

IX. APPENDICES FOR THE 2000 EDITION

APPENDIX A: PUBLIC SECTOR/PRIVATE SECTOR TASK FORCE PRINCIPLES AND RECOMMENDATIONS

PRINCIPLES

The Task Force identified seven principles as the basis for determining policy decisions related to Federal government activities with respect to the distribution of information. The principles are discussed in detail in Chapter IV (pages 33 – 46) and discussed again in relationship to the Task Force recommendations in Chapter V (pages 47 – 60).

Issuing the principles, the Task Force stated:

There are two points to be made of general importance. First, the Task Force considers that these principles should be viewed as a whole and that none of them should be taken in isolation from the others. Second, in many situations, some of the principles may conflict with each other or with principles outside the scope of these deliberations. There is no way in which such conflicts can be resolved in the statement of principles; they can only be resolved in the specific situations in which they occur.

- Principle 1. The Federal government should take a leadership role in creating a framework that would facilitate the development and foster the use of information products and services.
- Principle 2. The Federal government should establish and enforce policies and procedures that encourage, and do not discourage, investment by the private sector in the development and use of information products and services.
- Principle 3. The Federal government should not provide information products and services in commerce except when there are compelling reasons to do so, and then only when it protects the private sector's every opportunity to assume the function(s) commercially.
- Principle 4. The Federal government, when it uses, reproduces, or distributes information available from the private sector as part of an information resource, product, or service, must assure that the property rights of the private sector sources are adequately protected.
- Principle 5. The Federal government should make governmentally distributable information openly available in readily reproducible form, without any constraints on subsequent use.
- Principle 6. The Federal government should set pricing policies for distributing information products or services that reflect the true cost of access and/or reproduction, any specific prices to be subject to review by an independent authority.

Principle 7. The Federal government should actively use existing mechanisms, such as the libraries of the country, as primary channels for making governmentally distributable information available to the public.

RECOMMENDATIONS

The Task Force also made twenty-seven recommendations that represent means for implementing the seven principles. Following each recommendation is the principle associated with it and the page number where it is discussed. For a variety of reasons, the Task Force did not develop recommendations for principles 4 and 6.

- Recommendation #1. Provide an environment that will enhance the competitive forces of the private sector, so that the market mechanisms can be effective in allocating resources in the use of information and in directing innovation into market determined areas. (Principle 1, Page 49)
- Recommendation #2. Affirm the applicability of the First Amendment to information products and services. (Principle 1, Page 49)
- Recommendation #3. Encourage Congress to be consistent in the language used and in the application of principles relating to information products and services, such as those identified in this Report, when it formulates legislation and when it exercises its oversight role. (Principle 1, Page 50)
- Recommendation #4. Encourage government agencies to utilize the most efficient (information) technologies. (Principle 1, Page 50)
- Recommendation #5. Encourage the setting and use of voluntary standards that will not inhibit the further development of innovative information products and services. (Principle 1, Page 51)
- Recommendation #6. Encourage and support educational programs that provide the professional skills needed to further the development and use of information as an economic and social resource. (Principle 1, Page 52)
- Recommendation #7. Encourage and support both basic and applied research in library and information science. (Principle 1, Page 52)
- Recommendation #8. Encourage and support statistical programs and related research to provide the data needed to deal with information policy issues. (Principle 1, Page 52)
- Recommendation #9. Conduct a periodic economic assessment of the impact of Federal government information product and services. (Principle 1, Page 52)
- Recommendation #10. Encourage Federal agencies to regard the dissemination of information, especially through the mechanisms of the private sector (both for profit and not for profit), as a high priority responsibility. (Principle 1, Page 53)
- Recommendation #11. Identify and evaluate alternatives to existing Federal information dissemination mechanisms. (Principle 1, Page 53)
- Recommendation #12. Develop and support the use of libraries as active means for access to governmental information by the public. (Principle 1, Page 53)
- Recommendation #13. Identify and eliminate legal and regulatory barriers to the introduction of new information products and services. (Principle 2, Page 53)

- Recommendation #14. Encourage private enterprise to "add value" to government information (i.e., to re-package it, provide further processing services, and otherwise enhance the information so that it can be sold at a profit). (Principle 2, Page 54)
- Recommendation #15. Provide incentives to existing organizations, such as libraries and bookstores, that will encourage them to expand their activities in dissemination of governmentally distributable information. (Principle 2, Page 54)
- Recommendation #16. Establish procedures which will create a realistic opportunity for private sector involvement in the planning process for government information activities. (Principle 2, Page 55)
- Recommendation #17. Involve the private sector in the process of formulating standards relating to Federal information activities. (Principle 2, Page 55)
- Recommendation #18. Create or improve mechanisms for ensuring that the actions of government agencies, in developing information resources, products, and services, are consistent with the policies, goals, and long-range plans that are announced. (Principle 2, Page 55)
- Recommendation #19. Announce intentions sufficiently ahead of time to provide an opportunity for private sector involvement when a government agency, for reasons it regards as compelling, should plan to develop and/or to market an information product or service. (Principle 3, Page 56)
- Recommendation #20. Review and approve, before implementation, any plans for the government to develop and/or market an information product or service, the review to be carried out by an agency appropriate to the branch of government (such as OMB, GAO, CBO). (Principle 3, Page 56)
- Recommendation #21. Include an "information impact and cost analysis" as part of the process of review, evaluation, and approval of any plans for the government to develop and/or to market an information product or service, the analysis to cover economic and social effects, effects on existing products and services, effects on potential private sector products and services, and benefits to the public. (Principle 3, Page 56)
- Recommendation #22. Review periodically to evaluate the desirability of continuation of any information product or service as a governmental activity. (Principle 3, Page 56)
- Recommendation #23. Do not arbitrarily restrict the Federal government from enhancement of information products and services, even if solely to meet the needs of constituencies outside the government itself. (Principle 3, Page 57)
- Recommendation #24. Announce the availability of governmentally distributable information and maintain one or more registers to help the public determine what governmentally distributable information is available. (Principle 5, Page 58)
- Recommendation #25. Deposit governmentally distributable information, in whatever form it may be available, at national and regional centers, including regional depository libraries, where it may be examined at no charge. (Principle 5, Page 58)
- Recommendation #26. Do not assert any Federal government copyrights on information the Federal government makes domestically available. (Principle 5, Page 59)

Recommendation #27. Use the nation's libraries and non-governmental information centers as means for distribution of governmentally distributable information instead of creating new governmental units or expanding existing ones. (Principle 7, Page 59)

APPENDIX B: NCLIS PRINCIPLES OF PUBLIC INFORMATION

PREAMBLE

From the birth of our nation, open and uninhibited access to public information has ensured good government and a free society. Public information helps to educate our people, stimulate our progress and solve our most complex economic, scientific and social problems. With the coming of the Information Age and its many new technologies, however, public information has expanded so quickly that basic principles regarding its creation, use and dissemination are in danger of being neglected and even forgotten.

The National Commission on Libraries and Information Science, therefore, reaffirms that the information policies of the U.S., government are based on the freedoms guaranteed by the Constitution, and on the recognition of public information as a national resource to be developed and preserved in the public interest. We define **public information** as information created, compiled and/or maintained by the Federal Government. We assert that public information is information owned by the people, held in trust by their government, and should be available to the people except where restricted by law. It is in this spirit of public ownership and public trust that we offer the following Principles of Public Information.

PRINCIPLES

1. The public has the right of access to public information.

Government agencies should guarantee open, timely and uninhibited access to public information except where restricted by law. People should be able to access public information, regardless of its format, without any special training or expertise.

2. The Federal Government should guarantee the integrity and preservation of public information, regardless of its format.

By maintaining public information in the face of changing times and technologies, government agencies assure the government's accountability and the accessibility of the government's business to the public.

3. The Federal Government should guarantee the dissemination, reproduction, and redistribution of public information.

Any restriction of dissemination or any other function dealing with public information must be strictly defined by law.

4. The Federal Government should safeguard the privacy of persons who use or request information, as well as persons about whom information exists in government records.

5. The Federal Government should ensure a wide diversity of sources of access, private as well as governmental, to public information.

Although sources of access may change over time and because of advances in technology, government agencies have an obligation to the public to encourage diversity.

6. The Federal Government should not allow cost to obstruct the people's access to public information.

Costs incurred by creating, collecting and processing information for the government's own purposes should not be passed on to people who wish to utilize public information.

7. The Federal Government should ensure that information about government information is easily available and in a single index accessible in a variety of formats.

The government index of public information should be in addition to inventories of information kept within individual government agencies.

8. The Federal Government should guarantee the public's access to public information, regardless of where they live and work, through national networks and programs like the Depository Library Program.

Government agencies should periodically review such programs as well as the emerging technology to ensure that access to public information remains inexpensive and convenient to the public.

CONCLUSION

The National Commission on Libraries and Information Science offers these Principles of Public Information as a foundation for the decisions made throughout the Federal Government and the nation regarding issues of public information. We urge all branches of the Federal Government, state and local governments and the private sector to utilize these principles in the development of information policies and in the creation, use, dissemination and preservation of public information. We believe that in so acting, they will serve the best interests of the nation and the people in the Information Age.

Adopted by the U.S. National Commission on Libraries and Information Science
June 29, 1990

APPENDIX C: PUBLIC LAW 104-13—PAPERWORK REDUCTION ACT OF 1995¹

Public Law 104-13
104th Congress

An Act

To further the goals of the Paperwork Reduction Act to have Federal agencies become more responsible and publicly accountable for reducing the burden of Federal paperwork on the public, and for other purposes. <<NOTE: May 22, 1995 - [S. 244]>>

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, <<NOTE: Paperwork Reduction Act of 1995. Information resources management.>>

SECTION 1. SHORT TITLE. <<NOTE: 44 USC 101 note.>>

This Act may be cited as the ``Paperwork Reduction Act of 1995''.

SEC. 2. COORDINATION OF FEDERAL INFORMATION POLICY.

Chapter 35 of title 44, United States Code, is amended to read as follows:

``CHAPTER 35--COORDINATION OF FEDERAL INFORMATION POLICY

``Sec.

``3501. Purposes.

``3502. Definitions.

``3503. Office of Information and Regulatory Affairs.

``3504. Authority and functions of Director.

``3505. Assignment of tasks and deadlines.

``3506. Federal agency responsibilities.

``3507. Public information collection activities; submission to Director; approval and delegation.

``3508. Determination of necessity for information; hearing.

``3509. Designation of central collection agency.

``3510. Cooperation of agencies in making information available.

``3511. Establishment and operation of Government Information Locator Service.

``3512. Public protection.

``3513. Director review of agency activities; reporting; agency response.

``3514. Responsiveness to Congress.

``3515. Administrative powers.

``3516. Rules and regulations.

``3517. Consultation with other agencies and the public.

``3518. Effect on existing laws and regulations.

¹ The text of the Paperwork Reduction Act has been reformatted for inclusion in this publication but the content is as downloaded from GPO Access: WAIS Document Retrieval [DOCID: f:publ13.104], [[Page 109 STAT. 163]].

``3519. Access to information.

``3520. Authorization of appropriations.

``Sec. 3501. Purposes

``The purposes of this chapter are to--

``(1) minimize the paperwork burden for individuals, small businesses, educational and nonprofit institutions, Federal contractors, State, local and tribal governments, and other persons resulting from the collection of information by or for the Federal Government;

``(2) ensure the greatest possible public benefit from and maximize the utility of information created, collected, main- [[Page 109 STAT. 164]] tained, used, shared and disseminated by or for the Federal Government;

``(3) coordinate, integrate, and to the extent practicable and appropriate, make uniform Federal information resources management policies and practices as a means to improve the productivity, efficiency, and effectiveness of Government programs, including the reduction of information collection burdens on the public and the improvement of service delivery to the public;

``(4) improve the quality and use of Federal information to strengthen decisionmaking, accountability, and openness in Government and society;

``(5) minimize the cost to the Federal Government of the creation, collection, maintenance, use, dissemination, and disposition of information;

``(6) strengthen the partnership between the Federal Government and State, local, and tribal governments by minimizing the burden and maximizing the utility of information created, collected, maintained, used, disseminated, and retained by or for the Federal Government;

``(7) provide for the dissemination of public information on a timely basis, on equitable terms, and in a manner that promotes the utility of the information to the public and makes effective use of information technology;

``(8) ensure that the creation, collection, maintenance, use, dissemination, and disposition of information by or for the Federal Government is consistent with applicable laws, including laws relating to--

``(A) privacy and confidentiality, including section 552a of title 5;

``(B) security of information, including the Computer Security Act of 1987 (Public Law 100-235); and

``(C) access to information, including section 552 of title 5;

``(9) ensure the integrity, quality, and utility of the Federal statistical system;

``(10) ensure that information technology is acquired, used and managed to improve performance of agency missions, including the reduction of information collection burdens on the public; and

``(11) improve the responsibility and accountability of the Office of Management and Budget and all other Federal agencies to Congress and to the public for implementing the information collection review process, information resources management, and related policies and guidelines established under this chapter.

