyed are textual, numerical, bibliographic, and graphical (tables 2a and 2b, p. 20).

STANDARDS

13. There is a lack of standardization for producing Government information products on CD-ROM (e.g., installation instructions, user documentation) (p. 55).

14. The most prevalent medium and format standards identified in the survey are common agency practice rather than agency-mandated (tables 3b, 4b, 6b, pp. 23, 26, and 30).

15. Some Government agencies have established guidelines or best practices for presenting and organizing Government information products on the web, although full compliance with the guidelines is a goal that has not yet been achieved (p. 64).

16. Some Government agencies are exploring a range of innovative formats and web design approaches for electronic Government information products (p. 57).

NEXT STEPS

As a followup effort, NCLIS indicated that they will use these findings as a point of departure and analyze them in greater depth. It is expected that this followup effort will result in broad conclusions and recommendations to the President and Congress about how the problems and challenges revealed in this study can be constructively addressed to improve current and future public access to electronic Government information.

Senator FRIST. Dr. Challinor, to implement your assessment proposal do you need a specific congressional or Presidential directive to conduct this study?

Dr. CHALLINOR. We would need one, yes.

Senator FRIST. GPO has indicated, Dr. Challinor, in its statement that inclusion of the NTIS collection into the FDLP would be a major step in simplifying and unifying public access to govern-

ment information through a single source. What are your thoughts on this? How would it address your concerns about the overall Federal policy regarding information dissemination?

Dr. CHALLINOR. Well, I have the greatest respect for Mr. DiMario and his operation. And it was through him that NCLIS made this study. And I would hope that a through study would be done before we move forward on this, because the subject of government information is simply not properly understood at any levels. And this gives us an opportunity do so.

Senator FRIST. Do you have any comment on the report Mr. DiMario?

Mr. DiMARIO. I would agree that some study is appropriate. The problem I would have, and the only problem, is expressed in my statement. And that is that if you are planning to close NTIS and you are planning to do something in a hurry, you need to have a study that is completed in a hurry. Otherwise you need to carry on the NTIS function. You cannot just let that function hang out there without some resolution in the short term. That would be my concern.

Senator FRIST. Mr. Clark, what is your reaction to the GPO proposal?

Mr. CLARK. Well, I think in terms of right now, I look at the situation, where it sounds like there is this major exigency to shut down NTIS. And if you look at the finances currently, NTIS has right sized itself. And this is based on going from the early nineties as primarily a paper product type of operation to a hybrid situation where you have got both paper and electronic dissemination. Now, with that, you had additional costs, and also you have had some disintermediation in terms of folks—government agencies—putting their content on the Web.

Now the problem with that is that a lot of agencies, just like the Department of Commerce, think as soon as they put up their content, that is the end of their responsibility. And that is really where the serious problem is. If you look at NTIS's current revenue streams, our print subscriptions, our electronic subscriptions are growing. The major losses (product declines) have been in the demand area—and this is like individual technical reports. And part of that is because agencies slap it up on the Web and they think their job is done.

It is very interesting, in talking about that “Emerging Digital Economy Report,” when we worked with the Department of Commerce and put a link to their site to order (the Emerging Digital Economy Report products) from NTIS, we had several hundred orders for print/paper copy. That is because one of the reports was over 200 pages. In terms of talking about a flawed business model, I wish the Department would do more links like that. We could distribute a lot more copies and do a lot more public good.

Senator FRIST. Let me go back, Mr. Clark, to the \$650,000 in excess of cost. You heard my questioning of the Secretary. He basically said, he is very pleased with \$650,000, but it does not change the underlying thrust of the change in the way business is conducted as you project out to the future; therefore, we still need to make this shift.

Mr. CLARK. Well, I disagree with that. In terms of if you are looking at NTIS's clearinghouse revenue, it has actually increased compared to last year. And in terms of the dissemination of electronic products, we reach more users of NTIS information than ever. What has happened, is you have looked at a shift from a paper environment to an electronic environment.

Even in terms of trying to compare units, I think there was a reference in the Department's statement about units dropping from 2.3 million to 1.3 million. What they did not tell you is there was a half-a-million print copies of one paper subscription that went to an electronic format. And so how is it going to be counted as a print unit? And it is actually now in a data base that is reaching many more users, with more information than ever.

So here NTIS is being criticized for declining units when it is actually doing a better public good in terms of disseminating more information to more people at a lower cost.

Senator FRIST. And the drastic turnaround that resulted in this \$650,000 excess above cost was due to what?

Mr. CLARK. NTIS has to live within its means. As far as when you are moving from a paper environment to an electronic environment, you cannot grow yourself out of that (deficit situation). I think the previous management that was in place up through December 1998 thought that they could bring in more people and have more skills and try to grow themselves out of a deficit. And you cannot do that.

First, what you have to do is take a look at your costs. You also have to look at your mission. You cannot go outside of that mission. And you have to focus on that (mission) and do the best you can in terms of providing that mission, and look at technology to help lower your costs. And that is what NTIS has been doing.

Senator FRIST. Let me go back to the GPO proposal. Mr. DiMario, in your opinion, would NTIS be subsumed as part of this transfer? Do you keep it intact? Do you maintain it as a separate division within GPO that is specifically responsible for technical information? How do you envision that?

Mr. DiMARIO. My vision would be to do just that. NTIS performs a valuable service. It deals with a specific collection. It has specific cataloging. The community is used to that cataloging. It would not be to change that. They do an excellent job, and my sense would be not to disturb that.

However, there are areas in which there are duplications. This attempt to survive in NTIS caused the management of NTIS to reach out beyond the original statutory mandate to look at the definition of scientific and technical information in a much broader way, to basically include all information. As an example, Secretary Mallett cited the IRS publications. The IRS publications is a business of ongoing publications in the Federal Government. They are not particularly scientific or technical in the ordinary sense. And they are publications that are distributed on an annual basis, changed periodically.

We have always done that work. However, in recent times, NTIS and IRS have entered into agreements so that, especially in CD-ROM products, that they would be the producers of the product. And this ended up in a competition between the two agencies that

is not beneficial to either agency. And I think we need to look at that structure in the sense of whether that kind of activity should continue.

That is a direct result of this mandate to be self-sustaining. And that is true in both agencies.

Senator FRIST. Mr. Clark.

Mr. CLARK. Senator, I come from the private sector. Two-thirds of my career has been in the private sector. And it is only coming into government that I hear competition is a bad thing. Actually, I think it is a little bit different argument. I think redundancy is a bad thing.

Now, in terms of if the IRS comes to NTIS because we provide better capabilities—such as improved customer service—I would think that is in the public good to have that capability. That is why I do not quite understand—in terms of the IRS coming to NTIS because we provide a better service—how that is a bad thing.

Mr. DiMARIO. I would argue that that is not the case and that in fact we provide the same product cheaper to the public as a result. The IRS gets the product at a lower rate as a result of their arrangement with NTIS, but the public pays more for the product. We offer the same product for sale to the public at a cheaper rate.

I do not think this is an appropriate forum to debate specific publications or anything of this sort. Your question to me was whether or not I would take over the function directly as it is. And with respect to the core functions that are in terms of the technical services that are provided, the answer is yes, that I would do that. But I think as an appropriate statement as a public servant, that I could not sit here and say that we would not eliminate some of the functions that are duplicative. And that is all that I was saying to you.

I would like to also add, with respect to your previous question, that the estimate that was handed to me was between \$2 million and \$5 million as the potential increased cost to put the documents that are now fugitive into the depository program. That is based essentially on an estimate of 50 employees times an annual salary and expense of around \$45,000, and an estimate that that would be around \$2.25 million. So we are saying somewhere between \$2 million and \$5 million in total to take over that one function.

Senator FRIST. If there are other incremental costs, you can submit that to the record.

Mr. DiMARIO. Yes, sir.

Senator FRIST. Dr. Challinor.

Dr. CHALLINOR. Yes, I would like to say that the study that we suggested, we think NCLIS could do in between 3 and 6 months if we were given the proper funding. We think it would take between 3 and 6 months to do to make a further study than the one I just handed in.

Senator FRIST. Thank you very much.

Mr. Clark.

Mr. CLARK. Senator, I was wondering if I can just have a letter that was sent by the IRS to NTIS in terms of the reasoning for its choice in having NTIS produce the IRS CD-ROM, and it was based on NTIS's advantage in terms of customer service, I think that

needs to be part of the public record in terms of addressing this question as far as redundancy or competition.

Senator FRIST. We will insert that into the record once you provide that for us.

[The information referred to follows:]

August 26, 1999

Mr. John DiDiduro
Acting FedWorld Manager
National Technical Information Service
FedWorld Business Office
5285 Port Royal Road
Springfield, VA 22161

Dear Mr. DiDiduro:

I want to thank you for submitting your proposal for the 1999 IRS Federal Tax Products CD-ROM. As mentioned in the requirements, the proposals were evaluated against technical and pricing criteria. Below you will find the scores for the technical portion of the requirements.

Technical	GPO	NTIS
General	30	30
Production Capabilities	33	34
Customer Support	19	25
Marketing	10	10
Total Score	92	99

Pricing between GPO and NTIS are about equal with the exception of the cost to IRS. NTIS charges will yield IRS a saving of \$47,742 over GPO. Therefore, IRS will select the National Technical Information Service (NTIS) as the winning offeror.

If you have any further questions or concerns, please feel free to contact me.

Thank you for your time and effort in this matter.

Sincerely,

Romona L. Stickell
National Director
Multimedia Production Division

Mr. CLARK. Could I add one more thing?

Senator FRIST. Yes, sir.

Mr. CLARK. The Under Secretary (earlier) had commented about having in his legislation requiring (that) chief information officers to ensure that agencies' content is submitted to, I guess, the Library of Congress. If you look at the American Technology Pre-eminence Act now, there is a provision for that agencies are currently required to submit their scientific technical and engineering information to NTIS under the ATPA. The problem is many agencies choose to ignore it.

And what NTIS does is proactively (Web harvest)—and I know there has been talk about the high cost of Web harvesting—NTIS (Web harvesting) actually provides a technological solution to bring that information into its collection so that it is available through many more channels.

