

TESTIMONY ON S.803
The E-Government Act of 2001

Submitted by
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To
Committee on Governmental Affairs
United States Senate

July 18, 2001

Senator Lieberman and the other co-sponsors of S.803 are to be commended for their efforts in putting together a comprehensive bill addressing the management and promotion of electronic government services and processes, creating a Chief Information Officer for the Federal government to provide effective leadership for this effort, and establishing basic requirements for the use of Internet-based information technology to enhance the delivery of government information and services to the American people.

Congress created the National Commission on Libraries and Information Science 30 years ago in recognition "that library and information services adequate to meet the needs of the people are essential to achieve national goals and to utilize most effectively the Nation's education resources." The Commission is responsible for providing advice to both the President and the Congress on the implementation of national information policy. To accomplish this, it conducts studies, surveys and analyses of the nation's library and information needs, promotes research and development activities, conducts hearings and issues publications, and develops plans for meeting national library and informational needs and for the coordination of activities at the federal, state and local levels. The Commission also provides policy advice to the Director of the Institute of Museum and Library Services (IMLS) regarding Federal financial assistance for library services.

On March 27, 2001, NCLIS submitted a detailed description of a related legislative proposal, *The Public Information Resources Reform Act of 2001*. This legislative proposal was part of *A Comprehensive Assessment of Public Information Dissemination*¹ (hereinafter referred to as the *Assessment* report) that Senators Lieberman and McCain, both sponsors of S.803, requested from NCLIS in 2000. While there is some overlap and

¹ U.S. National Commission on Libraries and Information Science, *A Comprehensive Assessment of Public Information Dissemination*, Washington, DC: Government Printing Office, 2001. The report is published in 4 volumes. Volume 1: A Comprehensive Assessment of Public Information Dissemination; Volume 2: Legislative and Regulatory Proposals; Volume 3: Supplementary Reference Materials; and Volume 4: Compilation of Recent Statues Relating to Public Information Dissemination. These volumes are available at <http://www.nclis.gov/govt/assess/assess.vol1.pdf>, <http://www.nclis.gov/govt/assess/assess.vol2.pdf>, <http://www.nclis.gov/govt/assess/assess.vol3.pdf>, and <http://www.nclis.gov/govt/assess/assess.vol4.pdf>, respectively.

commonality in the subject matter of S.803 and the Commission's legislative proposal, the two pieces of proposed legislation complement, rather than duplicate, one another.

Four key public information management concerns are addressed by the *Assessment* report and its legislative proposal and S.803. These are the need for:

1. a clear and unequivocal statutory mandate to ensure that public information is made permanently publicly available and the historical government information electronic records are preserved;
2. the easy and reliable authentication of official public information;
3. effective policies and safeguards to protect against the obsolescence of the formats and/or mediums in which government information was initially created and is currently stored and utilized; and
4. measures addressing the education and training initiatives necessary to remedy the relatively low level of both computer and information literacy in the general population, which are formidable barriers to exploiting the full benefits of the Internet Age and contribute to the Digital Divide.

Title 1, Office of Management and Budget Electronic Government Services

Section 101, Federal Chief Information Officer

While the Commission concurs with the need for a Federal Chief Information Officer, we believe it would be unnecessarily confusing and counterproductive to establish a new Office of Information Policy in OMB while at the same time retaining the existing Office of Information and Regulatory Affairs (OIRA). Instead, we believe it would make more sense to designate the Administrator of a newly established Office of Federal Information Resources Management as the Federal CIO, consolidating the information responsibilities of OIRA with those of the proposed Office of Information Policy.

In the view of the Commission, the information collection component of Information Resources Management (IRM) that would remain with OIRA under S.803 and the information dissemination and the other components of IRM that would transfer to the new Office of Information Policy are integral and inseparable components of the same overall government information resources management life cycle. Therefore, OMB policy oversight responsibility over these components should be vested in the same office and under one individual. Such a newly configured office might more aptly be called the Office of Federal Information Resources Management, rather than the Office of Information Policy.