``Sec. 3502. Definitions

``As used in this chapter--

``(1) the term 'agency' means any executive department, military department, Government corporation, Government controlled corporation, or other establishment in the executive branch of the Government (including the Executive Office of the President), or any independent regulatory agency, but does not include--

- “(A) the General Accounting Office;
 - “(B) Federal Election Commission; [[Page 109 STAT. 165]]
 - “(C) the governments of the District of Columbia and of the territories and possessions of the United States, and their various subdivisions; or
 - “(D) Government-owned contractor-operated facilities, including laboratories engaged in national defense research and production activities;
- “(2) the term ‘burden’ means time, effort, or financial resources expended by persons to generate, maintain, or provide information to or for a Federal agency, including the resources expended for--
- “(A) reviewing instructions;
 - “(B) acquiring, installing, and utilizing technology and systems;
 - “(C) adjusting the existing ways to comply with any previously applicable instructions and requirements;
 - “(D) searching data sources;
 - “(E) completing and reviewing the collection of information; and
 - “(F) transmitting, or otherwise disclosing the information;
- “(3) the term ‘collection of information’--
- “(A) means the obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public, of facts or opinions by or for an agency, regardless of form or format, calling for either--
 - “(i) answers to identical questions posed to, or identical reporting or recordkeeping requirements imposed on, ten or more persons, other than agencies, instrumentalities, or employees of the United States; or
 - “(ii) answers to questions posed to agencies, instrumentalities, or employees of the United States which are to be used for general statistical purposes; and
 - “(B) shall not include a collection of information described under section 3518(c)(1);
- “(4) the term ‘Director’ means the Director of the Office of Management and Budget;
- “(5) the term ‘independent regulatory agency’ means the Board of Governors of the Federal Reserve System, the Commodity Futures Trading Commission, the Consumer Product Safety Commission, the Federal Communications Commission, the Federal Deposit Insurance Corporation, the Federal Energy Regulatory Commission, the Federal Housing Finance Board, the Federal Maritime Commission, the Federal Trade Commission, the Interstate Commerce Commission, the Mine Enforcement Safety and Health Review Commission, the National Labor Relations Board, the Nuclear Regulatory Commission, the Occupational Safety and Health Review Commission, the Postal Rate Commission, the Securities and Exchange Commission, and any other similar agency designated by statute as a Federal independent regulatory agency or commission;
- “(6) the term ‘information resources’ means information and related resources, such as personnel, equipment, funds, and information technology; [[Page 109 STAT. 166]]
- “(7) the term ‘information resources management’ means the process of managing information resources to accomplish agency missions and to improve agency performance, including through the reduction of information collection burdens on the public;
- “(8) the term ‘information system’ means a discrete set of information resources organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information;
- “(9) the term ‘information technology’ has the same meaning as the term ‘automatic data processing equipment’ as defined by section 111(a) (2) and (3)(C) (i) through (v) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 759(a) (2) and (3)(C) (i) through (v));

“(10) the term ‘person’ means an individual, partnership, association, corporation, business trust, or legal representative, an organized group of individuals, a State, territorial, tribal, or local government or branch thereof, or a political subdivision of a State, territory, tribal, or local government or a branch of a political subdivision;

“(11) the term ‘practical utility’ means the ability of an agency to use information, particularly the capability to process such information in a timely and useful fashion;

“(12) the term ‘public information’ means any information, regardless of form or format, that an agency discloses, disseminates, or makes available to the public;

“(13) the term ‘recordkeeping requirement’ means a requirement imposed by or for an agency on persons to maintain specified records, including a requirement to--

“(A) retain such records;

“(B) notify third parties, the Federal Government, or the public of the existence of such records;

“(C) disclose such records to third parties, the Federal Government, or the public; or

“(D) report to third parties, the Federal Government, or the public regarding such records; and

“(14) the term ‘penalty’ includes the imposition by an agency or court of a fine or other punishment; a judgment for monetary damages or equitable relief; or the revocation, suspension, reduction, or denial of a license, privilege, right, grant, or benefit.

“Sec. 3503. <<NOTE: Establishment.>> Office of Information and Regulatory Affairs

“(a) There is established in the Office of Management and Budget an office to be known as the Office of Information and Regulatory Affairs.

“(b) There shall be at the head of the Office an Administrator who shall be appointed by the President, by and with the advice and consent of the Senate. The Director shall delegate to the Administrator the authority to administer all functions under this chapter, except that any such delegation shall not relieve the Director of responsibility for the administration of such functions. The Administrator shall serve as principal adviser to the Director on Federal information resources management policy. [[Page 109 STAT. 167]]

“Sec. 3504. Authority and functions of Director

“(a)(1) The Director shall oversee the use of information resources to improve the efficiency and effectiveness of governmental operations to serve agency missions, including burden reduction and service delivery to the public. In performing such oversight, the Director shall--

“(A) develop, coordinate and oversee the implementation of Federal information resources management policies, principles, standards, and guidelines; and

“(B) provide direction and oversee--

“(i) the review and approval of the collection of information and the reduction of the information collection burden;

“(ii) agency dissemination of and public access to information;

“(iii) statistical activities;

“(iv) records management activities;

“(v) privacy, confidentiality, security, disclosure, and sharing of information; and

“(vi) the acquisition and use of information technology.

“(2) The authority of the Director under this chapter shall be exercised consistent with applicable law.

“(b) With respect to general information resources management policy, the Director shall--

((1) develop and oversee the implementation of uniform information resources management policies, principles, standards, and guidelines;

((2) foster greater sharing, dissemination, and access to public information, including through--

((A) the use of the Government Information Locator Service; and

((B) the development and utilization of common standards for information collection, storage, processing and communication, including standards for security, interconnectivity and interoperability;

((3) initiate and review proposals for changes in legislation, regulations, and agency procedures to improve information resources management practices;

((4) oversee the development and implementation of best practices in information resources management, including training; and

((5) oversee agency integration of program and management functions with information resources management functions.

((c) With respect to the collection of information and the control of paperwork, the Director shall--

((1) review and approve proposed agency collections of information;

((2) coordinate the review of the collection of information associated with Federal procurement and acquisition by the Office of Information and Regulatory Affairs with the Office of Federal Procurement Policy, with particular emphasis on applying information technology to improve the efficiency and effectiveness of Federal procurement, acquisition and payment, and to reduce information collection burdens on the public;

((3) minimize the Federal information collection burden, with particular emphasis on those individuals and entities most adversely affected; [[Page 109 STAT. 168]]

((4) maximize the practical utility of and public benefit from information collected by or for the Federal Government; and

((5) establish and oversee standards and guidelines by which agencies are to estimate the burden to comply with a proposed collection of information.

((d) With respect to information dissemination, the Director shall develop and oversee the implementation of policies, principles, standards, and guidelines to--

((1) apply to Federal agency dissemination of public information, regardless of the form or format in which such information is disseminated; and

((2) promote public access to public information and fulfill the purposes of this chapter, including through the effective use of information technology.

((e) With respect to statistical policy and coordination, the Director shall--

((1) coordinate the activities of the Federal statistical system to ensure--

((A) the efficiency and effectiveness of the system; and

((B) the integrity, objectivity, impartiality, utility, and confidentiality of information collected for statistical purposes;

((2) ensure that budget proposals of agencies are consistent with system-wide priorities for maintaining and improving the quality of Federal statistics and prepare an annual report on statistical program funding;

((3) develop and oversee the implementation of Governmentwide policies, principles, standards, and guidelines concerning--

((A) statistical collection procedures and methods;

((B) statistical data classification;

((C) statistical information presentation and dissemination;

“(D) timely release of statistical data; and

“(E) such statistical data sources as may be required for the administration of Federal programs;

“(4) evaluate statistical program performance and agency compliance with Governmentwide policies, principles, standards and guidelines;

“(5) promote the sharing of information collected for statistical purposes consistent with privacy rights and confidentiality pledges;

“(6) coordinate the participation of the United States in international statistical activities, including the development of comparable statistics;

“(7) appoint a chief statistician who is a trained and experienced professional statistician to carry out the functions described under this subsection;

“(8) <<NOTE: Establishment.>> establish an Interagency Council on Statistical Policy to advise and assist the Director in carrying out the functions under this subsection that shall--

“(A) be headed by the chief statistician; and

“(B) consist of--

“(i) the heads of the major statistical programs; and [[Page 109 STAT. 169]]

“(ii) representatives of other statistical agencies under rotating membership; and

“(9) provide opportunities for training in statistical policy functions to employees of the Federal Government under which--

“(A) each trainee shall be selected at the discretion of the Director based on agency requests and shall serve under the chief statistician for at least 6 months and not more than 1 year; and

“(B) all costs of the training shall be paid by the agency requesting training.

“(f) <<NOTE: Records.>> With respect to records management, the Director shall--

“(1) provide advice and assistance to the Archivist of the United States and the Administrator of General Services to promote coordination in the administration of chapters 29, 31, and 33 of this title with the information resources management policies, principles, standards, and guidelines established under this chapter;

“(2) review compliance by agencies with--

“(A) the requirements of chapters 29, 31, and 33 of this title; and

“(B) <<NOTE: Regulations.>> regulations promulgated by the Archivist of the United States and the Administrator of General Services; and

“(3) oversee the application of records management policies, principles, standards, and guidelines, including requirements for archiving information maintained in electronic format, in the planning and design of information systems.

“(g) With respect to privacy and security, the Director shall--

“(1) develop and oversee the implementation of policies, principles, standards, and guidelines on privacy, confidentiality, security, disclosure and sharing of information collected or maintained by or for agencies;

“(2) oversee and coordinate compliance with sections 552 and 552a of title 5, the Computer Security Act of 1987 (40 U.S.C. 759 note), and related information management laws; and

“(3) require Federal agencies, consistent with the Computer Security Act of 1987 (40 U.S.C. 759 note), to identify and afford security protections commensurate with the risk and magnitude of the harm resulting from the loss, misuse, or unauthorized access to or modification of information collected or maintained by or on behalf of an agency.

“(h) With respect to Federal information technology, the Director shall--

((1) in consultation with the Director of the National Institute of Standards and Technology and the Administrator of General Services--

((A) develop and oversee the implementation of policies, principles, standards, and guidelines for information technology functions and activities of the Federal Government, including periodic evaluations of major information systems; and

((B) oversee the development and implementation of standards under section 111(d) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 759(d)); [[Page 109 STAT. 170]]

((2) monitor the effectiveness of, and compliance with, directives issued under sections 110 and 111 of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 757 and 759);

((3) coordinate the development and review by the Office of Information and Regulatory Affairs of policy associated with Federal procurement and acquisition of information technology with the Office of Federal Procurement Policy;

((4) ensure, through the review of agency budget proposals, information resources management plans and other means--

((A) agency integration of information resources management plans, program plans and budgets for acquisition and use of information technology; and

((B) the efficiency and effectiveness of inter-agency information technology initiatives to improve agency performance and the accomplishment of agency missions; and

((5) promote the use of information technology by the Federal Government to improve the productivity, efficiency, and effectiveness of Federal programs, including through dissemination of public information and the reduction of information collection burdens on the public.