I know, in terms of last year, there was a reference made about the Department of Energy and how it was no longer going to send its images to NTIS. Well, what happened was the Department of Energy, through a fiscal environment that was being cut, did not have the resources to pay to do that (cover the cost of sending its images to NTIS). So we worked very closely with them, because they understand that NTIS distributes content through a number

of different channels, and (NTIS) was able to find a technological solution so that we could harvest their images and still be able to provide that expanded distribution and serve the public good.

Senator FRIST. Any final comments? Let me just say right up front, it has been very helpful to hear this discussion, the various vantage points. It has given the Subcommittee an opportunity to hear a number of sides of the debate as we continue to decide where is the most appropriate home for the clearinghouse. It is unlikely that we will settle this over the next 2 weeks while we are in session, but I think it is clear from the three elected representatives, as well as each of our witnesses, that there is no agreement at this juncture.

I would like to urge the Department of Commerce to continue the dialog with this Committee to ensure that we are absolutely reaching the right solution to the challenge before us. Before finishing, I would be happy for any of you to make any final brief closing statement.

Mr. DiMARIO. My comment is only germane as to Mr. Mallett's statement. One of the things that he indicated was that their reasoning in not selecting GPO and selecting the Library of Congress had to do with having adequate facilities for the NTIS collection. And I would submit to you that we have over 40 acres of space, and the amount of space that they are talking about is probably less than 1 acre of space. We have more than adequate space to house the collection, house the staff that exists and to carry on the function. I think Mr. Mallett was misinformed on that issue.

Senator FRIST. Thank you.

Dr. Challinor.

Dr. CHALLINOR. And I would like to say that if we do not know where we are, I do not think we know where we want to go.

Senator FRIST. You sound like a historian.

[Laughter.]

Dr. CHALLINOR. I am a historian. And I would just like to make that point strongly. We feel that we have turned out a really good report on government information, how it is disseminated. The fact that it has some problems should not deter us from going forward and learning where we are before we go anywhere. How is the car working before we drive the car?

Senator FRIST. Boy, you are asking a lot.

[Laughter.]

Senator FRIST. Mr. Clark.

Mr. CLARK. I just want to again reaffirm the fact that, from the Union's position, there is no valid reason to close NTIS. Its mission is important. The employees continue to work hard in terms of completing that mission.

I would also like to add that my mother is a special librarian of 16 years that purchased NTIS products in the past. And in terms of looking at the situation, I have a very close ear in terms of with the library community and many of the issues that they face in terms of information dissemination and problems in terms of accessing government Web sites.

Senator FRIST. Good. I thank all three of you. And I personally, as well as the subcommittee, will remain very actively engaged as

we go forward and continue to address this very, very important issue. I thank all of our witnesses.
[Whereupon, at 4 p.m., the hearing was adjourned.]

APPENDIX

STATEMENT ON BEHALF OF THE AMERICAN ASSOCIATION OF LAW LIBRARIES, AMERICAN LIBRARY ASSOCIATION, ASSOCIATION OF RESEARCH LIBRARIES, MEDICAL LIBRARY ASSOCIATION, SPECIAL LIBRARIES ASSOCIATION

On behalf of the American Association of Law Libraries, the American Library Association, the Association of Research Libraries, the Medical Library Association and the Special Libraries Association we appreciate the opportunity to submit this statement on the October 21, 1999 Subcommittee hearing on Secretary of Commerce William M. Daley's proposal to close the National Technical Information Service (NTIS).

There are many critically important issues involved raised by the proposal to close NTIS, not just those limited to scientific and technical information (STI). Indeed, the Commerce Department proposal touches upon all aspects of federal information policy. Consequently, these issues must be carefully reviewed before the Commerce proposal goes any further. We believe that it is essential to continue the basic functions and services that NTIS provides to identify, collect, disseminate, and archive scientific and business information, whether at NTIS or at other federal agencies. These core functions are inherently governmental and should be continued in some capacity.

Information is a key byproduct of our country's \$80 billion federal research and development investment—an investment that has kept the United States as a world leader in the information age and the global economy. In light of this enormous investment of resources, this proposal by Commerce *can* be an opportunity to analyze how these functions can be carried out in the most effective way to maximize the public's ability to access our government's scientific and technical information and other related business information. This *can* be an opportunity to improve the government distribution of federally-funded information products. We believe that any legislation enacted to relocate or reinvent NTIS should result in the improved ability of businesses, researchers, and the American public to have ready, ongoing, and permanent access to government information previously made available through NTIS for a fee.

The library community suggests that there are three key areas of concern regarding the possible closing of NTIS:

First, there should be a thorough assessment of the full range of NTIS services, of alternatives of providing each service, and of the current requirement that the NTIS program be self-supporting—and that NTIS should not be closed nor its services transferred until such an assessment is conducted.

Second, NTIS provides unique centralized services that are critically important to the ability of the public to locate and have access to the government's STI resources, including the tangible collection and current agency web-based publications.

And third, technology has not yet solved two key challenges in moving towards greater dissemination of STI reports through the Internet: those challenges are centralized bibliographic access and permanent public access.

A THOROUGH ASSESSMENT IS NEEDED

The United States is a world leader in scientific and technical research. Effective access to that research is fundamental to maintaining that leadership. NTIS plays a vital role in the collection and dissemination of the government's scientific, technical and business information, making that information available to a wide range of students, faculty and researchers. Thus, the Department of Commerce proposal to close NTIS raises a perennial question: How can the federal government best make these information resources more readily available to researchers, businesses, and the general public? In order to answer this question, particularly because to date there have been few details provided as to the transfer of NTIS important services, we need a comprehensive assessment of the full range of NTIS services to determine how these important services are to be provided. NTIS should not be closed nor its services transferred until there is a thorough study of the full range of NTIS

services, of alternatives for providing each service, and, of the requirement that the program be self-supporting.

Until this assessment is completed, it is premature to talk about what entity or entities should take over the NTIS functions. Those that have been mentioned as possible successors include the Library of Congress, the Government Printing Office, the National Archives and Records Administration, and the General Services Administration. Finding another way to provide those services, however, must involve much more than simply shifting the costs from one agency to another or from one branch to another.

Indeed, it would be ideal if the proposed Department of Commerce plan could be the jumping-off point for a broader discussion of how the federal government can best make information resources of all kinds readily available to the general public, to researchers and to businesses. To that end, we must first understand how NTIS and its services fit into the broader federal information framework.

This should be an opportunity to consider the many issues involved in:

- identifying what agency or agencies can most effectively collect, maintain, disseminate and preserve the information;
- cataloging and indexing information products for future retrieval;
- providing ready access to information resources, regardless of format;
- evaluating the costs of these and other services and determining how they should be borne; and
- ensuring permanent public access to information resources.

In undertaking this assessment, there are a number of key questions that should be considered:

1. What is the role of NTIS and its services in the federal information framework?
2. Some of NTIS's services, such as the acquisition, indexing, maintenance, and preservation of the STI collection, are inherently governmental or "public good" functions. We need to ask: What are the core, valuable services that NTIS performs for different constituencies, e.g. federal agencies, libraries, private sector entities, that support the research and development enterprise?
3. What are the financial ramifications for agencies which utilize NTIS services if the agency is no longer in operation? For example, who will serve as the dissemination and indexing service for agencies? What policies are in place or will need to be developed to assist agencies in providing access to their resources?

THE UNIQUE VALUE OF NTIS'S CENTRALIZED SERVICES

A centrally coordinated clearinghouse for the collection, dissemination, bibliographic control, retrieval, and archiving of federal technical reports is necessary to ensure access by businesses, researchers, and the public. Government information can be difficult to identify and locate. If a user cannot locate the information, its inherent value is lost. Users often do not know which agency or subagency produced a given publication, and even with this knowledge, finding copies of a publication on an agency's Internet site can be a difficult and frustrating experience as users encounter a multitude of databases, software, and search engines that offer access to government information. NTIS collects and makes available much of the scientific and technical research from hundreds of separate federal departments, agencies and offices. Without this service, which allows researchers to be aware of and have access to previous research efforts, our country would waste millions of dollars on repetitive research and development.

As a clearinghouse for a large variety of publications and reports, NTIS also has provided the bibliographic control of this material that helps the public find what they need, whether those reports are in electronic or paper format. A clearinghouse can provide links to individual agency web sites, can identify and locate reports that are not on the Internet, and can guarantee long-term public access and permanent preservation. Businesses, researchers, and the American public must continue to have access to the NTIS database of indexing and cataloging services for the government's scientific and technical reports.

Under the current NTIS model, libraries—particularly large academic, research and special libraries—purchase NTIS bibliographic database and segments of its vast collection. Libraries constitute 80% of the subscription base to the NTIS database. For example, at the Georgia Institute of Technology, access to the NTIS Index is essential for research and teaching—and is one of the most heavily used databases—because it consolidates indexing to reports of government sponsored research from a variety of agencies. Students seeking information about these reports would almost certainly be unable to locate needed information if it became necessary to search many different agency web sites.

In addition to the database, Georgia Tech has maintained a repository of reports for its faculty and students that dates back to the 1960s. Its current technical reports collection is 2.6 million items -- a valuable resource for research and study. It must be emphasized, however, that although a number of research libraries have acquired major segments of NTIS collections at considerable cost, no library has all of the reports nor is any library obligated to keep the material. It is the federal government that has the obligation to preserve these materials and to ensure that the public has permanent access to them. The issue of long-term and permanent access to valuable scientific and technical information must be carefully considered.

For meaningful continuation of NTIS services, we suggest that the following questions are addressed:

1. There is a federal research and development investment of well over \$80 billion with information being a key byproduct of that investment. NTIS plays a primary role in ensuring that some of the products of that investment are publicly available. How will this be continued if NTIS is no longer mandated to provide this service?

2. NTIS plays a key role in imposing uniformity via common standards in indexing scientific and technical information (STI) products from myriad federal agencies. Most of these agencies utilize different indexing schemes. How will this important role be continued in the future?