The Commission underscored in its *Assessment* report how the splintering and compartmentalization of leadership and management over the various stages of the government information life cycle has led historically to serious management problems. These include:

- gaps in government information policy;
- incompatibility in government information systems and lack of effective system, network, and platform interoperability;

- impairment of timely and efficient development of government information standards and guidelines; and
- the imposition of excessive paperwork and red tape burdens on the American public, businesses, and lower levels of government.

Twenty years ago the Commission on Federal Paperwork found that restraining government's insatiable appetite for collecting information from the public and reducing unnecessarily burdensome reporting, recordkeeping and regulatory requirements on the public must all be regarded as critical elements of government information policy. In short, paperwork reduction and information policy are both integral elements of the IRM, and therefore need to be managed together. Otherwise, IRM will ultimately fail.

Furthermore, the implementation of the CIO responsibilities in most agencies has been primarily focused on Information Technology (IT), separate from and to the exclusion of Information Content. The Commission feels strongly that Information Resources, both technology and content, must be managed together to optimize both types of resources for effective government and citizen access to government information and services. S.803 provides the opportunity to clearly link management of both technology and content and provide strong IRM leadership, not just strong IT leadership.

Section 103, Management and Promotion of Electronic Government Services

The creation of a Cross-Sector Forum (proposed 44 USC 3602(a)(12)) is an excellent idea. As the bill acknowledges, every sector of society has unique insights and experiences that can contribute to the success of Federal E-Government initiatives. The Commission supports the establishment of a framework to encourage the continuous, free, and open interchange of best practices and ideas, as well as to identify opportunities for collaboration across and among sectors.

The establishment of an E-Government Fund (proposed 44 USC 3604) is another constructive provision that the Commission strongly supports. The necessity for a reliable source of financing to support and test experimental ideas and encourage interagency information projects is essential, particularly since Internet technologies are rapidly evolving. Our *Assessment* recommended several very specific projects for such funding, including the development and testing of an integrated government information life cycle management software tool. However, the availability of this Fund to support "other innovative uses of information technology" should clearly allow for the development of software and for other related content initiatives that support IT applications. For example, the staff at FirstGov.gov has invested considerable intellectual effort in the development of taxonomies to organize the content of Government websites and facilitate searching by the public. Without this effort, the information technology will be less useful.

Title II, Federal Management and Promotion of Electronic Government Services

Section 201, Federal Agency Responsibilities

NCLIS fully endorses making greater use of the CIO Council (Section 201(b)) as a mechanism for continually assessing policy, program, and technical deficiencies that need to be studied and solutions identified for their resolution. The Commission's *Assessment* identified many technical areas where special task forces, standing committees, or ad hoc committees of the CIO Council could investigate problems and come up with suggested solutions, including:

- modernizing, upgrading, and integrating the Federal government's current awareness systems to keep the public continually and efficiently advised of new government information, the deletion of old information, or the changing of existing information products;
- making federal identifiers consistent for information across all agencies;
- harmonizing information identifiers for all levels of government – Federal, State, local, and tribal;
- evaluating pre-electronic government information for digital conversion;
- ensuring that "old" electronic government information, while perhaps removed from agency web sites for various reasons, nevertheless still becomes a part of the historical record;
- specifying metadata by which agencies classify records prior to archival retention or disposal; and
- requiring that data elements set forth in the Government Paperwork Elimination Act be tagged in XML.

Section 202, Acceptance of Electronic Signatures

The Commission's *Assessment* included extensive findings with respect to the need to respond quickly and effectively to the lack of reliable authentication policies, programs, and tools for attesting to the legitimacy of electronic government information. The Federal bridge certification authority for digital signatures is an excellent tool to address this issue.

Section 203, Online Federal Telephone Directory

Many Federal agencies have online directories with telephone numbers and e-mail addresses for all or selected employees. What is sorely needed, as recognized by S.803, is the integration and more efficient indexing of such government information services by broad, government-wide functional categories and sub-categories that transcend agency jurisdictions. Admittedly, this is a much more difficult, but necessary precondition of establishing a central, comprehensive, and authoritative online Federal Telephone Directory that can link to and utilize information from individual agency directories.