Sec. 3505. Assignment of tasks and deadlines

((a) In carrying out the functions under this chapter, the Director shall--

((1) in consultation with agency heads, set an annual Governmentwide goal for the reduction of information collection burdens by at least 10 percent during each of fiscal years 1996 and 1997 and 5 percent during each of fiscal years 1998, 1999, 2000, and 2001, and set annual agency goals to--

((A) reduce information collection burdens imposed on the public that--

((i) represent the maximum practicable opportunity in each agency; and

((ii) are consistent with improving agency management of the process for the review of collections of information established under section 3506(c); and

((B) improve information resources management in ways that increase the productivity, efficiency and effectiveness of Federal programs, including service delivery to the public;

((2) with selected agencies and non-Federal entities on a voluntary basis, conduct pilot projects to test alternative policies, practices, regulations, and procedures to fulfill the purposes of this chapter, particularly with regard to minimizing the Federal information collection burden; and

((3) in consultation with the Administrator of General Services, the Director of the National Institute of Standards and Technology, the Archivist of the United States, and the Director of the Office of Personnel Management, develop and maintain a Governmentwide strategic plan for information resources management, that shall include--

((A) a description of the objectives and the means by which the Federal Government shall apply information resources to improve agency and program performance;

((B) plans for-- [[Page 109 STAT. 171]]

“(i) reducing information burdens on the public, including reducing such burdens through the elimination of duplication and meeting shared data needs with shared resources;

“(ii) enhancing public access to and dissemination of, information, using electronic and other formats; and

“(iii) meeting the information technology needs of the Federal Government in accordance with the purposes of this chapter; and

“(C) a description of progress in applying information resources management to improve agency performance and the accomplishment of missions.

“(b) For purposes of any pilot project conducted under subsection (a)(2), the Director may, after consultation with the agency head, waive the application of any administrative directive issued by an agency with which the project is conducted, including any directive requiring a collection of information, after giving timely notice to the public and the Congress regarding the need for such waiver.

“Sec. 3506. Federal agency responsibilities

“(a)(1) The head of each agency shall be responsible for--

“(A) carrying out the agency's information resources management activities to improve agency productivity, efficiency, and effectiveness; and

“(B) complying with the requirements of this chapter and related policies established by the Director.

“(2)(A) <<NOTE: Reports.>> Except as provided under subparagraph (B), the head of each agency shall designate a senior official who shall report directly to such agency head to carry out the responsibilities of the agency under this chapter.

“(B) <<NOTE: Reports.>> The Secretary of the Department of Defense and the Secretary of each military department may each designate senior officials who shall report directly to such Secretary to carry out the responsibilities of the department under this chapter. If more than one official is designated, the respective duties of the officials shall be clearly delineated.

“(3) The senior official designated under paragraph (2) shall head an office responsible for ensuring agency compliance with and prompt, efficient, and effective implementation of the information policies and information resources management responsibilities established under this chapter, including the reduction of information collection burdens on the public. The senior official and employees of such office shall be selected with special attention to the professional qualifications required to administer the functions described under this chapter.

“(4) Each agency program official shall be responsible and accountable for information resources assigned to and supporting the programs under such official. In consultation with the senior official designated under paragraph (2) and the agency Chief Financial Officer (or comparable official), each agency program official shall define program information needs and develop strategies, systems, and capabilities to meet those needs.

“(b) With respect to general information resources management, each agency shall--

“(1) manage information resources to-- [[Page 109 STAT. 172]]

“(A) reduce information collection burdens on the public;

“(B) increase program efficiency and effectiveness; and

“(C) improve the integrity, quality, and utility of information to all users within and outside the agency, including capabilities for ensuring dissemination of public information, public access to government information, and protections for privacy and security;

“(2) in accordance with guidance by the Director, develop and maintain a strategic information resources management plan that shall describe how information resources management activities help accomplish agency missions;

“(3) develop and maintain an ongoing process to--

“(A) ensure that information resources management operations and decisions are integrated with organizational planning, budget, financial management, human resources management, and program decisions;

“(B) in cooperation with the agency Chief Financial Officer (or comparable official), develop a full and accurate accounting of information technology expenditures, related expenses, and results; and

“(C) establish goals for improving information resources management's contribution to program productivity, efficiency, and effectiveness, methods for measuring progress towards those goals, and clear roles and responsibilities for achieving those goals;

“(4) in consultation with the Director, the Administrator of General Services, and the Archivist of the United States, maintain a current and complete inventory of the agency's information resources, including directories necessary to fulfill the requirements of section 3511 of this chapter; and

“(5) in consultation with the Director and the Director of the Office of Personnel Management, conduct formal training programs to educate agency program and management officials about information resources management.

“(c) With respect to the collection of information and the control of paperwork, each agency shall--

“(1) establish a process within the office headed by the official designated under subsection (a), that is sufficiently independent of program responsibility to evaluate fairly whether proposed collections of information should be approved under this chapter, to--

“(A) review each collection of information before submission to the Director for review under this chapter, including--

“(i) an evaluation of the need for the collection of information;

“(ii) a functional description of the information to be collected;

“(iii) a plan for the collection of the information;

“(iv) a specific, objectively supported estimate of burden;

“(v) a test of the collection of information through a pilot program, if appropriate; and

“(vi) a plan for the efficient and effective management and use of the information to be collected, including necessary resources; [[Page 109 STAT. 173]]

“(B) ensure that each information collection--

“(i) is inventoried, displays a control number and, if appropriate, an expiration date;

“(ii) indicates the collection is in accordance with the clearance requirements of section 3507; and

“(iii) informs the person receiving the collection of information of--

“(I) the reasons the information is being collected;

“(II) the way such information is to be used;

“(III) an estimate, to the extent practicable, of the burden of the collection;

“(IV) whether responses to the collection of information are voluntary, required to obtain a benefit, or mandatory; and

“(V) the fact that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid control number; and

“(C) assess the information collection burden of proposed legislation affecting the agency;

“(2)(A) <<NOTE: Federal Register, publication.>> except as provided under subparagraph (B) or section 3507(j), provide 60-

day notice in the Federal Register, and otherwise consult with members of the public and affected agencies concerning each proposed collection of information, to solicit comment to--

“(i) evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility;

“(ii) evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information;

“(iii) enhance the quality, utility, and clarity of the information to be collected; and

“(iv) minimize the burden of the collection of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology; and

“(B) <<NOTE: Regulations.>> for any proposed collection of information contained in a proposed rule (to be reviewed by the Director under section 3507(d)), provide notice and comment through the notice of proposed rulemaking for the proposed rule and such notice shall have the same purposes specified under subparagraph (A) (i) through (iv); and

“(3) certify (and provide a record supporting such certification, including public comments received by the agency) that each collection of information submitted to the Director for review under section 3507--

“(A) is necessary for the proper performance of the functions of the agency, including that the information has practical utility;

“(B) is not unnecessarily duplicative of information otherwise reasonably accessible to the agency;

“(C) reduces to the extent practicable and appropriate the burden on persons who shall provide information to or for the agency, including with respect to small entities, [[Page 109 STAT. 174]] as defined under section 601(6) of title 5, the use of such techniques as--

“(i) establishing differing compliance or reporting requirements or timetables that take into account the resources available to those who are to respond;

“(ii) the clarification, consolidation, or simplification of compliance and reporting requirements; or

“(iii) an exemption from coverage of the collection of information, or any part thereof;

“(D) is written using plain, coherent, and unambiguous terminology and is understandable to those who are to respond;

“(E) is to be implemented in ways consistent and compatible, to the maximum extent practicable, with the existing reporting and recordkeeping practices of those who are to respond;

“(F) indicates for each recordkeeping requirement the length of time persons are required to maintain the records specified;

“(G) contains the statement required under paragraph (1)(B)(iii);

“(H) has been developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected, including the processing of the information in a manner which shall enhance, where appropriate, the utility of the information to agencies and the public;

“(I) uses effective and efficient statistical survey methodology appropriate to the purpose for which the information is to be collected; and

“(J) to the maximum extent practicable, uses information technology to reduce burden and improve data quality, agency efficiency and responsiveness to the public.

“(d) <<NOTE: Public information.>> With respect to information dissemination, each agency shall--

“(1) ensure that the public has timely and equitable access to the agency's public information, including ensuring such access through--

“(A) encouraging a diversity of public and private sources for information based on government public information; information maintained in electronic format, providing timely and equitable access to the underlying data (in whole or in part); and

“(C) agency dissemination of public information in an efficient, effective, and economical manner;

“(2) regularly solicit and consider public input on the agency's information dissemination activities;

“(3) provide adequate notice when initiating, substantially modifying, or terminating significant information dissemination products; and

“(4) not, except where specifically authorized by statute--

“(A) establish an exclusive, restricted, or other distribution arrangement that interferes with timely and equitable availability of public information to the public; [[Page 109 STAT. 175]]

“(B) restrict or regulate the use, resale, or redissemination of public information by the public;

“(C) charge fees or royalties for resale or redissemination of public information; or

“(D) establish user fees for public information that exceed the cost of dissemination.

“(e) With respect to statistical policy and coordination, each agency shall--

“(1) ensure the relevance, accuracy, timeliness, integrity, and objectivity of information collected or created for statistical purposes;

“(2) inform respondents fully and accurately about the sponsors, purposes, and uses of statistical surveys and studies;

“(3) protect respondents' privacy and ensure that disclosure policies fully honor pledges of confidentiality;

“(4) observe Federal standards and practices for data collection, analysis, documentation, sharing, and dissemination of information;

“(5) ensure the timely publication of the results of statistical surveys and studies, including information about the quality and limitations of the surveys and studies; and

“(6) make data available to statistical agencies and readily accessible to the public.

“(f) <<NOTE: Records.>> With respect to records management, each agency shall implement and enforce applicable policies and procedures, including requirements for archiving information maintained in electronic format, particularly in the planning, design and operation of information systems.

“(g) <<NOTE: Privacy. Computer technology.>> With respect to privacy and security, each agency shall--

“(1) implement and enforce applicable policies, procedures, standards, and guidelines on privacy, confidentiality, security, disclosure and sharing of information collected or maintained by or for the agency;

((2) assume responsibility and accountability for compliance with and coordinated management of sections 552 and 552a of title 5, the Computer Security Act of 1987 (40 U.S.C. 759 note), and related information management laws; and

((3) consistent with the Computer Security Act of 1987 (40 U.S.C. 759 note), identify and afford security protections commensurate with the risk and magnitude of the harm resulting from the loss, misuse, or unauthorized access to or modification of information collected or maintained by or on behalf of an agency.

((h) <<NOTE: Science and technology.>> With respect to Federal information technology, each agency shall--

((1) implement and enforce applicable Governmentwide and agency information technology management policies, principles, standards, and guidelines;

((2) assume responsibility and accountability for information technology investments;

((3) promote the use of information technology by the agency to improve the productivity, efficiency, and effectiveness of agency programs, including the reduction of information collection burdens on the public and improved dissemination of public information;

((4) propose changes in legislation, regulations, and agency procedures to improve information technology practices, including changes that improve the ability of the agency to use technology to reduce burden; and

((5) assume responsibility for maximizing the value and assessing and managing the risks of major information systems initiatives through a process that is--

((A) integrated with budget, financial, and program management decisions; and

((B) used to select, control, and evaluate the results of major information systems initiatives.

Sec. 3507. Public information collection activities; submission to Director; approval and delegation

((a) An agency shall not conduct or sponsor the collection of information unless in advance of the adoption or revision of the collection of information--

((1) the agency has--

((A) conducted the review established under section 3506(c)(1);

((B) evaluated the public comments received under section 3506(c)(2);

((C) submitted to the Director the certification required under section 3506(c)(3), the proposed collection of information, copies of pertinent statutory authority, regulations, and other related materials as the Director may specify; and

((D) <<NOTE: Federal Register, publication.>> published a notice in the Federal Register--

((i) stating that the agency has made such submission; and

((ii) setting forth--

((I) a title for the collection of information;

((II) a summary of the collection of information;

((III) a brief description of the need for the information and the proposed use of the information;

((IV) a description of the likely respondents and proposed frequency of response to the collection of information;

((V) an estimate of the burden that shall result from the collection of information; and

((VI) notice that comments may be submitted to the agency and Director;

((2) the Director has approved the proposed collection of information or approval has been inferred, under the provisions of this section; and

((3) the agency has obtained from the Director a control number to be displayed upon the collection of information.

((b) The Director shall provide at least 30 days for public comment prior to making a decision under subsection (c), (d), or (h), except as provided under subsection (j).

((c)(1) For any proposed collection of information not contained in a proposed rule, the Director shall notify the agency involved of the decision to approve or disapprove the proposed collection of information.

((2) The Director shall provide the notification under paragraph (1), within 60 days after receipt or publication of the notice under subsection (a)(1)(D), whichever is later. [[Page 109 STAT. 177]]

((3) If the Director does not notify the agency of a denial or approval within the 60-day period described under paragraph (2)--

((A) the approval may be inferred;

((B) a control number shall be assigned without further delay; and

((C) the agency may collect the information for not more than 1 year.