3. Although the American Technology Preeminence Act mandates agencies to submit STI products to NTIS, there has not been full compliance with the Act. It is important to try and achieve as comprehensive a collection as possible to support needed R&D activities, both in the public and private sectors. As discussions evolve concerning the roles and responsibilities of NTIS and related information dissemination agencies, are there other mechanisms that should be considered to make the clearinghouse as robust and complete as possible, regardless of which agency is tasked with acquisition, maintenance, and preservation of the collection?

4. NTIS maintains a core collection of paper products for which there continues to be a demand—two-thirds of the titles NTIS sells in any year are more than 3 years old and over half are over 10 years old. This is, in part, because research projects build on prior knowledge thus a researcher needs access to all prior research, some of which is federally-funded and accessible via NTIS. As more information becomes available electronically, these resources in conjunction with the paper products, should be included in the collection, ensuring the building of a robust and expanding collection over time. How will *efficient, meaningful and cost-effective* access to these resources be continued?

5. Addressing long-term preservation and access issues are central to the success of any collection, including both print and electronic resources. How will this crucial function be continued in an increasingly decentralized networked-based environment? NTIS has undertaken the role of archival repository for many agencies. How will these archival concerns be addressed?

THE CHALLENGES OF TECHNOLOGY AND INTERNET ACCESS

The rapid pace of technological change is truly daunting. The Internet and other advances in electronic technology have made amazing and positive changes in the way information can be gathered and shared. By 2007, it is estimated that there will be more than a billion computers and Internet-enabled appliances. But as significant as the advancement has been, many of us still rely upon printed products; some agencies do not make all of their information resources available via the network; and search engines and related technologies are not sophisticated nor sufficiently robust to permit effective cross database searching and retrieval. Moreover, many users continue to require hard copy, microfiche, and disc products to meet their needs. Certain types of publications still are most easily used in print, and CD-ROM is often a more useful format for disseminating large data sets than is the Internet. Last year alone, the Government Printing Office sold 19 million of these tangible government publications.

It is estimated that achieving the vision of effective and easy access to information resources across agency databases—access to the content of the resource, not mere linking—will not be possible for at least five years. And achieving this vision is not only technology dependent. Policies will need to be enforced to ensure that agencies are in fact making their resources publicly available. We need to ensure an efficient means of supplying similar NTIS products to citizens and businesses. Simply replacing NTIS dissemination of technical and business information with decentralized Internet access—posting individual technical and business reports on individual agency Internet sites—will not ensure continuing and permanent access to scientific and technical reports.

The following questions should be asked:

1. How has the federal information framework evolved and changed most recently due to the introduction of information technology and the increasing reliance upon the networked environment to make information resource publicly available?

2. Looking to the future, what technological changes are anticipated and are required to implement a comprehensive approach to meeting the Nation's needs in access to federal information resources, of which STI is only one part?

CONCLUSION: NTIS AND THE PUBLIC GOOD

The NTIS plays a key role in a complex, interwoven information system encompassing many agencies, users, and technologies. Thus, we strongly support this Subcommittee's undertaking of a thoughtful, thorough analysis and a systematic approach to the Department of Commerce proposal, taking into account the broader federal information framework. We need to have all the right stakeholders at the discussion table. We need to allow enough time to do it right, because continued public access to and preservation of this collection—and future scientific and technical information that the federal government produces—is of critical importance to our R&D enterprise and to the economic well-being of the nation.

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 58,000 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.

THE MEDICAL LIBRARY ASSOCIATION (MLA)

The Medical Library Association is an organization of over 3,800 individuals and 1,200 institutions in the health sciences information field. MLA members serve society by developing new information delivery systems, fostering educational and research programs for health sciences information professionals, and encouraging an enhanced public awareness of health care issues.

THE SPECIAL LIBRARIES ASSOCIATION (SLA)

The Special Libraries Association is an international professional association representing the interests of information professionals in 60 countries. Special librarians are information resource experts dedicated to putting knowledge to work to attain the goals of their organizations.

On the other hand, NTIS operates under a different model mandated by Congress where the agency maintains its specialized collection of the U.S. government's scientific and technical information and disseminates its findings at no cost to the U.S. taxpayer. Instead, both domestic and international consumers of this information pay the nominal costs associated with supporting ongoing access to this collection. NTIS places an important emphasis on partnerships with the private sector to expand dissemination of its content and provide for ongoing technological innovation, again at no taxpayer expense.

The final result is another win-win situation for U.S. citizens. They have the benefit of the ongoing availability of the items within the NTIS Clearinghouse and improved access to the NTIS Collection through technological innovation spurred by private-sector investment as opposed to taxpayer dollars. This is accomplished with-

out the need for an appropriation from Congress. If NTIS were eliminated and all agencies were required to cover the additional burden of disseminating their government research information, additional taxpayer resources would be required.

WHERE DO WE GO FROM HERE?

NTIS' successful Union/Management partnership has helped NTIS to significantly reduce costs. However, now that NTIS' financial crisis has subsided, the outplacement program and other staff reductions from faster-than-expected attrition have left NTIS with 10-15 fewer employees than planned. This has resulted in NTIS having a shortage regarding the skill mix required to provide its full range of services to the public and other agencies, and to generate the necessary revenue. The Union recommends that NTIS have the opportunity to move forward with its restructuring plan. This would include the lifting of a hiring freeze now imposed upon the agency by the Department. These actions would support NTIS' ongoing use of technology to complete its public good mission, while further reducing costs. In addition, the Union urges Congress and the Executive Branch to complete a review of current government information resources (i.e., NTIS, the Government Printing Office, the Library of Congress, etc.) to develop an overall "information policy" which can best utilize these invaluable government assets.

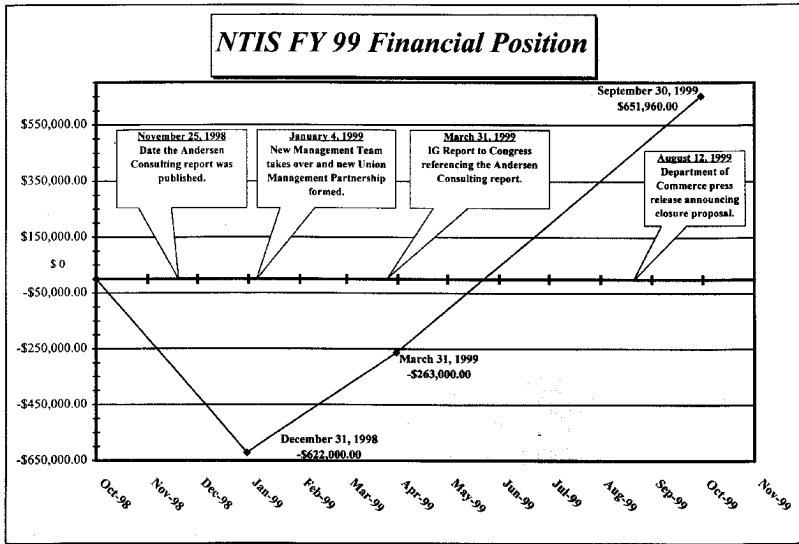


Table 1

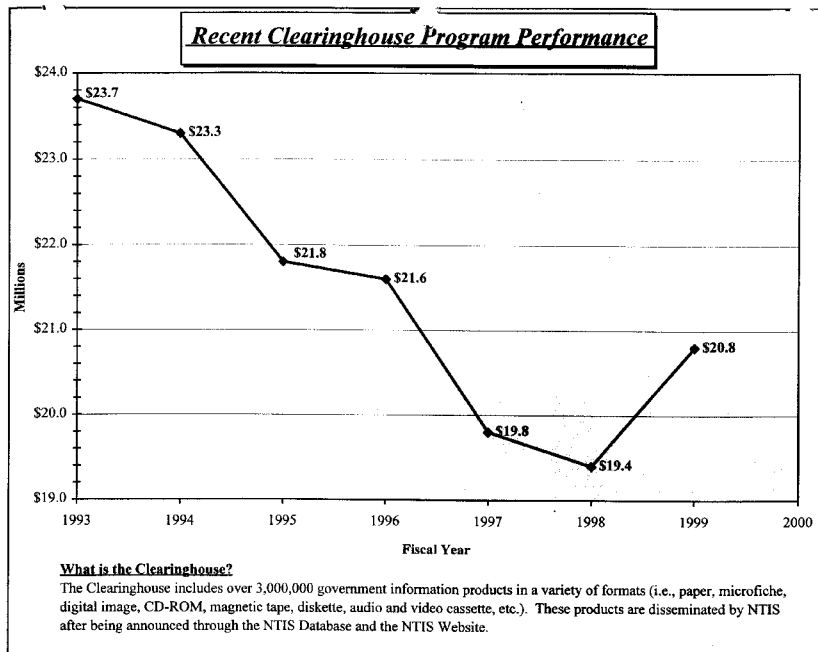


Table 2

PREPARED STATEMENT OF JAMES H. BILLINGTON, THE LIBRARIAN OF CONGRESS

Thank you for the opportunity to provide the Library of Congress perspective as the Subcommittee reviews the proposal by the Department of Commerce to terminate the National Technical Information Service (NTIS). In its initial August press release and subsequent bill drafts concerning the closing of NTIS, the Department of Commerce proposes transferring NTIS paper, microfiche and digital archives and bibliographic databases to the Library of Congress, to be maintained and made accessible to the public. The Subcommittee has provided to the Library draft legislation intended to accomplish the termination of NTIS and the transfer of various collections and functions out of the Department of Commerce, which the Library is in the process of evaluating to determine the legislation's impact on the Library's mission and existing programs.

While discussions of this matter have been necessitated by the actions of the Department of Commerce, now is perhaps an opportune time also to address pressing and important new challenges in information collection, dissemination, and archiving that face the federal government as a whole. The Library of Congress is eager to participate in an examination of federal information policy and to assist in determining the ultimate disposition of the collections and functions of NTIS.