Section 204, Online National Library

While a special electronic collection of U.S. historical and cultural materials is a very worthy proposal, the name given to it in the bill may be confusing. The Library of Congress and the National Libraries (the National Library of Medicine, the National Library of Education, the National Agricultural Library) are digitizing their collections and providing them online, as are many other Federal libraries and information centers. The Commission believes that all of the National Libraries, the Library of Congress, and the other Federal libraries are, collectively, a de facto Online National Library.

The Library of Congress, the Smithsonian Institution and the National Archives and Records Administration (NARA) together house a very substantial portion of the government's historical and cultural materials. They should be have a mandate to strengthen their collaboration with one another and with other Federal libraries and information centers to ensure that collections and materials that are in digital form, or will be digitized, are better inter-related bibliographically and that their availability and online accessibility is streamlined. This effort must be coordinated and integrated with FirstGov, GPO Access and other government portals.

Section 205, Federal Courts

The Commission strongly supports strengthening the policies, programs, and practices of the Federal Judiciary so that its information holdings can be made more widely and easily available to the public. We note the absence of a comparable provision for Legislative Branch information and strongly recommends that one be added.

Section 206, Regulatory Agencies

The Commission strongly supports a broadening and deepening of the "government-in-the-sunshine" principles as applied to the information holdings and transactions of the regulatory agencies.

Section 208, Online Access to Federally Funded R&D

The Commission strongly believes that a single, central, authoritative and comprehensive bibliography of government information, both electronic and non-electronic, is a mandatory requirement of the Internet Age. Such a National Bibliography should be linked to a single, central, authoritative and comprehensive database of electronic government information.

In its *Assessment*, the Commission recommended that the Federal government reserve a small portion of its R&D expenditures for the identification and collection, bibliographic control, access and dissemination, and preservation of the results of federally funded R&D, not as a separate service, but as a means of funding the integration of this essential information into a single, central, authoritative and comprehensive National Bibliography and a corresponding database. The Commission does not see any virtue in fragmenting

that bibliography or the corresponding database into a multiplicity of artificial compartments, such as R&D information in one database and non-R&D information in another. Such unnecessary proliferation of government information databases is precisely the sort of historical development that has frustrated attempts to develop single, one-stop searching of government information across agency lines. It has created unnecessary duplication of effort among agencies and programs as well as opportunities for information to be missing from any of the competing services.

Providing for links to other databases is completely inadequate to the information management challenges that are implicit in proliferated databases, because each database tends to develop its own set of thesauri, selection criteria, file formats, data element definitions, records structures, etc. These may become incompatible and therefore not easily interoperable.

The National Technical Information Service (NTIS) of the Department of Commerce is not mentioned in this section, although it already has a statutory mission to collect, preserve and make accessible the results of federally funded R&D. The inference is that NTIS is no longer required because the CIO Council or the new OMB Office of Information Policy will be operating and maintaining the Federal R&D information database. We respectfully disagree. A strong operational capability is required. The functional challenges involved are not simply database-related or technical. Rather, they involve a myriad of day-to-day operational tasks that an oversight office or an interagency mechanism such as the CIO Council could not, in our view, deal with effectively and efficiently.

Furthermore, federally funded R&D falls within the scope of the Federal Depository Library Program (FDLP) and the *Monthly Catalog of U.S. Government Publications (MoCat)*, both administrated by the Government Printing Office (GPO). By statute *MoCat* is a National Bibliography of government information, both public and internal. It is neither necessary nor desirable to create a duplicative program for bibliographic control of the results of federally funded R&D or to segregate the information into a database in a manner that could potentially continue to exclude it from public access through the FDLP.