((d)(1) <<NOTE: Proposed rule.>> For any proposed collection of information contained in a proposed rule--

((A) as soon as practicable, but no later than the date of publication of a notice of proposed rulemaking in the Federal Register, each agency shall forward to the Director a copy of any proposed rule which contains a collection of information and any information requested by the Director necessary to make the determination required under this subsection; and

((B) <<NOTE: Federal Register, publication.>> within 60 days after the notice of proposed rulemaking is published in the Federal Register, the Director may file public comments pursuant to the standards set forth in section 3508 on the collection of information contained in the proposed rule;

((2) <<NOTE: Regulations. Federal Register, publication.>> When a final rule is published in the Federal Register, the agency shall explain--

((A) how any collection of information contained in the final rule responds to the comments, if any, filed by the Director or the public; or

((B) the reasons such comments were rejected.

((3) If the Director has received notice and failed to comment on an agency rule within 60 days after the notice of proposed rulemaking, the Director may not disapprove any collection of information specifically contained in an agency rule.

((4) No provision in this section shall be construed to prevent the Director, in the Director's discretion--

((A) from disapproving any collection of information which was not specifically required by an agency rule;

((B) from disapproving any collection of information contained in an agency rule, if the agency failed to comply with the requirements of paragraph (1) of this subsection;

((C) from disapproving any collection of information obtained in a final agency rule, if the Director finds within 60 days after the publication of the final rule that the agency's response to the Director's comments filed under paragraph (2) of this subsection was unreasonable; or

((D) from disapproving any collection of information contained in a final rule, if--

“(i) the Director determines that the agency has substantially modified in the final rule the collection of information contained in the proposed rule; and

“(ii) the agency has not given the Director the information required under paragraph (1) with respect to the modified collection of information, at least 60 days before the issuance of the final rule.

“(5) This subsection shall apply only when an agency publishes a notice of proposed rulemaking and requests public comments.

“(6) The decision by the Director to approve or not act upon a collection of information contained in an agency rule shall not be subject to judicial review. [[Page 109 STAT. 178]]

“(e)(1) Any decision by the Director under subsection (c), (d), (h), or (j) to disapprove a collection of information, or to instruct the agency to make substantive or material change to a collection of information, shall be publicly available and include an explanation of the reasons for such decision.

“(2) Any written communication between the Administrator of the Office of Information and Regulatory Affairs, or any employee of the Office of Information and Regulatory Affairs, and an agency or person not employed by the Federal Government concerning a proposed collection of information shall be made available to the public.

“(3) This subsection shall not require the disclosure of--

“(A) any information which is protected at all times by procedures established for information which has been specifically authorized under criteria established by an Executive order or an Act of Congress to be kept secret in the interest of national defense or foreign policy; or

“(B) any communication relating to a collection of information which is not approved under this chapter, the disclosure of which could lead to retaliation or discrimination against the communicator.

“(f)(1) An independent regulatory agency which is administered by 2 or more members of a commission, board, or similar body, may by majority vote void--

“(A) any disapproval by the Director, in whole or in part, of a proposed collection of information of that agency; or

“(B) an exercise of authority under subsection (d) of section 3507 concerning that agency.

“(2) The agency shall certify each vote to void such disapproval or exercise to the Director, and explain the reasons for such vote. The Director shall without further delay assign a control number to such collection of information, and such vote to void the disapproval or exercise shall be valid for a period of 3 years.

“(g) The Director may not approve a collection of information for a period in excess of 3 years.

“(h)(1) If an agency decides to seek extension of the Director's approval granted for a currently approved collection of information, the agency shall--

“(A) conduct the review established under section 3506(c), including the seeking of comment from the public on the continued need for, and burden imposed by the collection of information; and

“(B) after having made a reasonable effort to seek public comment, but no later than 60 days before the expiration date of the control number assigned by the Director for the currently approved collection of information, submit the collection of information for review and approval under this section, which shall include an explanation of how the agency has used the information that it has collected.

((2) If under the provisions of this section, the Director disapproves a collection of information contained in an existing rule, or recommends or instructs the agency to make a substantive or material change to a collection of information contained in an existing rule, the Director shall--

((A) <<NOTE: Federal Register, publication. [[Page 109 STAT. 179]] >> publish an explanation thereof in the Federal Register; and [[Page 109 STAT. 179]]

((B) instruct the agency to undertake a rulemaking within a reasonable time limited to consideration of changes to the collection of information contained in the rule and thereafter to submit the collection of information for approval or disapproval under this chapter.

((3) An agency may not make a substantive or material modification to a collection of information after such collection has been approved by the Director, unless the modification has been submitted to the Director for review and approval under this chapter.

((i)(1) If the Director finds that a senior official of an agency designated under section 3506(a) is sufficiently independent of program responsibility to evaluate fairly whether proposed collections of information should be approved and has sufficient resources to carry out this responsibility effectively, the Director may, by rule in accordance with the notice and comment provisions of chapter 5 of title 5, United States Code, delegate to such official the authority to approve proposed collections of information in specific program areas, for specific purposes, or for all agency purposes.

((2) A delegation by the Director under this section shall not preclude the Director from reviewing individual collections of information if the Director determines that circumstances warrant such a review. The Director shall retain authority to revoke such delegations, both in general and with regard to any specific matter. In acting for the Director, any official to whom approval authority has been delegated under this section shall comply fully with the rules and regulations promulgated by the Director.

((j)(1) The agency head may request the Director to authorize a collection of information, if an agency head determines that--

((A) a collection of information--

((i) is needed prior to the expiration of time periods established under this chapter;
and

((ii) is essential to the mission of the agency; and

((B) the agency cannot reasonably comply with the provisions of this chapter because--

((i) public harm is reasonably likely to result if normal clearance procedures are followed;

((ii) an unanticipated event has occurred; or

((iii) the use of normal clearance procedures is reasonably likely to prevent or disrupt the collection of information or is reasonably likely to cause a statutory or court ordered deadline to be missed.

((2) The Director shall approve or disapprove any such authorization request within the time requested by the agency head and, if approved, shall assign the collection of information a control number. Any collection of information conducted under this subsection may be conducted without compliance with the provisions of this chapter for a maximum of 90 days after the date on which the Director received the request to authorize such collection.

Sec. 3508. Determination of necessity for information; hearing

Before approving a proposed collection of information, the Director shall determine whether the collection of information by the agency is necessary for the proper performance of the

functions of the agency, including whether the information shall have practical utility. Before making a determination the Director may give the agency and other interested persons an opportunity to be heard [[Page 109 STAT. 180]] or to submit statements in writing. To the extent, if any, that the Director determines that the collection of information by an agency is unnecessary for any reason, the agency may not engage in the collection of information.

``Sec. 3509. Designation of central collection agency

``The Director may designate a central collection agency to obtain information for two or more agencies if the Director determines that the needs of such agencies for information will be adequately served by a single collection agency, and such sharing of data is not inconsistent with applicable law. In such cases the Director shall prescribe (with reference to the collection of information) the duties and functions of the collection agency so designated and of the agencies for which it is to act as agent (including reimbursement for costs). While the designation is in effect, an agency covered by the designation may not obtain for itself information for the agency which is the duty of the collection agency to obtain. The Director may modify the designation from time to time as circumstances require. The authority to designate under this section is subject to the provisions of section 3507(f) of this chapter.

``Sec. 3510. Cooperation of agencies in making information available

``(a) The Director may direct an agency to make available to another agency, or an agency may make available to another agency, information obtained by a collection of information if the disclosure is not inconsistent with applicable law.

``(b)(1) If information obtained by an agency is released by that agency to another agency, all the provisions of law (including penalties) that relate to the unlawful disclosure of information apply to the officers and employees of the agency to which information is released to the same extent and in the same manner as the provisions apply to the officers and employees of the agency which originally obtained the information.

``(2) The officers and employees of the agency to which the information is released, in addition, shall be subject to the same provisions of law, including penalties, relating to the unlawful disclosure of information as if the information had been collected directly by that agency.

``Sec. 3511. Establishment and operation of Government Information Locator Service

``(a) In order to assist agencies and the public in locating information and to promote information sharing and equitable access by the public, the Director shall--

``(1) cause to be established and maintained a distributed agency-based electronic Government Information Locator Service (hereafter in this section referred to as the 'Service'), which shall identify the major information systems, holdings, and dissemination products of each agency;

``(2) require each agency to establish and maintain an agency information locator service as a component of, and to support the establishment and operation of the Service;

``(3) [[Page 109 STAT. 181]] <<NOTE: Establishment.>> in cooperation with the Archivist of the United States, the Administrator of General Services, the Public Printer, and the Librarian of Congress, establish an interagency committee [[Page 109 STAT. 181]] to advise the Secretary of Commerce on the development of technical standards for the Service to ensure compatibility, promote information sharing, and uniform access by the public;

“(4) consider public access and other user needs in the establishment and operation of the Service;

“(5) ensure the security and integrity of the Service, including measures to ensure that only information which is intended to be disclosed to the public is disclosed through the Service; and

“(6) periodically review the development and effectiveness of the Service and make recommendations for improvement, including other mechanisms for improving public access to Federal agency public information.

“(b) This section shall not apply to operational files as defined by the Central Intelligence Agency Information Act (50 U.S.C. 431 et seq.).

“Sec. 3512. Public protection

“(a) Notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information that is subject to this chapter if--

“(1) the collection of information does not display a valid control number assigned by the Director in accordance with this chapter; or

“(2) the agency fails to inform the person who is to respond to the collection of information that such person is not required to respond to the collection of information unless it displays a valid control number.

“(b) The protection provided by this section may be raised in the form of a complete defense, bar, or otherwise at any time during the agency administrative process or judicial action applicable thereto.

“Sec. 3513. Director review of agency activities; reporting; agency response

“(a) In consultation with the Administrator of General Services, the Archivist of the United States, the Director of the National Institute of Standards and Technology, and the Director of the Office of Personnel Management, the Director shall periodically review selected agency information resources management activities to ascertain the efficiency and effectiveness of such activities to improve agency performance and the accomplishment of agency missions.

“(b) Each agency having an activity reviewed under subsection (a) shall, within 60 days after receipt of a report on the review, provide a written plan to the Director describing steps (including milestones) to--

“(1) be taken to address information resources management problems identified in the report; and

“(2) improve agency performance and the accomplishment of agency missions.

“Sec. 3514. Responsiveness to Congress

“(a)(1) The Director shall--

“(A) keep the Congress and congressional committees fully and currently informed of the major activities under this chapter; and [[Page 109 STAT. 182]]

“(B) <<NOTE: Reports.>> submit a report on such activities to the President of the Senate and the Speaker of the House of Representatives annually and at such other times as the Director determines necessary.

((2) The Director shall include in any such report a description of the extent to which agencies have--

((A) reduced information collection burdens on the public, including--

((i) a summary of accomplishments and planned initiatives to reduce collection of information burdens;

((ii) a list of all violations of this chapter and of any rules, guidelines, policies, and procedures issued pursuant to this chapter;

((iii) a list of any increase in the collection of information burden, including the authority for each such collection; and

((iv) a list of agencies that in the preceding year did not reduce information collection burdens in accordance with section 3505(a)(1), a list of the programs and statutory responsibilities of those agencies that precluded that reduction, and recommendations to assist those agencies to reduce information collection burdens in accordance with that section;

((B) improved the quality and utility of statistical information;

((C) improved public access to Government information; and

((D) improved program performance and the accomplishment of agency missions through information resources management.

((b) The preparation of any report required by this section shall be based on performance results reported by the agencies and shall not increase the collection of information burden on persons outside the Federal Government.

Sec. 3515. Administrative powers

Upon the request of the Director, each agency (other than an independent regulatory agency) shall, to the extent practicable, make its services, personnel, and facilities available to the Director for the performance of functions under this chapter.

Sec. 3516. Rules and regulations

The Director shall promulgate rules, regulations, or procedures necessary to exercise the authority provided by this chapter.

Sec. 3517. Consultation with other agencies and the public

((a) In developing information resources management policies, plans, rules, regulations, procedures, and guidelines and in reviewing collections of information, the Director shall provide interested agencies and persons early and meaningful opportunity to comment.