Department of Commerce statements correctly point out that the Library has sizeable holdings in the area of science and technology. Our collections in this area date back to the Congress' purchase of Thomas Jefferson's personal library in 1815, after the original Library of Congress was burned by the British army. The library that Jefferson sold to the Congress not only included over twice the number of volumes in the Congress' earlier library; it expanded the scope of the Library far beyond the bounds of the destroyed books that had been devoted primarily to legal, economic, and historical works. Jefferson's books were in French, Spanish, German, Latin, Greek and Russian and the new Library of Congress covered such subjects as architecture, agriculture, chemistry, zoology, technical arts, and geography. This was the basis for the Library's universal collection of today—along with the transfer of the Smithsonian Institution library in 1866 to the Library of Congress of about 40,000 volumes of publications of learned scientific societies, museums, exploring expeditions, and observatories throughout the world. This transfer, known as the Smithsonian Deposit, considerably broadened the range of the Library's science collections and permanently influenced their further development.

Over the next century, the Library greatly expanded its scientific collections, both domestic and foreign. This expansion was primarily attributable to intelligence gathering in wartime, copyright deposit and a vast increase in foreign exchanges and overseas acquisitions offices (which today provide acquisitions for the nation's premier research libraries as well for the Library's own collections). In 1963, the Library, at the urging of, and with funding from, the National Science Foundation, began to operate a National Referral Center for Science and Technology. Over time, referral services for scientific information were integrated into the Science, Technology and Business Division.

The Science, Technology and Business Division provides reference and bibliographic services and develops the collections in all areas of science and technology (with the exception of clinical medicine and technical agriculture, which are subject specialties of the National Library of Medicine and the National Agricultural Library respectively) and in business, management and economics. The scientific, business and technical materials in the Library's book and journal collection for which the Division has collection development responsibility comprise about eight million items—roughly 40 percent of the Library's total book and journal collection. In addition, the Division maintains, services, and develops its own specialized collections of technical reports, standards and international "gray literature" (i.e., non-classified, unpublished material often available only through specialized channels), amounting to 3.7 million items.

On several occasions—particularly during the early 1990's, with the advent of mass public use of the Internet—the Library has explored enhancing general access to scientific and technical information through development of specialized reference databases, making "gray literature" available electronically, and taking on a leading role in the national discussions of this topic. These exploratory activities have involved assessment of other federal agencies' collections and services, as well as collaboration with academic and commercial interests in assessing the respective roles of government and the private sector. During the Reagan Administration's discussions relating to privatization of NTIS, then-Secretary of Commerce Mosbacher and I conducted preliminary but inconclusive discussions about having the Library of Congress become the archival center for NTIS documents. The idea seems to have

been revived to some degree in the Commerce Department's stated proposal for transferring NTIS' collections to the Library.

Editorials and commentaries on NTIS's imminent demise seem to accept the conclusion that electronic access to, and agency-based rather than centralized dissemination of, scientific and technical information have rendered an NTIS-type operation obsolete. Librarians and business and academic researchers are not so likely to concur with this conclusion. In many ways, the growth of electronic access and automated databases have greatly expanded the demand for reference services that are integrated with document delivery, such as the services provided by NTIS, as well as those provided by the private sector information industry. The question of how optimally to meet those demands in a rapidly changing information environment is now squarely before this subcommittee.

As the Subcommittee explores the best way to proceed, I hope you will consider, by their component parts, the full spectrum of operations involved in collecting, organizing and supplying scientific and technical information. NTIS provides or acquires a wide array of services, including publication, acquisition, indexing, abstracting, translation, digitization, distribution, and archiving of information from many sources and in several formats. NTIS not only provides centralized access to scientific and technical *U.S. government* information, but it also acquires these types of materials from *non-government* and *foreign sources* and provides reference and distribution services for these as well. These functions dovetail with activities carried out by the Commerce Department, the Library of Congress, and many other federal agencies in assisting the nation's academic and commercial entities to capitalize on research and development of the United States and the world, and to push innovation to the next level.

The assertion that some of NTIS' functions cannot be sustained on a cost-recovery basis does not necessarily mean that all or even most of its functions should be discontinued. If NTIS cannot continue in its present form, the federal government must examine which of its functions are sufficiently desirable and effective to merit continued federal support, and how and where such functions can best be sustained to ensure the uninterrupted acquisition, accessibility and preservation of scientific and technical information. Each function now carried out by NTIS should be assessed as to whether the function is needed, whether it should be centralized (or centrally coordinated); whether multiple access points, public and private, should be encouraged; and whether the function should be self-sustaining or publicly supported in order to serve a larger public good. Only then can a responsible conclusion be reached as to which agency or agencies are best positioned to ensure future access to information in all formats, even to some low-demand but potentially important products.

The Library of Congress can lend substantial expertise to this assessment, and may, given adequate resources, be a logical successor to NTIS for those functions that complement the Library's mission—particularly collecting, cataloging, and providing congressional, research and public access to scientific and technical material that is of policy-making or historical value or may not be easily found anywhere else. However, these functions, as the Department of Commerce has pointed out, are costly and, in large part, cannot realistically be recouped through a fee-based sales program. Moreover, the Library lacks the authority (and a proper business mechanism such as a revolving fund) to retain fees from such a sales program.

However, many of NTIS' functions (including proactive information retrieval activities, high volume document distribution, translation of foreign materials, abstracting scientific and technical reports, declassifying government information, brokering agency databases to the information industry, and print and electronic publication of information products of executive agencies) are beyond both the Library's current mandate and available resources. Several functions alluded to in the most recent available draft of the Department of Commerce's legislative proposal, such as being involved in determining a "compatible electronic format" for future supplies of executive branch STE information, raise separation of powers issues, as well as practical issues that Congress has struggled to address in the larger context of public access to federal information.

The Library has submitted written questions to the Department of Commerce to elicit information regarding the resources necessary to fulfill the functions that Commerce proposes to transfer legislatively to the Library. This information will be necessary for the Library—and the Congress—to assess the Library's ability to carry out new functions that fall within our mission without impairing our current programs and services. I have attached for the Subcommittee's information the specific questions posed to the Department of Commerce [Attachment A]. We understand that responses to the questions will be provided shortly before the hearing; as soon as the Library receives them, we will share them with the Subcommittee.

Mr. Chairman, I commend you and the members of this Subcommittee for convening this hearing. The matter immediately before this Subcommittee, NTIS, is one part of a larger government wide concern. The resolution of this matter will have a bearing on federal information policy generally. The Library continues discussions with National Archives, the Government Printing Office, the library community and other stakeholders about this proposal as it relates to the collection, dissemination and archiving of government information generally. These functions, whether carried out by NTIS or elsewhere, arguably should be considered to be component parts of a cost-effective federal investment in research and development—a goal this Subcommittee has worked toward during this session.

In his sixth annual message as president, Thomas Jefferson stated that “a public institution alone can supply those sciences which, though rarely called for, are yet necessary to complete the circle, all the parts of which contribute to the improvement of the country.” The Library of Congress is one public institution that looks forward to continuing to work with the Congress to ensure the circle is complete.

Attachment A

QUESTIONS RAISED BY SEPTEMBER 30, 1999 DRAFT LEGISLATION BY THE LIBRARY OF CONGRESS TO THE U.S. DEPARTMENT OF COMMERCE, OCTOBER 7, 1999

1. Transfer of Collections to Library

- Does the term “scientific, technical, or engineering information” as defined in section 3(e), fully encompass the 3-plus million item collection to be transferred to the Library of Congress, including foreign materials and gray literature?
- The draft appears to place the burden on the Library, once it receives the collection, to comply with the Federal Records Act of 1950 [section 102 (b)]. The National Archives and Records Administration has examined the collection since the Department of Commerce’s announcement of the closing of NTIS. What is the assessment of the quantity and nature of the records that are required by law to be transferred to NARA?
- What are the current space requirements for the collection (sq. ft.)?
- What is the current level of bibliographic control of the collection, particularly of the older items (over 5 years old)? Is the current cataloging information compatible with LC cataloging?
- Please provide a breakdown of the formats of items in the collection (paper, fiche, digital other) and the size of the bibliographic and other databases.

2. Resources Needed to maintain the collection

- Please provide a breakdown of NTIS personnel (or other Department of Commerce or contract personnel), by GS-level, responsible for the following NTIS activities:
 - acquisition (including collections policy development)
 - cataloging
 - abstracting and indexing
 - translating
 - storage, archiving and preservation (including re-formatting)
 - database and IT management
- What is the volume of new items coming into the collection per year, in what formats? What is the annual volume of cataloging, abstracting, and indexing performed? What proportion of new acquisitions have not been digitized?

3. Other Functions and Responsibilities

- What is “full availability and continued improvement” intended to mean, precisely [sec. 201(a)]?
- Title 3 is silent with respect to agencies’ obligations under Title 44. How is this intended to affect those obligations?
- What recourse would the Library have if an agency did not comply with sec. 201(b)? How would the Library know whether an agency had failed to provide the information? Does NTIS provide staff resources for the purpose of tracking down “fugitive” documents?
- Describe the number and types of inter-agency agreements NTIS has currently to ensure receipt of new government and unpublished information and contract research reports.

4. General issue:

- The draft legislation includes the finding that “The Library of Congress is uniquely suited to serve as a central point of access” to government information. What factors have gone into the implied conclusion that the Government Printing Office is not so suited?

RESPONSE TO QUESTIONS SUBMITTED BY HON. BILL FRIST TO MICHAEL F. DiMARIO

Question 1. Can you describe why you are able to include the same documents in both your sales program and the Federal Depository Library Program (FDLP)?

Answer. When publications are printed or procured through GPO, they are reviewed for selection by the FDLP and our sales program. By law, all publications having public interest or educational value, except those produced for purely internal administrative purposes or classified for national security reasons, are selected for the FDLP. Agencies which print or procure publications other than through GPO are required by law to provide copies of those publications for inclusion in the FDLP. For the sales program, only those publications with sales potential, based on analysis by GPO and the publishing agency, are selected. Publications distributed to depository libraries are funded by an annual appropriation. The sales program is supported only by revenues from sales.

Question 2. Can you elaborate on the competition between the GPO and NTIS sales programs in recent years?