The Commission stands by the recommendation in its *Assessment* that the operational functions for collection, bibliographic control and permanent public access of the Superintendent of Documents at GPO, NTIS and FirstGov.gov, among others, be consolidated within the Executive Branch to improve public access, enhance interoperability of systems, and reduce duplication. Provisions for government services like NTIS to be self-sustaining must be amended to recognize the responsibility of the Federal government to fund functions such as collecting, abstracting, indexing,² so that all sales of government information are priced at the incremental cost of dissemination.

² In its *Assessment*, the Commission identifies a list of inherently governmental functions performed by NTIS that benefit the general public and, therefore, should be treated as inherently government functions and funded with appropriated funds. These are: (1) the collection or acquisition of reports; (2) the indexing, abstracting, cataloging, and preservation of these reports; (3) the further processing of reports by scanning,

Section 209, Common Protocols for Geographic Information Systems

The Commission strongly supports the continued coordination of common protocols for geographic information.

Section 211, Enhancing Crisis Management Through Advanced Information Technology

The Commission supports the provisions for the Federal Emergency Management Agency (FEMA) to explore ways to strengthen the use of IT in the government's disaster assistance programs. However, rather than directing FEMA to contract with the National Research Council (NRC) of the National Academy of Sciences (NAS), we recommend that FEMA be authorized to work with the National Science Foundation (NSF) to develop the research criteria and identify a variety of academic and research institutions, including NAS, that are capable of performing the research.

Section 212, Information Technology Training of Government Personnel and Federal Information Technology Training Center

NCLIS strongly supports the establishment of a Federal Information Technology Training Center to ensure that government IRM and program personnel are kept abreast of the rapidly changing technologies. Very substantial private and public sector traditional higher education and commercial training programs exist. These additional resources should be tapped to supplement Federal in-house education and training capabilities. Also, distance education and distance learning are ideal uses of the Internet,³ and the Office of Personnel Management (OPM) should investigate their application to the Federal workforce training and incorporate them wherever appropriate.

Section 213, Community Technology Centers

We strongly support the idea of a study on the best practices of federally funded Community Technology Centers (CTC) and request that the Commission be a designated participant in such a study. However, this provision seems to emphasize community technology capabilities, rather than emphasizing both the technologies and the information services that they deliver. Neighborhood and community centers and public and other local libraries, especially libraries that have been designated as Federal Depository Libraries, already provide a broad range of electronic government information and services. Libraries have long been recognized as "the court of first resort" by ordinary citizens who want to know something about their government, such as specific entitlements, available services, and, most importantly, how to find information they need. Local libraries are widely regarded by citizens as their best local gateway to

microfiching and archiving; (4) the creation and maintenance of the database that provides searching and locating information for this report collection, including the maintenance of a PURL or comparable system to maintain accessibility to reports on agency websites; (5) the mounting and maintaining of the searchable database on a website for free public access; (6) the mounting of the full text of the reports—to the extent they are not available on agency servers—on servers for free public access; (7) the maintenance of archive files to insure permanent, but not necessarily free, public access to material not otherwise available.

³ Is there a difference between distance learning and distance ed?

government information and services. These libraries are ideally positioned to serve as the nucleus of community information and referral centers both for access to technology and the content that it can deliver. The Commission has already joined with the Institute of Museum and Library Services, the Department of Education, the American Library Association, and the Benton Foundation to develop a community technology center database that could be expanded to address the purposes of Section 213(b)(4). That database can be accessed by placing a zip code in the "Get Connected" box at <http://www.digitaldividenetwork.org/content/sections/index.cfm>.

Section 214, Disparities in Access to the Internet

The report required by this section infers that access to the Internet is the central problem. We respectfully disagree. Dealing with computer access and modem requirements is only the beginning of the problem. Even if citizens become highly computer literate, the majority of them remain significantly disadvantaged if they have not also been trained in the skills of information literacy—to effectively identify, find, retrieve, organize, evaluate, and utilize the information they want and need. Therefore, the Commission strongly recommends that the study include an examination of information literacy deficiencies in Internet access, not just hardware, software, systems, and network deficiencies. We recommend that the legislation direct NCLIS to undertake this study, which clearly falls within our mission and capabilities. The Commission has a strong history of initiatives in information literacy, and we are currently working with the Department of State, the Department of Education, and UNESCO to prepare for a global conference on information literacy.