((b) Any person may request the Director to review any collection of information conducted by or for an agency to determine, if, under this chapter, a person shall maintain, provide, or disclose the information to or for the agency. Unless the request is frivolous, the Director shall, in coordination with the agency responsible for the collection of information-- [[Page 109 STAT. 183]]

((1) respond to the request within 60 days after receiving the request, unless such period is extended by the Director to a specified date and the person making the request is given notice of such extension; and

((2) take appropriate remedial action, if necessary.

Sec. 3518. Effect on existing laws and regulations

“(a) Except as otherwise provided in this chapter, the authority of an agency under any other law to prescribe policies, rules, regulations, and procedures for Federal information resources management activities is subject to the authority of the Director under this chapter.

“(b) Nothing in this chapter shall be deemed to affect or reduce the authority of the Secretary of Commerce or the Director of the Office of Management and Budget pursuant to Reorganization Plan No. 1 of 1977 (as amended) and Executive order, relating to telecommunications and information policy, procurement and management of telecommunications and information systems, spectrum use, and related matters.

“(c)(1) Except as provided in paragraph (2), this chapter shall not apply to the collection of information--

“(A) during the conduct of a Federal criminal investigation or prosecution, or during the disposition of a particular criminal matter;

“(B) during the conduct of--

“(i) a civil action to which the United States or any official or agency thereof is a party; or

“(ii) an administrative action or investigation involving an agency against specific individuals or entities;

“(C) by compulsory process pursuant to the Antitrust Civil Process Act and section 13 of the Federal Trade Commission Improvements Act of 1980; or

“(D) during the conduct of intelligence activities as defined in section 3.4(e) of Executive Order No. 12333, issued December 4, 1981, or successor orders, or during the conduct of cryptologic activities that are communications security activities.

“(2) This chapter applies to the collection of information during the conduct of general investigations (other than information collected in an antitrust investigation to the extent provided in subparagraph (C) of paragraph (1)) undertaken with reference to a category of individuals or entities such as a class of licensees or an entire industry.

“(d) Nothing in this chapter shall be interpreted as increasing or decreasing the authority conferred by Public Law 89-306 on the Administrator of the General Services Administration, the Secretary of Commerce, or the Director of the Office of Management and Budget.

“(e) Nothing in this chapter shall be interpreted as increasing or decreasing the authority of the President, the Office of Management and Budget or the Director thereof, under the laws of the United States, with respect to the substantive policies and programs of departments, agencies and offices, including the substantive authority of any Federal agency to enforce the civil rights laws.

“Sec. 3519. Access to information

“Under the conditions and procedures prescribed in section 716 of title 31, the Director and personnel in the Office of Information and Regulatory Affairs shall furnish such information as the Comptroller General may require for the discharge of the responsibilities of the Comptroller General. For the purpose of obtaining such information, the Comptroller General or representatives thereof shall have access to all books, documents, papers and records, regardless of form or format, of the Office.

“Sec. 3520. Authorization of appropriations

“There are authorized to be appropriated to the Office of Information and Regulatory Affairs to carry out the provisions of this chapter, and for no other purpose, \$8,000,000 for each of the fiscal years 1996, 1997, 1998, 1999, 2000, and 2001.”

SEC. 3. BURDEN REDUCTION REGARDING QUARTERLY FINANCIAL REPORT PROGRAM AT BUREAU OF THE CENSUS.

Section 91 of title 13, United States Code, is amended by adding at the end the following new subsection:

- “(d)(1) The Secretary shall not select an organization or entity for participation in a survey, if--
 - “(A) the organization or entity--
 - “(i) has assets of less than \$50,000,000;
 - “(ii) completed participation in a prior survey in the preceding 10-year period, as determined by the Secretary; and
 - “(iii) was selected for that prior survey participation after September 30, 1990; or
 - “(B) the organization or entity--
 - “(i) has assets of more than \$50,000,000 and less than \$100,000,000;
 - “(ii) completed participation in a prior survey in the preceding 2-year period, as determined by the Secretary; and
 - “(iii) was selected for that prior survey participation after September 30, 1995.

“(2)(A) The Secretary shall furnish advice and similar assistance to ease the burden of a small business concern which is attempting to compile and furnish the business information required of organizations and entities participating in the survey.

“(B) To facilitate the provision of the assistance under subparagraph (A), the Secretary shall establish a toll-free telephone number.

“(C) The Secretary shall expand the use of statistical sampling techniques to select organizations and entities having assets less than \$100,000,000 to participate in the survey.

“(3) The Secretary may undertake such additional paperwork burden reduction initiatives with respect to the conduct of the survey as may be deemed appropriate by the Secretary.

“(4) For purposes of this subsection:

“(A) The term ‘small business concern’ means a business concern that meets the requirements of section 3(a) of the Small Business Act and the regulations promulgated pursuant thereto.

“(B) The term ‘survey’ means the collection of information by the Secretary pursuant to this section for the purpose of preparing the publication entitled ‘Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations’.”. [[Page 109 STAT. 185]]

SEC. 4. <<NOTE: 44 USC 3501 note.>> EFFECTIVE DATE.

(a) In General.--Except as otherwise provided in this section, this Act and the amendments made by this Act shall take effect on October 1, 1995.

(b) Authorization of Appropriations.--Section 3520 of title 44, United States Code, as amended by this Act, shall take effect on the date of enactment of this Act.

(c) Delayed Application.--In the case of a collection of information for which there is in effect on September 30, 1995, a control number issued by the Office of Management and Budget under chapter 35 of title 44, United States Code--

(1) the amendments made by this Act shall apply to the collection of information beginning on the earlier of--

(A) the first renewal or modification of that collection of information after September 30, 1995; or

(B) the expiration of its control number after September 30, 1995.

(2) prior to such renewal, modification, or expiration, the collection of information shall be subject to chapter 35 of title 44, United States Code, as in effect on September 30, 1995.

Approved May 22, 1995.

LEGISLATIVE HISTORY--S. 244 (H.R. 830):

HOUSE REPORTS: No. 104-37 accompanying H.R. 830 (Comm. on Government Reform and Oversight) and 104-99 (Comm. of Conference).

SENATE REPORTS: No. 104-8 (Comm. on Governmental Affairs).

CONGRESSIONAL RECORD, Vol. 141 (1995):

Feb. 22, H.R. 830 considered and passed House.

Mar. 6, 7, S. 244 considered and passed Senate.

Mar. 10, considered and passed House, amended.

Apr. 6, Senate and House agreed to conference report.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 31 (1995):

May 22, Presidential remarks.

<all>

APPENDIX D: OMB CIRCULAR A-130—MANAGEMENT OF FEDERAL INFORMATION RESOURCES

February 8, 1996

CIRCULAR NO. A-130²
Revised

(Transmittal Memorandum No. 3)

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Management of Federal Information Resources

Circular No. A-130 provides uniform government-wide information resources management policies as required by the Paperwork Reduction Act of 1980, as amended by the Paperwork Reduction Act of 1995, 44 U.S.C. Chapter 35. This Transmittal Memorandum contains updated guidance on the "Security of Federal Automated Information Systems," Appendix III and makes minor technical revisions to the Circular to reflect the Paperwork Reduction Act of 1995 (P.L. 104-13). The Circular is reprinted in its entirety for convenience.

Alice M. Rivlin
Director
Attachment

CIRCULAR NO. A-130
Revised

(Transmittal Memorandum No. 3)

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Management of Federal Information Resources

1. Purpose
2. Rescissions
3. Authorities
4. Applicability and Scope
5. Background
6. Definitions
7. Basic Considerations and Assumptions
8. Policy
9. Assignment of Responsibilities

² The text of OMB Circular A-130 has been reformatted for inclusion in this publication but the content is as posted at www.whitehouse.gov/OMB/circulars/a130/a130.html.

- 10. Oversight
 - 11. Effectiveness
 - 12. Inquiries
 - 13. Sunset Review Date
-

1. Purpose: This Circular establishes policy for the management of Federal information resources. Procedural and analytic guidelines for implementing specific aspects of these policies are included as appendices.

2. Rescissions: This Circular rescinds OMB Circulars No. A-3, A-71, A-90, A-108, A-114, and A-121, and all Transmittal Memoranda to those circulars.

3. Authorities: This Circular is issued pursuant to the Paperwork Reduction Act (PRA) of 1980, as amended by the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35); the Privacy Act, as amended (5 U.S.C. 552a); the Chief Financial Officers Act (31 U.S.C. 3512 et seq.); the Federal Property and Administrative Services Act, as amended (40 U.S.C. 759 and 487); the Computer Security Act (40 U.S.C. 759 note); the Budget and Accounting Act, as amended (31 U.S.C. Chapter 11); Executive Order No. 12046 of March 27, 1978; and Executive Order No. 12472 of April 3, 1984.

4. Applicability and Scope:

- a. The policies in this Circular apply to the information activities of all agencies of the executive branch of the Federal government.
 - b. Information classified for national security purposes should also be handled in accordance with the appropriate national security directives. National security emergency preparedness activities should be conducted in accordance with Executive Order No. 12472.
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5. Background: The Paperwork Reduction Act establishes a broad mandate for agencies to perform their information resources management activities in an efficient, effective, and economical manner. To assist agencies in an integrated approach to information resources management, the Act requires that the Director of OMB develop and implement uniform and consistent information resources management policies; oversee the development and promote the use of information management principles, standards, and guidelines; evaluate agency information resources management practices in order to determine their adequacy and efficiency; and determine compliance of such practices with the policies, principles, standards, and guidelines promulgated by the Director.

6. Definitions:

- a. The term "agency" means any executive department, military department, government corporation, government controlled corporation, or other establishment in the executive branch of the Federal government, or any independent regulatory agency. Within the Executive Office of the President, the term includes only OMB and the Office of Administration.
- b. The term "audiovisual production" means a unified presentation, developed according to a plan or script, containing visual imagery, sound or both, and used to convey information.
- c. The term "dissemination" means the government initiated distribution of information to the public. Not considered dissemination within the meaning of this Circular is

distribution limited to government employees or agency contractors or grantees, intra- or inter-agency use or sharing of government information, and responses to requests for agency records under the Freedom of Information Act (5 U.S.C. 552) or Privacy Act.

- d. The term "full costs," when applied to the expenses incurred in the operation of an information processing service organization (IPSO), is comprised of all direct, indirect, general, and administrative costs incurred in the operation of an IPSO. These costs include, but are not limited to, personnel, equipment, software, supplies, contracted services from private sector providers, space occupancy, intra-agency services from within the agency, inter-agency services from other Federal agencies, other services that are provided by State and local governments, and Judicial and Legislative branch organizations.
- e. The term "government information" means information created, collected, processed, disseminated, or disposed of by or for the Federal Government.
- f. The term "government publication" means information which is published as an individual document at government expense, or as required by law. (44 U.S.C. 1901)
- g. The term "information" means any communication or representation of knowledge such as facts, data, or opinions in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms.
- h. The term "information dissemination product" means any book, paper, map, machine-readable material, audiovisual production, or other documentary material, regardless of physical form or characteristic, disseminated by an agency to the public.
- i. The term "information life cycle" means the stages through which information passes, typically characterized as creation or collection, processing, dissemination, use, storage, and disposition.
- j. The term "information management" means the planning, budgeting, manipulating, and controlling of information throughout its life cycle.
- k. The term "information resources" includes both government information and information technology.
- l. The term "information processing services organization" (IPSO) means a discrete set of personnel, information technology, and support equipment with the primary function of providing services to more than one agency on a reimbursable basis.
- m. The term "information resources management" means the process of managing information resources to accomplish agency missions. The term encompasses both information itself and the related resources, such as personnel, equipment, funds, and information technology.
- n. The term "information system" means a discrete set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual.
- o. The term "information system life cycle" means the phases through which an information system passes, typically characterized as initiation, development, operation, and termination.
- p. The term "information technology" means the hardware and software operated by a Federal agency or by a contractor of a Federal agency or other organization that processes information on behalf of the Federal government to accomplish a Federal function, regardless of the technology involved, whether computers, telecommunications, or others. It includes automatic data processing equipment as that term is defined in Section 111(a)(2) of the Federal Property and Administrative Services

Act of 1949. For the purposes of this Circular, automatic data processing and telecommunications activities related to certain critical national security missions, as defined in 44 U.S.C. 3502(2) and 10 U.S.C. 2315, are excluded.