Answer. NTIS provides a highly valuable public service through the performance of its core function: the collection and dissemination of Federal scientific, technical, and engineering information (STEI). For most of the past 50 years, when NTIS's activities were directed toward the performance of this core mission, there was little if any competition with GPO's sales program, which is established by law as a general sales outlet for Government publications of all kinds. However, following the establishment of NTIS as a total cost recovery enterprise, NTIS has become involved in the dissemination of a variety of non-STEI in an effort to generate revenues because of the limited sales potential of STEI titles. This has led it into direct competition with GPO's sales program. Competition is not the legislative purpose of either GPO's or NTIS's programs. The question, therefore, is what public purpose is being served by this competition, in view of limited public resources.

In recent years, NTIS has actively sought out GPO's best-selling non-STEI titles (for example, *Big Emerging Markets* and the *Statistical Abstract*), and it today carries an extremely wide range of subjects, including Civil War histories. NTIS's effort to generate revenues recently resulted in recommendations to go even farther afield from its core mission. A market study issued last year by Andersen Consulting, Inc., “Developing a Market-Growth Strategy” (November 25, 1998), called on NTIS to “develop and execute a rigorous, market-driven operational strategy” by “identifying and acquiring more best-sellers” (p. ES-3), including publications on Medicare, school safety, agriculture, and so on (p. ES-5). These are clearly non-STEI products. The report also states, “[a]lthough NTIS' primary market is professional publishing, product opportunity should be considered for cross-over publications into the consumer/trade segment,” including such “consumer-trade segment titles” as cookbooks, mystery, religion, romance, sports, travel, and gardening (p. 74). GPO is not the only Government entity to register concern with these developments. In his March 1999 Semiannual Report to Congress, the Inspector General for the Commerce Department stated “[w]e are...concerned that in order to replace lost sales, NTIS is seeking business opportunities at the perimeter of its statutory mission...” (U.S. Department of Commerce, Office of Inspector General, Semiannual Report to Congress, March 31, 1999, p. 14).

The question of what public purpose is being served by the competition between NTIS and GPO can be illustrated by our experience with sales of the Internal Revenue Services tax forms CD-ROM product, an issue that was raised during the hearing. Until 1998, GPO was the producer and distributor of the IRS tax forms CD-ROM. The product consists of two CD-ROM's, distributed about one month apart. In 1997, GPO sold 56,830 copies of this product via phone and mail orders. In 1998, IRS provided the tax forms data to NTIS instead of GPO. In order to obtain a product for sale to GPO's longstanding customers, we had to purchase CD-ROM's from NTIS. In 1998, GPO sold 35,000 copies of this product via mail, phone, and e-mail order, and NTIS reportedly sold about 30,000 copies. GPO priced the CD-ROM at \$20 while NTIS sold it at \$20 plus \$5 shipping and handling (a total of \$25) if ordered by phone or mail, or \$13 plus \$5 shipping and handling (a total of \$18) if

ordered electronically. In spite of NTIS's lower price for electronic ordering, GPO still captured half the market.

This year, IRS again provided the tax forms data to NTIS. The IRS selection of NTIS was held after a competition between NTIS and GPO. GPO has not been permitted to see the NTIS submission to IRS and so we have no basis on which to judge its merits or to counter with a better offer. The NTIS price is currently being advertised as \$23 plus \$5 shipping and handling (a total of \$28) for mail, fax and telephone orders, or \$16 plus \$5 shipping and handling (a total of \$21) for electronic orders. GPO is preparing a comparable product based on IRS data that is available online, and will offer customer support services. The GPO price will be \$20 for mail, phone, fax, and electronic orders.

Since the Printing Act of 1895, GPO has a strong record of providing responsive, cost-effective information products and services for Congress, Federal agencies, and the public. We will willingly compete with other Federal agencies to provide public access to public domain information products in CD-ROM format, provided the competition is conducted openly with full and fair access to all information and, of course, accords with all statutory and regulatory requirements regarding the reproduction and dissemination of Government publications. However, in this case the competition was conducted without full and fair access to all information. Moreover, it has resulted in a situation in which purchasers of the CD-ROM from NTIS will pay \$8 more for this product than they need to if they are unable or unwilling to order electronically. Based on last year's purchasing patterns, over 40,000 people did not purchase electronically. If that pattern is repeated, these customers will pay up to \$320,000 more for the NTIS product than GPO would have charged. Finally, it placed the Government's distributor of STEI in the place of being a distributor of IRS tax forms to the public, which is clearly outside of its statutory mission.

NTIS's mission as a collector and disseminator of STEI is a valuable function, but its competition with GPO's general sales program does not appear to be generating any marked improvement in public access to Government information products.

Question 3. You mentioned that the GPO sales program is operating at a loss. NTIS has testified about how it has reduced costs. What has GPO done to reduce its operations costs?

Answer. As we testified, our sales program is facing a loss situation today. One reason for this is the increased availability of some of the same data on the Internet. However, the decline in sales of Government publications cannot be attributed solely to the free availability of information on the Internet. Reductions in the number of Federal publications due to cutbacks in agency publishing budgets, in addition to competition from private sector reprinters and other Government sales programs (such as NTIS), are contributory factors to the decline of sales revenue.

Unlike NTIS, GPO has a financial structure that provides retained earnings that can be used to temporarily absorb losses, thus avoiding an anti-deficiency situation. To address the loss, we are reducing staffing (through attrition) and reducing product order volume to minimize the potential for unsalable publications. We have improved public order options by making secure online ordering available. We are increasing promotion of sales products. We have received authorization from the Joint Committee on Printing to include popular agency publications printed or procured other than through GPO in the sales program. We have implemented a general price adjustment. We have reduced warehouse space for publications and are planning for further reductions by releasing some of it for consolidation with paper warehouse storage space. We are implementing an Integrated Processing System to automate all program functions. Beyond these steps, we will undertake a review of the overall program structure to determine how best we can continue meeting the public's need for access to Government information products through reasonably priced sales.

Question 4. Would you also transfer NTIS' current consulting services to other Federal agencies?

Answer. We do not have adequate information available on NTIS's programs and services at this time to make a determination on the appropriate disposition of NTIS's functions, should Congress transfer them to GPO. Our primary interest, as we stated in our testimony, is in the future of NTIS's core STEI dissemination function, including the provision of free FDLP access to "fugitive" Government publications and the electronic data and web sites hosted on Fed World.

Question 5. Does GPO's current mandate allow it to take over all of NTIS without further legislative change?

Answer. We believe our legislative mandates to catalog, index, and make available to depository libraries all Federal information that has public interest or educational value, except those produced for purely internal administrative purposes or classified for national security reasons, are sufficient authorization for taking on the collection and dissemination of STEI, if Congress makes that determination. Our sales program and revolving fund authorizations are broad enough to take on the sale of STEI, although certain legislative adjustments to that authority may be desirable with respect to pricing and discounts. However, to continue the NTIS practice of collecting and distributing non-Federal Government STEI, a specific statutory authorization may be necessary. In addition, we currently operate under a statutory ceiling on staffing in the Legislative Branch Appropriations Act that might be affected by a transfer of functions, depending on how many staff are included in the transfer.

Question 6. If GPO was granted the NTIS functions, how many of the NTIS staff would you expect to add to the GPO staff?

Answer. We would regard the NTIS staff associated with the transferred NTIS functions as absolutely essential to the successful continuation of those functions. The number of transferred staff would depend on which functions Congress determines to transfer.

Question 7. Can you comment on NTIS's "cooperative publications" and how GPO will address this designation if NTIS is transferred to the agency?

Answer. NTIS has long claimed its publications are "so-called cooperative publications which must necessarily be sold in order to be self-sustaining," as defined in section 1903 of Title 44, U.S.C. Such publications are statutorily exempted from distribution through the FDLP. Notwithstanding a General Accounting Office decision supporting NTIS, however, we do not believe that this exemption was intended for publications created wholly at Government expense, as are most STEI publications handled by NTIS. Accordingly, we would make them available for distribution to depository libraries. Every title that is in our sales program is also in our depository library program.

Question 8. Do you agree that the resolution to NTIS should be part of a larger initiative to address an overall policy on the electronic publication and dissemination of government information? Do you have any suggestions or recommendations for such a policy?

Answer. We would not object to addressing overall information policy in this fashion. However, the continued bifurcation of Government information collection and dissemination functions, as well as the lack of FDLP access to the NTIS collection and databases, are impediments to comprehensive and equitable public access that should not continue for a prolonged study period. These impediments, if allowed to continue, would not be good building blocks for an overall policy on the publication and dissemination of Government information.

If a larger initiative to address an overall policy is undertaken, we recommend that simplifying public access through the development of a centralized locator system for Government information, ensuring permanent public access to all Government information products, and consolidating the Government's information dissemination mechanisms to reduce duplication and take advantage of economies of scale should be carefully considered.

Question 9. Regardless of the resolution for which agency has the mandate to publish government scientific literatures, do any of you have recommendations for dealing with the issue that agencies are not submitting documents as required by law?

Answer. We have long believed that the enforcement of this requirement should be addressed through the Office of Management and Budget's Office of Information and Regulatory Affairs. This Office issues information policy circulars which are binding on Federal agency performance of information management functions.

RESPONSE TO QUESTIONS SUBMITTED BY HON. BILL FRIST
TO DR. JOAN R. CHALLINOR

Question 1. In working to produce the report on "Assessment of Electronic Government Information Products," did your participants include both librarians and technologists at the different federal entities?

Answer. Yes, survey respondents, other survey interviewees, and the special advisory group established by the Commission to help plan the study included a wide variety of different federal agency personnel and offices, including: librarians;

records and archival officers; information system and technology staffs; public affairs officials; web and media specialists; management analysts; technical information personnel; chief information officers; publishing and printing officials; program managers; and others. Several library and information science professors and former high-level government information policy experts served on the study's advisory group and were also interviewed in-depth. All three branches of Government were involved, and representatives of the Federal Depository Library Program, a key constituency group of the study, participated in the study's design and periodically reviewed progress and offered advice, as did various federal interagency and public interest groups. In short, the survey consciously solicited a wide variety of viewpoints and perspectives, and therefore its conclusions and findings, to the best of our knowledge, are not unduly biased or weighted in favor of any particular "vested interests." Indeed, sometimes a difference of opinion was expressed in response to the same interview question depending on the respondent's particular perspective of the issues and problems.