Section 215, Accessibility, Usability, and Preservation of Government Information

While the Commission is delighted to see a section in this bill devoted to accessibility, usability, and preservation of government information, we respectfully disagree that creating an Advisory Board on Government Information is the most effective way to deal with the myriad public information management challenges involved. The agencies creating the information systems must be directed to ensure that each system is simple, intuitive and self-instructing. In addition, agencies must ensure ready access to customer support by telephone or e-mail.

First, the Commission acknowledges the necessity for addressing the problem of incompatibility of agency bibliographic standards and thesauri. An interagency committee is an appropriate mechanism to identify specific incompatibilities and other factors that impede interoperability. However, a committee is not an effective mechanism to resolve the differences, nor is it an effective mechanism to ensure that agencies comply with standards. While the Board would be a practical mechanism to identify inconsistencies and suggest appropriate solutions, a central agency, responsible for government-wide cataloging and indexing standards and their implementation is essential to maintain the efficacy of such an initiative over time. In addition, the Commission believes that the public is best served if these bibliographic records are aggregated and preserved in a National Bibliography so that they can be searched effectively.

Second, despite use of the term "usability" in the title of this section, there is no substantive mention of how usability of government information is to be improved. Usability is extremely important because many citizens have never been trained in the skills necessary for information literacy. One of the key recommendations in the *Assessment* was that OMB, working through the Federal WebMasters Forum and the CIO Council, lead an effort to explore the design, development, and pilot testing of a comprehensive public information current awareness system to enable affirmative dissemination of public information. The Commission believes that such a mechanism depends on the Federal Government's ability to identify systematically what government information the public truly needs and wants, how such needs are currently met, and pinpoint gaps that should be filled.

Third, despite use of the term "preservation" in the title of this section, there is no substantive mention of how government information could and would be preserved. On the contrary, there seems to be confusion over two key terms: permanent public availability and preservation. The two concepts, while closely related, are distinct. The term "permanent public access" describes the condition whereby government information is retained permanently and is made available to the public. The term "preservation" refers to the function of periodically refreshing technology formats and mediums to guard against obsolescence and to ensure the integrity, authenticity and security of information over time.

Furthermore, the provisions for permanent public access do not acknowledge the statutory roles of NTIS and GPO as central information service agencies to ensure permanent public access to a wide variety of government information, nor the role of the National Archives and Records Administration (NARA) in the preservation (in an archival sense) of such information as it deems appropriate under the Federal Records Act. Agencies are more likely to comply with requirements for permanent public access and preservation if these requirements can be harmonized. In the *Assessment*, the Commission recommended the design and development of an integrated government information life cycle software product to manage different requirements, such as permanent public availability and preservation. Application of information life cycle management seems to us to be the best overall information resources management framework to accomplish this objective.

Fourth, this section calls for agency inventories of web site directories and sub-directories to identify "classes of information" available to the public. The requirement to create inventory records is in the provisions for the Government Information Locator Service (GILS) in the Paperwork Reduction Act and in OMB Circular A-130 and has never been enforced. It is unclear how the same or a similar provision in S.803 will motivate agency compliance or what guidance and assistance will be provided that could result in a useful product that can be maintained and kept current over time. To be useful, inventories must be at the level of the individual public information product or service, yet while this section does not preclude records of individual documents, it does not encourage or require such specificity.

In Conclusion

In its *Assessment*, the Commission made 36 recommendations, 16 of which were identified as strategic recommendations. The primary strategic recommendation is that public information should be formally recognized by the United States as a strategic national resource. Recognition of public information as a strategic national resource must result in diffusion of that knowledge by optimizing timely and permanent public availability of the information for its owners, the people of the United States.