- q. The term "major information system" means an information system that requires special management attention because of its importance to an agency mission; its high development, operating, or maintenance costs; or its significant role in the administration of agency programs, finances, property, or other resources.
- r. The term "records" means all books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the government or because of the informational value of the data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes, extra copies of documents preserved only for convenience of reference, and stocks of publications and of processed documents are not included. (44 U.S.C. 3301)
- s. The term "records management" means the planning, controlling, directing, organizing, training, promoting, and other managerial activities involved with respect to records creation, records maintenance and use, and records disposition in order to achieve adequate and proper documentation of the policies and transactions of the Federal Government and effective and economical management of agency operations. (44 U.S.C. 2901(2))
- t. The term "service recipient" means an agency organizational unit, programmatic entity, or chargeable account that receives information processing services from an information processing service organization (IPSO). A service recipient may be either internal or external to the organization responsible for providing information resources services, but normally does not report either to the manager or director of the IPSO or to the same immediate supervisor.

7. Basic Considerations and Assumptions:

- a. The Federal Government is the largest single producer, collector, consumer, and disseminator of information in the United States. Because of the extent of the government's information activities, and the dependence of those activities upon public cooperation, the management of Federal information resources is an issue of continuing importance to all Federal agencies, State and local governments, and the public.
- b. Government information is a valuable national resource. It provides the public with knowledge of the government, society, and economy -- past, present, and future. It is a means to ensure the accountability of government, to manage the government's operations, to maintain the healthy performance of the economy, and is itself a commodity in the marketplace.
- c. The free flow of information between the government and the public is essential to a democratic society. It is also essential that the government minimize the Federal paperwork burden on the public, minimize the cost of its information activities, and maximize the usefulness of government information.
- d. In order to minimize the cost and maximize the usefulness of government information, the expected public and private benefits derived from government information should

- exceed the public and private costs of the information, recognizing that the benefits to be derived from government information may not always be quantifiable.
- e. The nation can benefit from government information disseminated both by Federal agencies and by diverse nonfederal parties, including State and local government agencies, educational and other not-for-profit institutions, and for-profit organizations.
 - f. Because the public disclosure of government information is essential to the operation of a democracy, the management of Federal information resources should protect the public's right of access to government information.
 - g. The individual's right to privacy must be protected in Federal Government information activities involving personal information.
 - h. Systematic attention to the management of government records is an essential component of sound public resources management which ensures public accountability. Together with records preservation, it protects the government's historical record and guards the legal and financial rights of the government and the public.
 - i. Agency strategic planning can improve the operation of government programs. The application of information resources should support an agency's strategic plan to fulfill its mission. The integration of IRM planning with agency strategic planning promotes the appropriate application of Federal information resources.
 - j. Because State and local governments are important producers of government information for many areas such as health, social welfare, labor, transportation, and education, the Federal Government must cooperate with these governments in the management of information resources.
 - k. The open and efficient exchange of scientific and technical government information, subject to applicable national security controls and the proprietary rights of others, fosters excellence in scientific research and effective use of Federal research and development funds.
 - l. Information technology is not an end in itself. It is one set of resources that can improve the effectiveness and efficiency of Federal program delivery.
 - m. Federal Government information resources management policies and activities can affect, and be affected by, the information policies and activities of other nations.
 - n. Users of Federal information resources must have skills, knowledge, and training to manage information resources, enabling the Federal government to effectively serve the public through automated means.
 - o. The application of up-to-date information technology presents opportunities to promote fundamental changes in agency structures, work processes, and ways of interacting with the public that improve the effectiveness and efficiency of Federal agencies.
 - p. The availability of government information in diverse media, including electronic formats, permits agencies and the public greater flexibility in using the information.
 - q. Federal managers with program delivery responsibilities should recognize the importance of information resources management to mission performance.

8. Policy:

- a. Information Management Policy
 - 1. Information Management Planning. Agencies shall plan in an integrated manner for managing information throughout its life cycle. Agencies shall:

- (a) Consider, at each stage of the information life cycle, the effects of decisions and actions on other stages of the life cycle, particularly those concerning information dissemination;
- (b) Consider the effects of their actions on members of the public and ensure consultation with the public as appropriate;
- (c) Consider the effects of their actions on State and local governments and ensure consultation with those governments as appropriate;
- (d) Seek to satisfy new information needs through interagency or intergovernmental sharing of information, or through commercial sources, where appropriate, before creating or collecting new information;
- (e) Integrate planning for information systems with plans for resource allocation and use, including budgeting, acquisition, and use of information technology;
- (f) Train personnel in skills appropriate to management of information;
- (g) Protect government information commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information;
- (h) Use voluntary standards and Federal Information Processing Standards where appropriate or required;
- (i) Consider the effects of their actions on the privacy rights of individuals, and ensure that appropriate legal and technical safeguards are implemented;
- (j) Record, preserve, and make accessible sufficient information to ensure the management and accountability of agency programs, and to protect the legal and financial rights of the Federal Government;
- (k) Incorporate records management and archival functions into the design, development, and implementation of information systems;
 - 1. Provide for public access to records where required or appropriate.
 - 2. Information Collection. Agencies shall collect or create only that information necessary for the proper performance of agency functions and which has practical utility.
 - 3. Electronic Information Collection. Agencies shall use electronic collection techniques where such techniques reduce burden on the public, increase efficiency of government programs, reduce costs to the government and the public, and/or provide better service to the public. Conditions favorable to electronic collection include:
 - (a) The information collection seeks a large volume of data and/or reaches a large proportion of the public;
 - (b) The information collection recurs frequently;
 - (c) The structure, format, and/or definition of the information sought by the information collection does not change significantly over several years;
 - (d) The agency routinely converts the information collected to electronic format;
 - (e) A substantial number of the affected public are known to have ready access to the necessary information technology and to maintain the information in electronic form;

- (f) Conversion to electronic reporting, if mandatory, will not impose substantial costs or other adverse effects on the public, especially State and local governments and small business entities.
4. Records Management. Agencies shall:
- (a) Ensure that records management programs provide adequate and proper documentation of agency activities;
 - (b) Ensure the ability to access records regardless of form or medium;
 - (c) In a timely fashion, establish, and obtain the approval of the Archivist of the United States for, retention schedules for Federal records; and
 - (d) Provide training and guidance as appropriate to all agency officials and employees and contractors regarding their Federal records management responsibilities.
5. Providing Information to the Public. Agencies have a responsibility to provide information to the public consistent with their missions. Agencies shall discharge this responsibility by:
- (a) Providing information, as required by law, describing agency organization, activities, programs, meetings, systems of records, and other information holdings, and how the public may gain access to agency information resources;
 - (b) Providing access to agency records under provisions of the Freedom of Information Act and the Privacy Act, subject to the protections and limitations provided for in these Acts;
 - (c) Providing such other information as is necessary or appropriate for the proper performance of agency functions; and
 - (d) In determining whether and how to disseminate information to the public, agencies shall:
 - (i) Disseminate information in a manner that achieves the best balance between the goals of maximizing the usefulness of the information and minimizing the cost to the government and the public;
 - (ii) Disseminate information dissemination products on equitable and timely terms;
 - (iii) Take advantage of all dissemination channels, Federal and nonfederal, including State and local governments, libraries and private sector entities, in discharging agency information dissemination responsibilities;
 - (iv) Help the public locate government information maintained by or for the agency.
6. Information Dissemination Management System. Agencies shall maintain and implement a management system for all information dissemination products which shall, at a minimum:
- (e) Assure that information dissemination products are necessary for proper performance of agency functions (44 U.S.C. 1108);
 - (a) Consider whether an information dissemination product available from other Federal or nonfederal sources is equivalent to an

- agency information dissemination product and reasonably fulfills the dissemination responsibilities of the agency;
- (b) Establish and maintain inventories of all agency information dissemination products;
 - (c) Develop such other aids to locating agency information dissemination products including catalogs and directories, as may reasonably achieve agency information dissemination objectives;
 - (d) Identify in information dissemination products the source of the information, if from another agency;
 - (e) Ensure that members of the public with disabilities whom the agency has a responsibility to inform have a reasonable ability to access the information dissemination products;
 - (f) Ensure that government publications are made available to depository libraries through the facilities of the Government Printing Office, as required by law (44 U.S.C. Part 19);
 - (g) Provide electronic information dissemination products to the Government Printing Office for distribution to depository libraries;
 - (h) Establish and maintain communications with members of the public and with State and local governments so that the agency creates information dissemination products that meet their respective needs;
 - (i) Provide adequate notice when initiating, substantially modifying, or terminating significant information dissemination products; and
 - (j) Ensure that, to the extent existing information dissemination policies or practices are inconsistent with the requirements of this Circular, a prompt and orderly transition to compliance with the requirements of this Circular is made.
7. Avoiding Improperly Restrictive Practices. Agencies shall:
- (a) Avoid establishing, or permitting others to establish on their behalf, exclusive, restricted, or other distribution arrangements that interfere with the availability of information dissemination products on a timely and equitable basis;
 - (b) Avoid establishing restrictions or regulations, including the charging of fees or royalties, on the reuse, resale, or redissemination of Federal information dissemination products by the public; and,
 - (c) Set user charges for information dissemination products at a level sufficient to recover the cost of dissemination but no higher. They shall exclude from calculation of the charges costs associated with original collection and processing of the information. Exceptions to this policy are:
 - (i) Where statutory requirements are at variance with the policy;
 - (ii) Where the agency collects, processes, and disseminates the information for the benefit of a specific identifiable group beyond the benefit to the general public;

- (iii) Where the agency plans to establish user charges at less than cost of dissemination because of a determination that higher charges would constitute a significant barrier to properly performing the agency's functions, including reaching members of the public whom the agency has a responsibility to inform; or
 - (iv) Where the Director of OMB determines an exception is warranted.
 - 8. Electronic Information Dissemination. Agencies shall use electronic media and formats, including public networks, as appropriate and within budgetary constraints, in order to make government information more easily accessible and useful to the public. The use of electronic media and formats for information dissemination is appropriate under the following conditions:
 - (a) The agency develops and maintains the information electronically;
 - (b) Electronic media or formats are practical and cost effective ways to provide public access to a large, highly detailed volume of information;
 - (c) The agency disseminates the product frequently;
 - (d) The agency knows a substantial portion of users have ready access to the necessary information technology and training to use electronic information dissemination products;
 - (e) A change to electronic dissemination, as the sole means of disseminating the product, will not impose substantial acquisition or training costs on users, especially State and local governments and small business entities.
 - 9. Safeguards. Agencies shall:
 - (a) Ensure that information is protected commensurate with the risk and magnitude of the harm that would result from the loss, misuse, or unauthorized access to or modification of such information;
 - (b) Limit the collection of information which identifies individuals to that which is legally authorized and necessary for the proper performance of agency functions;
 - (c) Limit the sharing of information that identifies individuals or contains proprietary information to that which is legally authorized, and impose appropriate conditions on use where a continuing obligation to ensure the confidentiality of the information exists;
 - (d) Provide individuals, upon request, access to records about them maintained in Privacy Act systems of records, and permit them to amend such records as are in error consistent with the provisions of the Privacy Act.
- b. Information Systems and Information Technology Management
 - 1. Evaluation and Performance Measurement. Agencies shall promote the appropriate application of Federal information resources as follows:

- (a) Seek opportunities to improve the effectiveness and efficiency of government programs through work process redesign and the judicious application of information technology;
 - (b) Prepare, and update as necessary throughout the information system life cycle, a benefit-cost analysis for each information system:
 - (i) at a level of detail appropriate to the size of the investment;
 - (ii) consistent with the methodology described in OMB Circular No. A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs;" and
 - (iii) that relies on systematic measures of mission performance, including the:
 - (a) effectiveness of program delivery; (b) efficiency of program administration; and (c) reduction in burden, including information collection burden, imposed on the public;
 - (c) Conduct benefit-cost analyses to support ongoing management oversight processes that maximize return on investment and minimize financial and operational risk for investments in major information systems on an agency-wide basis; and
 - (d) Conduct post-implementation reviews of information systems to validate estimated benefits and document effective management practices for broader use.
2. Strategic Information Resources Management (IRM) Planning. Agencies shall establish and maintain strategic information resources management planning processes which include the following components:
- (a) Strategic IRM planning that addresses how the management of information resources promotes the fulfillment of an agency's mission. This planning process should support the development and maintenance of a strategic IRM plan that reflects and anticipates changes in the agency's mission, policy direction, technological capabilities, or resource levels;
 - (b) Information planning that promotes the use of information throughout its life cycle to maximize the usefulness of information, minimize the burden on the public, and preserve the appropriate integrity, availability, and confidentiality of information. It shall specifically address the planning and budgeting for the information collection burden imposed on the public as defined by 5 C.F.R. 1320;
 - (c) Operational information technology planning that links information technology to anticipated program and mission needs, reflects budget constraints, and forms the basis for budget requests. This planning should result in the preparation and maintenance of an up-to-date five-year plan, as required by 44 U.S.C. 3506, which includes:
 - (i) a listing of existing and planned major information systems;
 - (ii) a listing of planned information technology acquisitions;
 - (iii) an explanation of how the listed major information systems and planned information technology acquisitions relate to each other and support the achievement of the agency's mission; and
 - (iv) a summary of computer security planning, as required by Section 6 of the Computer Security Act of 1987 (40 U.S.C. 759 note); and