Question 2. Do you agree that the resolution to NTIS should be a part of a larger initiative to address overall policy on the electronic publication and dissemination of government information? Do you have any suggestions or recommendations for such a policy?

Answer. Yes, NCLIS strongly believes that the "resolution of NTIS" challenge should *not* be dealt with in a disconnected, piecemeal fashion. Rather, the matter should be part of a broader investigation that "lays out the record" in a public manner after carefully considering:

1. the viewpoints and stakes of the many players involved—the Congress, the President and OMB, agency chief information officers, major federal information dissemination agencies such as the Government Printing Office and the Library of Congress, agency program divisions, agency functional offices such as publishing and webmaster offices, citizens, businesses, state and local levels of government, interagency committees, public information users groups, consumer interest groups, the media, historians, scientists and scientific and technical information officials, federal depository librarians, and others;
2. federal public information dissemination and electronic publishing laws, rules, regulations, policies, programs, and practices;
3. a selected sample of interagency and agency level implementing procedures (e.g. agency web guidelines and traditional as well as electronic publishing procedures);
4. existing organizational missions and authorities of the various federal entities with public information dissemination and electronic publishing responsibilities;
5. changing citizen needs for, and ways of identifying, obtaining, and using government information in the Information Age (both traditional ink-on-paper and electronic); and
6. other factors.

In its above-mentioned study report, NCLIS documented at the top, middle and lower agency levels both (1) a lack of awareness and understanding of many of the current laws that touch on public information dissemination and electronic publishing, as well as (2) considerable confusion, overlap, duplication, inconsistencies and gaps among and between the applicable federal laws, authorities, policies, programs and so on. For example, surprisingly, there is no statutory provision that defines *permanent public access*, and yet that information management concept is crucial to the orderly migration of traditional (pre-electronic) information products to the web, minimizing federal information losses due to fugitive materials, and guaranteeing the preservation of the federal record for historical, archival, socio-cultural and other reasons.

NCLIS does have some preliminary ideas as to how this fragmentation of guidance and responsibility at the government-wide, branch and agency levels can be significantly reduced. The Commission also has some views as to how the many dispersed and compartmentalized dissemination and publishing authorities could be consolidated, simplified and streamlined. However, the Commission believes the appropriate course of action is to undertake a 3-6 month investigation as recommended in our prepared testimony to the Committee. Only after that investigation considers the viewpoints of the many players involved would the pros and cons of alternative scenarios and strategies be formulated for the Congress to consider.

The Commission also believes that while it has the statutory authority to initiate such an investigation, it would be very helpful if a mandate were given to us by Congress (just as it was by the Joint Committee on Printing in the case of the just-

completed study) in order to maximize the prospects for soliciting greater agency cooperation, attracting keener public interest and support, and securing more focused media and public interest group attention.

Question 3. Regardless of the resolution for which agency has the mandate to publish government scientific literature, do any of you have recommendations for dealing with the issue that agencies are not submitting documents as required by law?

Answer. NCLIS believes that what needs to be done first and foremost is to educate and train agency officials in order to enlighten them as to the relevant statutes and regulations—and enforce current laws. For example, there is a provision in the Paperwork Reduction Reauthorization Act of 1995, Section 3506(d) that says:

“with respect to information dissemination, each agency shall provide adequate notice when initiating, substantially modifying, or terminating significant information dissemination products”

Some agency officials were aware of this provision, but most were not, or were confused as to how it related to other legislation. Beyond the Paperwork Reduction Reauthorization Act of 1995, which is a part of Chapter 35 of Title 44 of the USC, other provisions of Title 44, such as those that pertain to the authorities and responsibilities of the Public Printer, the Government Printing Office and the Federal Depository Library Program (in particular Chapters 2, 5, 17, 19), and the National Archives and Records Administration and agency records programs (in particular Chapters 21 and 31), and other legislation such as the Information Technology Management Reform Act, and the American Technology Pre-eminence Act all have a bearing on agency requirements for submitting agency documents and information to NTIS, NARA and the FDLP.

But NCLIS found that neither federal nor agency level web guidelines, nor other information dissemination guidance policies and procedures, adequately implement the provisions of these many laws. As a consequence, government information products “appear and disappear” oftentimes with very little, or even without any warning whatsoever, whether products are intended for internal agency personnel or for external public audiences. Nor do federal publishing guidelines and standards bring together in one place the many considerations relating to alternative information formats, mediums, standards and dissemination practices.

In sum, the answer to this question also underscores the need for a sound, official government definition for the concept of “permanent public access.” That concept is closely related to, but is distinguishable from a similar information retention requirement—“permanent records retention,” which is embodied in Federal records legislation. Currently, agencies are floundering in the absence of authoritative guidance and many agencies (if not most) assume that the two concepts are synonymous. Consequently, agencies are interpreting information retention requirements in a very confusing, inconsistent, and inadequate manner.

The investigation we are proposing would squarely address the critical need for uniform and practical guidance in the area of information retention, and sorting out closely related concepts including the two mentioned in the preceding paragraph plus two very important and closely related additional areas: *authentication* and *preservation* of information materials. There is also a need for a consistent definition of just what is *government information*. NCLIS has already drafted for review several “white papers” in these areas.

In the Foreword to the Office of Technology Assessment’s report “Helping America Compete: The Role of Federal Scientific and Technical Information,” (July 1990), the statement is made:

“Global change is a fact of contemporary life—whether in the political, economic, or technological spheres. U.S. leadership in all of these areas is being challenged. We need to take actions that can help renew the U.S. competitive edge in the worldwide marketplace of ideas, products, and services, and to provide leadership on global issues such as the environment. A key area of U.S. strength could and should be our scientific and technical information. The U.S. Government is the largest single source of STI in the world—ranging from technical reports on aerospace propulsion and solar thermal electronic systems to satellite data on oceanic and atmospheric trends to bibliographic indices on medical and agricultural research. Yet the U.S. is not taking full advantage of opportunities to use Federal STI as part of a strategy to renew the U.S. competitive edge. STI is very important to scientists and engineers in a wide range of research, development, and commercial activities. They spend a lot of time on STI—time that is valued, conservatively, at several billions of dollars per year just for federally funded researchers. When used efficiently, Federal STI pays off handsomely.”

In summary, NCLIS believes the core issue at stake in the NTIS transfer is not the sorting out of Federal agency organizational boxes or benefit: cost equations, al-

though they certainly must be addressed, but, rather, a carefully considered, fresh assessment of how to strengthen the value of Government information as a strategic national social and economic resource to America and individual Americans in the emerging Information Age.

The Commission would welcome an opportunity to meet with Committee members and/or staff as early as practicable to discuss our proposal for undertaking a study which explicitly addresses not only the specific questions raised by the Secretary of Commerce's proposed transfer of NTIS authorities, functions, and collections, but the broader questions of how to strengthen government-wide public information dissemination and electronic publishing policies, organizational missions and authorities, and related matters as well. We will be contacting you shortly for that purpose.

RESPONSE TO QUESTIONS SUBMITTED BY HON. BILL FRIST TO BILL CLARK

Question 1. You have mentioned the cost reduction efforts of NTIS in your statement. Can you describe some of the specific efforts and their impacts to the overall financial position of the agency?

Answer. Here are specific cost savings realized during FY99:

Office Space	\$40,000
Vehicle Rentals	\$5,000
Telecommunications	\$20,000
Staffing	\$1,425,000
Travel	\$50,000
Performance Bonuses	\$300,000
Total Cost Savings:	\$1,840,000

The above cost savings are the results of the successful efforts made by NTIS employees, and the Labor/Management partnership to improve the organization's financial performance. Together, we began the process of implementing these savings in the Spring of FY99. Over fiscal year 2000, NTIS should realize annual savings of several million dollars from these reductions.

The cost savings delineated above were made possible by hard work and sacrifice. For example, forty-six talented NTIS employees relinquished their positions to be out-placed within other Commerce agencies; several NTIS staff members surrendered their offices for cubicles to reduce rent costs; employee travel was curtailed; official vehicle usage was reduced; telecommunications costs were lowered; and employee performance bonuses were cancelled. These employee efforts made a dramatic contribution to improving NTIS' financial position, allowing the organization to finish with a \$650,000 surplus for fiscal year 1999. Had the Department of Commerce not made its precipitous August 12, 1999 closure proposal, NTIS' restructuring efforts could easily have been held up as a model of a successful Labor/Management partnership. The organization reduced its annual costs by over 10%, while both increasing its Clearinghouse revenue, and disseminating more government information than ever.

Question 2. Mr. DiMario of GPO mentioned duplicative efforts between GPO and NTIS in the areas of making certain types of technical information available, as well as printing and reproduction services to other federal agencies. Can you please comment on this?

Answer. As a fully cost-recovery agency, NTIS must use its resources efficiently, and therefore avoid wasteful duplicative efforts with the Government Printing Office—an agency receiving substantial appropriated funds. NTIS' Collection contains more than 3,000,000 products, and it adds between 40,000 to 100,000 new products annually. Many of NTIS' products are government technical reports that are published by government contractors, and not by GPO. New products are added to the NTIS Collection based upon their future research value, as opposed to market value, and are available from NTIS in perpetuity. Meanwhile, it is the bargaining unit's understanding that GPO's sales program concentrates on about 12,000 government bestseller products each year that are selected because of their potential sales value, as opposed to research value, and remain available only as long as supplies last. When comparing NTIS' 3,000,000 "research valued" product inventory to GPO's bestseller sales program containing 12,000 products, overlap is bound to be limited.