A corollary recommendation is that the Congress and the President direct the inclusion of a standard provision in the enabling legislation for each agency incorporating public information dissemination as a primary agency responsibility, integral to its mission and that this requirement apply to all entities in all three branches of the federal government. While the Commission is reluctant to specify precise language for a standard clause, the provision in 7 *U.S.C.* 2201 that directs the Department of Agriculture (USDA) to "...diffuse among the people of the United States, useful information on subjects connected with Agriculture..." reflects the spirit of the Commission's recommendation.

The Commission urges the Committee to consider the incorporation of both of these recommendations into S.803. Although the belief that government information is a strategic national resource is implicit in many of the provisions of S.803, it should be an explicit statement in the findings and purposes of the Bill and in its legislative provisions.

A third strategic in the Assessment recommendation is that the Congress should authorize and fund a consolidated independent agency in the Executive Branch, which the Commission calls the Public Information Resources Administration (PIRA). This agency would assume relevant operational responsibilities of NTIS, GPO, GSA and other agencies for permanent public access to government information and be the lead agency for a National Bibliography and National Database. It would be a strong, operational agency focused on the management of public information as a strategic national resource.

In the Executive Summary for its *Assessment*, the Commission stated:

Public ownership of information created by the federal government is an essential right. It not only allows individuals to fulfill their civic responsibilities, but also contributes to an overall improvement in their quality of life. Current information technology not only brings with it expanded opportunities for using government information but also a number of difficulties, including adequacy of finding tools, technological incompatibilities, and sometimes just the overwhelming amount of information.

Government agencies are trying to use the World Wide Web to ensure availability of information, and emerging efforts in development of indexing tools and web portals offer some hope. However, not all needed information is available on the Internet nor do users of public information necessarily have the professional skills to use what is available in any format. Also, government information made

available electronically can disappear as quickly as it has appeared. No policy is in place for long term or permanent public access to web-based public information.

Electronic government as envisioned by S.803 encompasses delivery of both services and information to citizens electronically. This cannot be accomplished without information technology. However, information technology is not an end in itself. It is an essential tool in the creation, management, organization, access and dissemination, and preservation of government information, as well as in the delivery of services to citizens.

The Commission feels strongly that Government Information Resources, both the technology and the content, are inextricably interrelated and must be managed together to optimize both types of resources for effective government and citizen access to government information and services. Historically, there has been a disproportionate emphasis on IT, because of the substantial financial resources that are invested and the fact that it is easier to address the hardware and software than it is to address information content. However, failure to manage both information content and the information technology through a coherent, balanced Information Resources Management Program cannot result in effective government or good service to citizens.

A useful analogy may be found in the molecular structure of water (H₂O). There are two hydrogen atoms and only one of oxygen. The oxygen atom is larger and heavier than the two hydrogen atoms together. Which element is more important? The answer is that both are essential to create water. If either one is removed, water no longer results. There is a symbiotic relationship between information content and the technology to store, process and disseminate it. They are inseparable if effective government and good service to citizens are to be obtained, just as hydrogen and oxygen are inseparable in the creation of water.

In summary, the Commission appreciates very much the opportunity to comment on this important legislative initiative, and commend Senator Lieberman and the co-sponsors of S.803 for taking the first step in establishing a strong legislative basis for the Federal Government's movement toward E-Government. Certainly such movement is inevitable, and it will benefit the American people. However, the Commission believes that provisions of the S.803 must be very carefully crafted to balance information technology management with information content management in order to achieve a complete Information Resources Management program for the Federal government and to ensure appropriate government information life cycle management. The technology alone will not, as if by magic, solve the content challenges. We urge the Committee to consider incorporation of additional provisions related to the information content or development of a parallel and complementary bill to ensure that both sides of this complex issue are adequately addressed. This is essential to optimize management of internal information and information technology resources and to ensure the maximum possible public access to this strategic national asset.

Attachment

The *Executive Summary* of the Commission report, *A Comprehensive Assessment of Public Information Dissemination*, is attached to this testimony for inclusion in the hearing record.