- (d) Coordination with other agency planning processes including strategic, human resources, and financial resources.
3. Information Systems Management Oversight. Agencies shall establish information system management oversight mechanisms that:
- (a) Ensure that each information system meets agency mission requirements;
 - (b) Provide for periodic review of information systems to determine:
 - (i) how mission requirements might have changed;
 - (ii) whether the information system continues to fulfill ongoing and anticipated mission requirements; and
 - (iii) what level of maintenance is needed to ensure the information system meets mission requirements cost effectively;
 - (c) Ensure that the official who administers a program supported by an information system is responsible and accountable for the management of that information system throughout its life cycle;
 - (d) Provide for the appropriate training for users of Federal information resources;
 - (e) Prescribe Federal information system requirements that do not unduly restrict the prerogatives of State, local, and tribal governments;
 - (f) Ensure that major information systems proceed in a timely fashion towards agreed-upon milestones in an information system life cycle, meet user requirements, and deliver intended benefits to the agency and affected publics through coordinated decision making about the information, human, financial, and other supporting resources; and
 - (g) Ensure that financial management systems conform to the requirements of OMB Circular No. A-127, "Financial Management Systems."
4. Use of Information Resources. Agencies shall create and maintain management and technical frameworks for using information resources that document linkages between mission needs, information content, and information technology capabilities. These frameworks should guide both strategic and operational IRM planning. They should also address steps necessary to create an open systems environment. Agencies shall implement the following principles:
- (a) Develop information systems in a manner that facilitates necessary interoperability, application portability, and scalability of computerized applications across networks of heterogeneous hardware, software, and communications platforms;
 - (b) Ensure that improvements to existing information systems and the development of planned information systems do not unnecessarily duplicate information systems available within the same agency, from other agencies, or from the private sector;
 - (c) Share available information systems with other agencies to the extent practicable and legally permissible;
 - (d) Meet information technology needs through intra-agency and inter-agency sharing, when it is cost effective, before acquiring new information technology resources;
 - (e) For Information Processing Service Organizations (IPSOs) that have costs in excess of \$5 million per year, agencies shall:

- (i) account for the full costs of operating all IPSOs;
 - (ii) recover the costs incurred for providing IPSO services to all service recipients on an equitable basis commensurate with the costs required to provide those services; and
 - (iii) document sharing agreements between service recipients and IPSOs; and
- (f) Establish a level of security for all information systems that is commensurate with the risk and magnitude of the harm resulting from the loss, misuse, or unauthorized access to or modification of the information contained in these information systems.
5. Acquisition of Information Technology. Agencies shall:
- (g) Acquire information technology in a manner that makes use of full and open competition and that maximizes return on investment;
 - (h) Acquire off-the-shelf software from commercial sources, unless the cost effectiveness of developing custom software to meet mission needs is clear and has been documented;
 - (i) Acquire information technology in accordance with OMB Circular No. A-109, "Acquisition of Major Systems," where appropriate; and
 - (j) Acquire information technology in a manner that considers the need for accommodations of accessibility for individuals with disabilities to the extent that needs for such access exist.

9. Assignment of Responsibilities:

- a. All Federal Agencies. The head of each agency shall:
1. Have primary responsibility for managing agency information resources;
 2. Ensure that the information policies, principles, standards, guidelines, rules, and regulations prescribed by OMB are implemented appropriately within the agency;
 3. Develop internal agency information policies and procedures and oversee, evaluate, and otherwise periodically review agency information resources management activities for conformity with the policies set forth in this Circular;
 4. Develop agency policies and procedures that provide for timely acquisition of required information technology;
 5. Maintain an inventory of the agencies' major information systems, holdings and information dissemination products, as required by 44 U.S.C. 3511.
 6. Implement and enforce applicable records management policies and procedures, including requirements for archiving information maintained in electronic format, particularly in the planning, design and operation of information systems.
 7. Identify to the Director, OMB, statutory, regulatory, and other impediments to efficient management of Federal information resources and recommend to the Director legislation, policies, procedures, and other guidance to improve such management;
 8. Assist OMB in the performance of its functions under the PRA including making services, personnel, and facilities available to OMB for this purpose to the extent practicable;
 9. Appoint a senior official, as required by 44 U.S.C. 3506(a), who shall report directly to the agency head to carry out the responsibilities of the agency under the PRA. The

head of the agency shall keep the Director, OMB, advised as to the name, title, authority, responsibilities, and organizational resources of the senior official. For purposes of this paragraph, military departments and the Office of the Secretary of Defense may each appoint one official.

10. Direct the senior official appointed pursuant to 44 U.S.C. 3506(a) to monitor agency compliance with the policies, procedures, and guidance in this Circular. Acting as an ombudsman, the senior official shall consider alleged instances of agency failure to comply with this Circular and recommend or take corrective action as appropriate. The senior official shall report annually, not later than February 1st of each year, to the Director those instances of alleged failure to comply with this Circular and their resolution.
- b. Department of State. The Secretary of State shall:
 1. Advise the Director, OMB, on the development of United States positions and policies on international information policy issues affecting Federal Government information activities and ensure that such positions and policies are consistent with Federal information resources management policy;
 2. Ensure, in consultation with the Secretary of Commerce, that the United States is represented in the development of international information technology standards, and advise the Director, OMB, of such activities.
 - c. Department of Commerce. The Secretary of Commerce shall:
 1. Develop and issue Federal Information Processing Standards and guidelines necessary to ensure the efficient and effective acquisition, management, security, and use of information technology;
 2. Advise the Director, OMB, on the development of policies relating to the procurement and management of Federal telecommunications resources;
 3. Provide OMB and the agencies with scientific and technical advisory services relating to the development and use of information technology;
 4. Conduct studies and evaluations concerning telecommunications technology, and concerning the improvement, expansion, testing, operation, and use of Federal telecommunications systems and advise the Director, OMB, and appropriate agencies of the recommendations that result from such studies;
 5. Develop, in consultation with the Secretary of State and the Director of OMB, plans, policies, and programs relating to international telecommunications issues affecting government information activities;
 6. Identify needs for standardization of telecommunications and information processing technology, and develop standards, in consultation with the Secretary of Defense and the Administrator of General Services, to ensure efficient application of such technology;
 7. Ensure that the Federal Government is represented in the development of national and, in consultation with the Secretary of State, international information technology standards, and advise the Director, OMB, of such activities.
 - d. Department of Defense. The Secretary of Defense shall develop, in consultation with the Administrator of General Services, uniform Federal telecommunications standards and guidelines to ensure national security, emergency preparedness, and continuity of government.
 - e. General Services Administration. The Administrator of General Services shall:

1. Advise the Director, OMB, and agency heads on matters affecting the procurement of information technology;
 2. Coordinate and, when required, provide for the purchase, lease, and maintenance of information technology required by Federal agencies;
 3. Develop criteria for timely procurement of information technology and delegate procurement authority to agencies that comply with the criteria;
 4. Provide guidelines and regulations for Federal agencies, as authorized by law, on the acquisition, maintenance, and disposition of information technology, and for implementation of Federal Information Processing Standards;
 5. Develop policies and guidelines that facilitate the sharing of information technology among agencies as required by this Circular;
 6. Manage the Information Technology Fund in accordance with the Federal Property and Administrative Services Act as amended;
- f. Office of Personnel Management. The Director, Office of Personnel Management, shall:
1. Develop and conduct training programs for Federal personnel on information resources management including end-user computing;
 2. Evaluate periodically future personnel management and staffing requirements for Federal information resources management;
 3. Establish personnel security policies and develop training programs for Federal personnel associated with the design, operation, or maintenance of information systems.
- g. National Archives and Records Administration. The Archivist of the United States shall:
1. Administer the Federal records management program in accordance with the National Archives and Records Act;
 2. Assist the Director, OMB, in developing standards and guidelines relating to the records management program.
- h. Office of Management and Budget. The Director of the Office of Management and Budget shall:
1. Provide overall leadership and coordination of Federal information resources management within the executive branch;
 2. Serve as the President's principal adviser on procurement and management of Federal telecommunications systems, and develop and establish policies for procurement and management of such systems;
 3. Issue policies, procedures, and guidelines to assist agencies in achieving integrated, effective, and efficient information resources management;
 4. Initiate and review proposals for changes in legislation, regulations, and agency procedures to improve Federal information resources management;
 5. Review and approve or disapprove agency proposals for collection of information from the public, as defined by 5 CFR 1320.3;
 6. Develop and maintain a Governmentwide strategic plan for information resources management.
 7. Evaluate agencies' information resources management and identify cross-cutting information policy issues through the review of agency information programs, information collection budgets, information technology acquisition plans, fiscal budgets, and by other means;

8. Provide policy oversight for the Federal records management function conducted by the National Archives and Records Administration, coordinate records management policies and programs with other information activities, and review compliance by agencies with records management requirements;
9. Review agencies' policies, practices, and programs pertaining to the security, protection, sharing, and disclosure of information, in order to ensure compliance, with respect to privacy and security, with the Privacy Act, the Freedom of Information Act, the Computer Security Act and related statutes;
10. Resolve information technology procurement disputes between agencies and the General Services Administration pursuant to Section 111 of the Federal Property and Administrative Services Act;
11. Review proposed U.S. Government Position and Policy statements on international issues affecting Federal Government information activities and advise the Secretary of State as to their consistency with Federal information resources management policy.
12. Coordinate the development and review by the Office of Information and Regulatory Affairs of policy associated with Federal procurement and acquisition of information technology with the Office of Federal Procurement Policy.

10. Oversight:

- a. The Director, OMB, will use information technology planning reviews, fiscal budget reviews, information collection budget reviews, management reviews, and such other measures as the Director deems necessary to evaluate the adequacy and efficiency of each agency's information resources management and compliance with this Circular.
- b. The Director, OMB, may, consistent with statute and upon written request of an agency, grant a waiver from particular requirements of this Circular. Requests for waivers must detail the reasons why a particular waiver is sought, identify the duration of the waiver sought, and include a plan for the prompt and orderly transition to full compliance with the requirements of this Circular. Notice of each waiver request shall be published promptly by the agency in the Federal Register, with a copy of the waiver request made available to the public on request.

11. Effectiveness: This Circular is effective upon issuance. Nothing in this Circular shall be construed to confer a private right of action on any person.

12. Inquiries: All questions or inquiries should be addressed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503. Telephone: (202) 395-3785.

13. Sunset Review Date: OMB will review this Circular three years from the date of issuance to ascertain its effectiveness.

[Appendices]³

Appendix I to OMB Circular No. A-130 – Federal Agency Responsibilities for Maintaining Records About Individuals

³ Appendices I, II and III to OMB Circular A-130 have been omitted from this publication, but may be found at www.whitehouse.gov/OMB/circulars/a130/a130.html.

Appendix II to OMB Circular No. A-130 - Cost Accounting, Cost Recovery, and Interagency Sharing of Information Technology Facilities

[The guidance formerly found in Appendix II has been revised and placed in Section 8b. See, Transmittal No. 2, 59 FR 37906. Appendix II has been deleted and is reserved for future topics.]

Appendix III to OMB Circular No. A-130 - Security of Federal Automated Information Resources

Appendix IV to OMB Circular No. A-130 - Analysis of Key Sections

1. Purpose

The purpose of this Appendix is to provide a general context and explanation for the contents of the key Sections of the Circular.