Moreover, there have been occasions where agencies have requested NTIS knowledge and expertise in assisting them with product dissemination. This was due to either NTIS' superiority in technology and online systems, customer service, marketing, or NTIS' ability to partner with the private sector to resurrect products

which lost federal funding (i.e. U.S. Industry & Trade Outlook, the NOAA Dive Manual, etc.). The IRS CD-ROM cited by Mr. DiMario at the hearing, is an example of NTIS' definitive customer service advantage over GPO's. We produced the CD-ROM in conjunction with our close relationship with the IRS in supporting their Web site. NTIS won the award to produce the CD-ROM from the IRS because of our superior customer service ability. GPO had produced the CD-ROM product in the past. Consequently, NTIS distributed last year's IRS CD-ROM, and the IRS was so impressed with our capabilities, they again awarded production to NTIS this year. It should be noted that NTIS' Agreement with the IRS did not prohibit GPO from producing and marketing the product. In this instance, it would appear that having more than one outlet for the IRS-CD-ROM product may have lowered the price paid by consumers, while improving service. This outcome is better for consumers and the public good.

There are many ways that GPO actually benefits from NTIS' print capabilities. First, NTIS is mindful of its requirements under Title 44 and utilizes GPO to do its printing. Under current rules, NTIS is allowed to print outside of GPO under certain circumstances where the printing costs fall under a certain dollar amount, and no appropriated funds are involved. As part of this process, NTIS is fully aware of the need to supply copies of these documents to GPO's depository library program. NTIS coordinates with GPO on the number of copies required, and provides timely delivery to the Federal Depository Library Program (FDLP). The fulfillment of these documents is paid for by NTIS. This is another NTIS bonus reaped by GPO, depository libraries, the public-at-large, and taxpayers.

GPO's claim of duplicative efforts is not the reason for failures within GPO's sales program. Similarly, NTIS' FY98 financial shortfall was not due to competition from GPO. Comparing the two operations is like comparing apples and oranges. Moreover, attempting to consolidate NTIS functions within GPO's sales program causes great concern to the Union since Mr. DiMario's testimony indicates that GPO's sales program is currently sustaining operating losses. Meanwhile, NTIS has successfully reduced its costs, and is in an excellent position to again post a surplus during FY2000. This will be accomplished without any appropriation. Therefore, any suggestion of merging NTIS Clearinghouse resources into GPO's financially troubled sales program is met with great concern from the Union at NTIS. We want to avoid jeopardizing the future of NTIS' workforce, and its valuable mission as the Clearinghouse for scientific and technical information. This is especially true now that NTIS has right-sized itself, and put its financial house in order.

If the Department's strategy to merge NTIS functions with another agency were implemented, it would cause an additional burden on U.S. taxpayers. Mr. DiMario's Senate testimony stated: "I want to make it clear, however, that there would be an appropriations impact associated with making NTIS' collection available to depository libraries." He went on to state: "The amount of increase in the appropriation would depend on how the NTIS Collection is made available to the libraries. Depending on the final plan approved for the disposition of NTIS, there may also be an impact on our statutory limitation on full-time equivalent (FTE) employment." Mr. DiMario's oral testimony indicated that GPO would require between \$2 million and \$5 million annually just to distribute NTIS' Collection within its depository library program. Based upon Mr. DiMario's public statements, the GPO plan would cost taxpayers more, risk the loss of valuable NTIS products and services, and jeopardize employment for NTIS workers. The Union considers this is a lose-lose proposition for all involved.

The Union would like to take a moment to address a major concern mentioned in the Public Printer's testimony that federal depository libraries do not have access to NTIS' Collection. It is the Union's understanding that hundreds of depository libraries currently have access to the NTIS Database, an electronic catalog of more than 2,000,000 products. These depository libraries access the NTIS Database via state-of-the-art database products developed in conjunction with the private-sector. However, the Union is concerned that a digital divide is being created between the wealthier depository libraries and those with limited means. A logical solution to this inequity would be for Congress to make limited appropriated funds available to NTIS to allow depository libraries with smaller budgets to subscribe directly to NTIS Database products. These are the same products that are currently available to depository libraries with greater financial resources. It is the Union's position that a small depository library in Tennessee, West Virginia, Louisiana, Montana and other states should have access to the same high quality NTIS Database search tools as other depository libraries with large endowments. An appropriation by Congress in support of this proposal would be in the public good, and would be more cost-effective to the taxpayer, than GPO's proposal. It would also place the future NTIS Database product innovation burden squarely on the private-sector, as op-

posed to on the government's shoulders, and take advantage of top quality NTIS Database products already in existence. This strategy would be a win-win for all parties.

Question 3. You mentioned that conservative projections anticipate NTIS further improving its financial status in fiscal year 2000. What are the underlying assumptions for this projection.

Answer. Cost reduction steps (contained in the above answer to question #1) taken during FY99 will result in FY2000 annual cost savings of up to several millions of dollars. Meanwhile, NTIS increased its Clearinghouse revenue by \$1.4 million in FY99 from the previous year. Even if Clearinghouse revenue eroded, NTIS will still be in a position to generate a substantial surplus. Based upon these projections, the efforts of the Union, NTIS Management, and the Department could be held up as a successful partnership in rightsizing a financially troubled agency.

NTIS continues to expand the dissemination of its products, and it has successfully moved from a paper to electronic environment. Then, too, a bound, print report is still preferred by many consumers of government documents. For example, the printed report sales generated from the NTIS links to the Department's Emerging Digital Economy reports endorse the need for this NTIS service. Many consumers of NTIS reports prefer a bound print copy, as opposed to the hassle of retrieving this content from the Web. NTIS is eagerly working with other government agencies to develop similar links to support the needs of consumers of government documents. NTIS is also bolstering its acquisitions staff with new technology to harvest Web documents to increase NTIS' annual input of new documents. All of these efforts will expand the acquisition, archiving, and dissemination of government information, while improving NTIS' financial position. In addition, NTIS' online products have mass appeal. Its database products continue to expand the distribution of government information to millions of potential users.

Question 4. You have proposed a fourth option for the future of NTIS by implementing the restructuring plan. What is the appropriation level required by the plan for fiscal year 2000. Why should we not expect to be back at this point a year from now?

Answer. The Union's fourth option proposal does not require an appropriation for FY2000. In fact, there has never been an appropriation requirement for NTIS. At one time, NTIS Management had requested an annual \$2,000,000 appropriation to support the mandated costs of acquiring and indexing products added to the NTIS Collection in support of the public good. However, this is not a requirement for NTIS to complete its mandated mission to operate the Clearinghouse for government scientific and technical information. As you are aware, NTIS had a surplus during FY99 of \$650,000. The earlier appropriation request reflected the fact that NTIS collects, organizes, and preserves far more than it can justify solely on the basis of commercial potential. This would have permitted NTIS to expand the dissemination of its Database, potentially lower prices for its paper products, and put NTIS on an even keel with other government agencies that receive appropriations to support their public good functions. The permanent preservation of the taxpayers vast expenditure of R&D funds is in the public interest, and the costs should be shared by NTIS customers and the taxpayers. The request was never considered to be an operating subsidy, but it certainly would have facilitated much needed investment in capital equipment. The agency's financial position continues to improve.

While the Union cannot control the impact of the negative NTIS press coverage created by the Department's proposal, NTIS employees and their professionalism have bolstered the organization's financial performance during FY99. Although unlikely, any revenue decline during FY2000 may be attributable to the uncertainty created by the Department's flawed proposal, and the Department's insistence on maintaining a hiring freeze that denies NTIS the staff we need to generate revenue. (We are already 20 FTE below the NTIS-Department of Commerce target of 260, even though we can fully support the additional hires). Meanwhile, NTIS employees are working hard to prevent any revenue decline and lessen customer angst. We continue to work in a business-as-usual manner giving NTIS customers, as well as other government agencies the confidence that NTIS products and services will continue unabated and with the attention to quality that customers expect from NTIS. The staff's positive efforts during FY99 say much about our resolve, and our potential for success.

The Department publicly doubted NTIS' financial performance during FY99, and they were wrong. The Subcommittee should consider the tenacity of NTIS employees in carrying-out their mission that made the Department's dire predictions irrelevant. During the past fiscal year NTIS employees operated successfully under difficult conditions. What government official would state that NTIS' Clearinghouse

revenues would increase during a time when NTIS staffing would be reduced by 20%, NTIS employee performance bonuses would be cancelled, and misinformation would be spread criticizing the organization and the status of its mission? Despite this environment, NTIS staff continued to persevere and NTIS revenues increased.

Question 5. What percentage of the NTIS employees do you represent?

Answer. NTIS currently employs approximately 240 federal government workers. Of these, about 84 percent make up the bargaining unit of rank and file positions. NTIS management positions make up approximately 16 percent of the overall workforce.

The Union at NTIS represents the interests of all rank and file employees. Although we do not represent NTIS Management, it should be added that many managers have privately voiced their support for Union efforts to educate the public about NTIS' important mission. As an example of the solidarity within NTIS, I am including a copy of a letter signed by more than 200 NTIS employees. The letter was presented to the Honorable Congressman Tom Davis thanking him for his August 17th visit to NTIS in support of NTIS' mission, its employees, and their families.

Question 6. The Commerce Department report projects declining revenues for the clearinghouse, yet your data showed clearinghouse revenues increased to \$20.8 million in fiscal year 1999. If the increase is due to cost cutting measures, do you think that revenues will continue to rise or will they remain steady at the \$20 million level?

Answer. The Commerce Department's declining revenue projections were clearly wrong. Then too, reducing NTIS costs is a separate issue from increasing revenue. During FY99, NTIS dramatically reduced its overall costs by more than \$1.4 million. Meanwhile, because of the hard work and dedication of NTIS staff, its Clearinghouse revenue increased by about \$1.4 million during FY99 as compared to FY98 Clearinghouse revenue. This resulted in FY99 Clearinghouse revenue of \$20.8 million. The Clearinghouse revenue success story occurred despite the fact that NTIS employees served under three separate Directors within the past year and a half, survived major cost-reduction efforts including the outplacement of 46 employees, and we flourished despite the necessary, albeit disruptive office moves to consolidate space. Instead of criticizing the performance of NTIS employees and the mission they perform, the Department should be offering their continued support for a job well done. It should also be noted that the Commerce Department's projected Clearinghouse loss of \$2.9 million during FY99 was totally off base. They included this erroneous cost projection in their NTIS report despite the fact they had actual NTIS Clearinghouse budget figures as of August 1999 that stated otherwise. The Union anticipates NTIS using technology to lower its dissemination costs, while increasing productivity. This technological strategy, combined with the increasing popularity of NTIS' online products, and effective cost-reduction efforts should allow NTIS' surplus revenue environment to continue during FY2000.

Question 7. Regardless of the resolution for which agency has the mandate to publish government literatures, do you have any recommendation for dealing with the issue that agencies are not submitting documents as required by law?

Answer. The federal government cannot legislate itself out of this problem. The Union supports NTIS' multi-tiered approach to solving the problem of agencies not submitting documents as required by law. First, NTIS has a professional acquisitions staff that works closely with agencies to ensure compliance with the American Technology Preeminence Act (ATPA). The ATPA states:

"The head of each Federal executive department or agency shall transfer in a timely manner to the National Technical Information Service unclassified scientific, technical, and engineering information which results from federally funded research and development activities for dissemination to the private sector, academia, State and local governments, and Federal agencies."

Public Law 102-245, Section 108, American Technology Preeminence Act of 1991

In addition to the ATPA, NTIS is using technology to harvest Web documents to proactively bring them into its collection. This effort ensures that government research documents are archived in a central source, and that they are available to researchers in perpetuity. A third option available to NTIS is to use technology to track the research dollars directly from their source. NTIS is currently considering the use of its Federal Research in Progress Database (FEDRIP) as an acquisitions tool to track government research projects from their source, and ensure compliance with the ATPA of government research output. The Union supports NTIS' multi-tiered approach to assist agencies with complying with the ATPA. If these efforts

at cooperation fail, Congress could then consider assisting NTIS in this effort by providing additional teeth to the existing ATPA legislation. This could include providing NTIS with the ability to charge agencies for the cost of acquiring documents not provided to NTIS under the ATPA. Then, too, Congress could consider delaying future funding dollars to agencies that openly refuse to comply with the terms of the ATPA. I am including a brochure entitled "ATPA in a nutshell" that outlines agency requirements under the ATPA. NTIS continues to educate federal agencies regarding their document submission requirements under the ATPA.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL FRIST
TO HON. ROBERT MALLETT

Question 1. Can you define the problem that the Department of Commerce is addressing in its proposal to eliminate NTIS?

Answer. The fundamental problem that the Department of Commerce's proposal addresses is the fatally flawed business model of NTIS. For years, NTIS and the Department have struggled with how to ensure public access to government information at a reasonable cost, while keeping NTIS self-sufficient. The Internet has already adversely impacted NTIS' ability to remain solvent—and looking to the future the economics of the Internet will only be more detrimental to the bottom-line of NTIS.

As the Department's Inspector General (IG) noted in March 1999, "Federal agencies are increasingly bypassing NTIS as a distribution channel, instead offering their publications directly to the public over the Internet." It is not surprising then that—largely because of these changes in the marketplace—the number of titles received from government agencies declined 34% over this period, and more significantly, sales of publications from the traditional NTIS Clearinghouse declined from almost 2.3 million units in Fiscal Year 1993 to 1.3 million units in Fiscal Year 1998. As a result over the past several years, NTIS' Clearinghouse lost millions of dollars.

It is important to note that, to offset losses, NTIS has significantly changed its business mix. Over half of its revenues are now derived from services provided to other government agencies, up from one-third only five years ago. NTIS has also ventured into other business products one example is producing and selling a CD-ROM of IRS tax forms. Revenues from NTIS' other business lines in FY 1999 have offset Clearinghouse losses and has allowed the organization to show a profit. But, as the Department's IG stated earlier this year, We are also concerned that in order to replace lost sales, NTIS is seeking business opportunities on the perimeter of its statutory mission, where it risks competing against private businesses. Others, including Members of Congress, have raised similar concerns.

In addition, the Department seeks to address the problem of agencies not sending documents to central clearinghouse. As noted above, Federal agencies are bypassing NTIS and providing science and technical information directly to the public via the Internet. The Department's draft bill seeks to put in place a policy mechanism to help ensure that agencies provide new documents to the central clearinghouse. Specifically, we propose that the Chief Information Officer (CIO) of each Executive agency that produces scientific, technical, and engineering information report annually to Congress on that CIO's respective agency's compliance with the relevant provisions of the bill.

Question 2. Can you describe any interaction that the Secretary's office has had with the NTIS management in the process of determining the closure of the agency?

Answer. As early as 1998, the Deputy Secretary met with NTIS' senior management to discuss options for the future of NTIS, stating clearly that all options were on the table, including the possibility of closure. In the spring of 1999, the Deputy Secretary met with the NTIS Advisory Board to discuss NTIS' precarious fiscal situation and the need for the Department to take actions to ensure that NTIS remained solvent. In addition, the Secretary's office, which includes the Office of Administration and the Office of Budget, held regular meetings with NTIS management to review the financial situation throughout 1999. Finally, before the Secretary announced his decision to propose closing NTIS and transferring its core function to the Library of Congress, the Secretary and Deputy Secretary met with the Director of NTIS, Ron Larson.

Question 3. You stated in your testimony that the Internet has rendered the NTIS business model outdated. Did you consider restructuring NTIS' core mission to fit a new business model?

Answer. Yes. The option presented by NTIS' management including digitizing the most recent ten years of the collection and seeking appropriations for the core clearinghouse functions. Under this plan, NTIS would also use the FedWorld name as an information portal, and contract out for print-on-demand services. Older documents would be transferred to another location.

We evaluated this option carefully, considering its impact on the access of information to the public, its impact on the budget, and its impact on the NTIS employees. We rejected this option for two reasons.

First, we felt that there were other options—like the one we proposed—that would provide the public better access to the information than this option. The NTIS Advisory Board informed the Department that digitizing certain types of documents would adversely impact the quality of the reproduction. Additionally, for business purposes, NTIS management proposed that NTIS maintain only 10 years of documents (on a rolling basis). The older documents would have been archived at a undetermined, but different, location. Because of the importance of maintaining this rich collection in one place, the Department believed that this option was unacceptable.

Second, in order to digitize the most recent ten years of the collection, which consists the documents with the highest sales potential, NTIS would require an appropriation of about \$7.4 million over three years. In addition, NTIS believed it would need an annual appropriation of about \$4.9 million to the acquisition, organization and preservation of information products to be added to its collection. Therefore, the appropriations requests for FY2000 through FY2004 would be about \$30 million. This is greater than the amount the Department estimated it would cost the Library to assume the core clearinghouse function.

Question 4. Does your proposed plan set a precedent that the Library of Congress should be a depository as well as disseminate all government documents? If not, why should the NTIS collection and future technical documents be treated differently than other government documents?

Answer. We do not believe that our plan sets a precedent that the Library of Congress should be a depository as well as a disseminator of all government documents. Currently, science and technical information is treated differently than all other government documents; NTIS collects and disseminates this information. Under our plan, science and technical information would continue to receive the same special attention that it receives today. We believe that this make sense. The dissemination of this information helps inform our scientific community, which helps spur innovation and new advances in the fields of science.

Question 5. Did the Commerce Department's plan take into consideration business plans and strategies proposed and being implemented by NTIS' new management team since January 1999?

Answer. Yes. The first option we considered was NTIS managements proposed plan. See question #3 for reasons this option was rejected.

Question 6. How does your proposal for closing NTIS address the larger issue of a unified and consistent government policy for publishing and disseminating federal publications, both electronically and otherwise? Do you believe that the proposal would facilitate public access for government information equally, regardless of means or media?

Answer. By rationalizing the dissemination of government science and technical information so that there are not a number of government agencies selling documents to the American people, the Department believes that we are helping to produce a more unified and consistent government policy for publishing and disseminating federal publications. However, the Department of Commerce is unable to solve the larger issue here since we are dealing with just the science and technical documents. We are willing to work with whomever to figure out how to address the larger issue you raise.

The Department also believes that our proposal would facilitate public access for government science and technical information, regardless of means or media. Individuals would be able to access government information in three separate locations. First, if he/she has access to the Internet, they would be able to obtain the document at the producing agencies web site. Second, he/she could get a copy of a document from a local Federal Depository Library; there are Depository Libraries located in just about every Congressional district in the country. And finally, if he/she is unable to get the document via the Internet or at a Depository Library, the individual could call or visit the Library of Congress to obtain the document through the central clearinghouse. We think that this proposal strengthens the ability of the Amer-

ican public to obtain access to the science and technical information produced by the government.

Question 7. Why do you believe the Library of Congress is a better place for NTIS than GPO?

Answer. In our opinion—based on the information we had at the time we made our decision—we believed that the Library was a more appropriate place for NTIS than GPO. This is not to say that GPO is an inappropriate place to house NTIS. On the contrary, we believe the GPO would do a fine job collecting and disseminating government science and technical information.

However, you should know that we chose the Library of Congress in our proposal for three reasons:

First, the Library has a collection of scientific and technical information consisting of about 4 million titles. The Library is well known to all Americans, and has a very positive reputation.

Second, the Library deals with dissemination activities, albeit on a smaller scale than NTIS.

And finally, the Librarian of Congress, James Billington, had expressed an interest in the NTIS collection in 1989.

We would like to work with Congress and the other stakeholders, including the Library of Congress and the Government Printing Office, to find the best place to house the important public-good functions of NTIS.

Question 8. Who devised the internal working group that developed the proposal to close NTIS?

Answer. The Deputy Secretary requested two working groups be formed to focus on NTIS. The first group dealt with the immediate financial crisis and was led by Linda Bilmes, the Assistant Secretary for Administration and Chief Financial Officer. The second group looked at the long-term issues surrounding NTIS and was led by Jon Orszag, the Director of Policy and Strategic Planning at the Department. These groups coordinated closely and consisted of a variety of people from throughout the Department, including a representative from the Office of General Counsel, Human Resources, Office of Budget, Office of Administration, Office of Policy, etc.