2. Background

The Paperwork Reduction Act (PRA) of 1980, Public Law 96-511, as amended by the Paperwork Reduction Act of 1995, Public Law 104-13, codified at Chapter 35 of Title 44 of the United States Code, establishes a broad mandate for agencies to perform their information activities in an efficient, effective, and economical manner. Section 3504 of the Act provides authority to the Director, OMB, to develop and implement uniform and consistent information resources management policies; oversee the development and promote the use of information management principles, standards, and guidelines; evaluate agency information management practices in order to determine their adequacy and efficiency, and determine compliance of such practices with the policies, principles, standards, and guidelines promulgated by the Director.

The Circular implements OMB authority under the PRA with respect to Section 3504(b), general information resources management policy, Section 3504(d), information dissemination, Section 3504(f), records management, Section 3504(g), privacy and security, and Section 3504(h), information technology. The Circular also implements certain provisions of the Privacy Act of 1974 (5 U.S.C. 552a); the Chief Financial Officers Act (31 U.S.C. 3512 et seq.); Sections 111 and 206 of the Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. 759 and 487, respectively); the Computer Security Act (40 U.S.C. 759 note); the Budget and Accounting Act of 1921 (31 U.S.C. 1 et seq.); and Executive Order No. 12046 of March 27, 1978, and Executive Order No. 12472 of April 3, 1984, Assignment of National Security and Emergency Telecommunications Functions. The Circular complements 5 CFR Part 1320, Controlling Paperwork Burden on the Public, which implements other Sections of the PRA dealing with controlling the reporting and recordkeeping burden placed on the public.

In addition, the Circular revises and consolidates policy and procedures in seven previous OMB directives and rescinds those directives, as follows:

A-3 - Government Publications

A-71 - Responsibilities for the Administration and Management of Automatic Data Processing Activities Transmittal Memorandum No. 1 to Circular No. A-71 - Security of Federal Automated Information Systems

A-90 - Cooperating with State and Local Governments to Coordinate and Improve Information Systems

A-108 - Responsibilities for the Maintenance of Records about Individuals by Federal Agencies

A-114 - Management of Federal Audiovisual Activities

A-121 - Cost Accounting, Cost Recovery, and Interagency Sharing of Data Processing Facilities

3. Analysis

Section 6, Definitions. Access and Dissemination. The original Circular No. A-130 distinguished between the terms "access to information" and "dissemination of information" in order to separate statutory requirements from policy considerations. The first term means giving members of the public, at their request, information to which they are entitled by a law such as the FOIA. The latter means actively distributing information to the public at the initiative of the agency. The distinction appeared useful at the time Circular No. A-130 was written, because it allowed OMB to focus discussion on Federal agencies' responsibilities for actively distributing information. However, popular usage and evolving technology have blurred differences between the terms "access" and "dissemination" and readers of the Circular were confused by the distinction. For example, if an agency "disseminates" information via an on-line computer system, one speaks of permitting users to "access" the information, and on-line "access" becomes a form of "dissemination."

Thus, the revision defines only the term "dissemination." Special considerations based on access statutes such as the Privacy Act and the FOIA are explained in context.

Government Information. The definition of "government information" includes information created, collected, processed, disseminated, or disposed of both by and for the Federal Government. This recognizes the increasingly distributed nature of information in electronic environments. Many agencies, in addition to collecting information for government use and for dissemination to the public, require members of the public to maintain information or to disclose it to the public. Sound information resources management dictates that agencies consider the costs and benefits of a full range of alternatives to meet government objectives. In some cases, there is no need for the government actually to collect the information itself, only to assure that it is made publicly available. For example, banks insured by the FDIC must provide statements of financial condition to bank customers on request. Particularly when information is available in electronic form, networks make the physical location of information increasingly irrelevant.

The inclusion of information created, collected, processed, disseminated, or disposed of for the Federal Government in the definition of "government information" does not imply that responsibility for implementing the provisions of the Circular itself extends beyond the executive agencies to other entities. Such an interpretation would be inconsistent with Section 4, Applicability, and with existing law. For example, the courts have held that requests to Federal agencies for release of information under the FOIA do not always extend to those performing information activities under grant or contract to a Federal agency. Similarly, grantees may copyright information where the government may not. Thus the information responsibilities of grantees and contractors are not identical to those of Federal agencies except to the extent that the

agencies make them so in the underlying grants or contracts. Similarly, agency information resources management responsibilities do not extend to other entities.

Information Dissemination Product. This notice defines the term "information dissemination product" to include all information that is disseminated by Federal agencies. While the provision of access to on-line databases and search software included on compact disk, read-only memory (CD-ROM) are often called information services rather than products, there is no clear distinction and, moreover, no real difference for policy purposes between the two. Thus, the term "information dissemination product" applies to both products and services, and makes no distinction based on how the information is delivered.

Section 8a(1). Information Management Planning. Parallel to new Section 7, Basic Considerations and Assumptions, Section 8a begins with information resources management planning. Planning is the process of establishing a course of action to achieve desired results with available resources. Planners translate organizational missions into specific goals and, in turn, into measurable objectives.

The PRA introduced the concept of information resources management and the principle of information as an institutional resource which has both value and associated costs. Information resources management is a tool that managers use to achieve agency objectives. Information resources management is successful if it enables managers to achieve agency objectives efficiently and effectively.

Information resources management planning is an integral part of overall mission planning. Agencies need to plan from the outset for the steps in the information life cycle. When creating or collecting information, agencies must plan how they will process and transmit the information, how they will use it, how they will protect its integrity, what provisions they will make for access to it, whether and how they will disseminate it, how they will store and retrieve it, and finally, how the information will ultimately be disposed of. They must also plan for the effects their actions and programs will have on the public and State and local governments.

The Role of State and Local Governments. OMB made additions at Sections 7a, 7e, and 7j, Basic Considerations and Assumptions, concerning State and local governments, and also in policy statements at Sections 8a(1)(c), (3)(f), (5)(d)(iii), and (8)(e).

State and local governments, and tribal governments, cooperate as major partners with the Federal Government in the collection, processing, and dissemination of information. For example, State governments are the principal collectors and/or producers of information in the areas of health, welfare, education, labor markets, transportation, the environment, and criminal justice. The States supply the Federal Government with data on aid to families with dependent children; medicare; school enrollments, staffing, and financing; statistics on births, deaths, and infectious diseases; population related data that form the basis for national estimates; employment and labor market data; and data used for census geography. National information resources are greatly enhanced through these major cooperating efforts.

Federal agencies need to be sensitive to the role of State and local governments, and tribal governments, in managing information and in managing information technology. When planning, designing, and carrying out information collections, agencies should systematically consider what effect their activities will have on cities, counties, and States, and take steps to involve these governments as appropriate. Agencies should ensure that their information collections impose the

minimum burden and do not duplicate or conflict with local efforts or other Federal agency requirements or mandates. The goal is that Federal agencies routinely integrate State and local government concerns into Federal information resources management practices. This goal is consistent with standards for State and local government review of Federal policies and programs.

Training. Training is particularly important in view of the changing nature of information resources management. Decentralization of information technology has placed the management of automated information and information technology directly in the hands of nearly all agency personnel rather than in the hands of a few employees at centralized facilities. Agencies must plan for incorporating policies and procedures regarding computer security, records management, protection of privacy, and other safeguards into the training of every employee and contractor.

Section 8a(2). Information Collection. The PRA requires that the creation or collection of information be carried out in an efficient, effective, and economical manner. When Federal agencies create or collect information -- just as when they perform any other program functions -- they consume scarce resources. Such activities must be continually evaluated for their relevance to agency missions.

Agencies must justify the creation or collection of information based on their statutory functions. Policy statement 8a(2) uses the justification standard -- "necessary for the proper performance of the functions of the agency" -- established by the PRA (44 U.S.C. 3508). Furthermore, the policy statement includes the requirement that the information have practical utility, as defined in the PRA (44 U.S.C. 3502(11)) and elaborated in 5 CFR Part 1320. Practical utility includes such qualities of information as accuracy, adequacy, and reliability. In the case of general purpose statistics or recordkeeping, practical utility means that actual uses can be demonstrated (5 CFR 1320.3(l)). It should be noted that OMB's intent in placing emphasis on reducing unjustified burden in collecting information, an emphasis consistent with the Act, is not to diminish the importance of collecting information whenever agencies have legitimate program reasons for doing so. Rather, the concern is that the burdens imposed should not exceed the benefits to be derived from the information. Moreover, if the same benefit can be obtained by alternative means that impose a lesser burden, that alternative should be adopted.

Section 8a(3). Electronic Information Collection. Section 71 articulates a basic assumption of the Circular that modern information technology can help the government provide better service to the public through improved management of government programs. One potentially useful application of information technology is in the government's collection of information. While some information collections may not be good candidates for electronic techniques, many are. Agencies with major electronic information collection programs have found that automated information collections allow them to meet program objectives more efficiently and effectively. Electronic data interchange (EDI) and related standards for the electronic exchange of information will ease transmission and processing of routine business transaction information such as invoices, purchase orders, price information, bills of lading, health insurance claims, and other common commercial documents. EDI holds similar promise for the routine filing of regulatory information such as tariffs, customs declarations, license applications, tax information, and environmental reports.

Benefits to the public and agencies from electronic information collection appear substantial. Electronic methods of collection reduce paperwork burden, reduce errors, facilitate validation, and provide increased convenience and more timely receipt of benefits.

The policy in Section 8a(3) encourages agencies to explore the use of automated techniques for collection of information, and sets forth conditions conducive to the use of those techniques.

Section 8a(4). Records Management. Section 8a(4) begins with the fundamental requirement for Federal records management, namely, that agencies create and keep adequate and proper documentation of their activities. Federal agencies cannot carry out their missions in a responsible and responsive manner without adequate recordkeeping. Section 7h articulates the basic considerations concerning records management. Policy statements concerning records management are also interwoven throughout Section 8a, particularly in subsections on planning (8a(1)(j)), information dissemination (8a(6)), and safeguards (8a(9)).

Records support the immediate needs of government -- administrative, legal, fiscal -- and ensure its continuity. Records are essential for protecting the rights and interests of the public, and for monitoring the work of public servants. The government needs records to ensure accountability to the public which includes making the information available to the public.

Each stage of the information life cycle carries with it records management responsibilities. Agencies need to record their plans, carefully document the content and procedures of information collection, ensure proper documentation as a feature of every information system, keep records of dissemination programs, and, finally, ensure that records of permanent value are preserved.

Preserving records for future generations is the archival mission. Advances in technology affect the amount of information that can be created and saved, and the ways this information can be made available. Technological advances can ease the task of records management; however, the rapid pace of change in modern technology makes decisions about the appropriate application of technology critical to records management. Increasingly the records manager must be concerned with preserving valuable electronic records in the context of a constantly changing technological environment.

Records schedules are essential for the appropriate maintenance and disposition of records. Records schedules must be prepared in a timely fashion, implement the General Records Schedules issued by the National Archives and Records Administration, be approved by the Archivist of the United States, and be kept accurate and current. (See 44 U.S.C. 3301 et seq.) The National Archives and Records Administration and the General Services Administration provide guidance and assistance to agencies in implementing records management responsibilities. They also evaluate agencies' records management programs to determine the extent to which they are appropriately implementing their records management responsibilities.

Sections 8a(5) and 8a(6). Information Dissemination Policy. Section 8a(5). Every agency has a responsibility to inform the public within the context of its mission. This responsibility requires that agencies distribute information at the agency's initiative, rather than merely responding when the public requests information.

The FOIA requires each agency to publish in the Federal Register current descriptions of agency organization, where and how the public may obtain information, the general methods and procedural requirements by which agency functions are determined, rules of procedure, descriptions of forms and how to obtain them, substantive regulations, statements of general policy, and revisions to all the foregoing (5 U.S.C. 552(a)(1)). The Privacy Act also requires publication of information concerning "systems of records" which are records retrieved by

individual identifier such as name, Social Security Number, or fingerprint. The Government in the Sunshine Act requires agencies to publish meeting announcements (5 U.S.C. 552b (e)(1)). The PRA (44 U.S.C. 3507(a)(2)) and its implementing regulations (5 CFR Part 1320) require agencies to publish notices when they submit information collection requests for OMB approval. The public's right of access to government information under these statutes is balanced against other concerns, such as an individual's right to privacy and protection of the government's deliberative process.

As agencies satisfy these requirements, they provide the public basic information about government activities. Other statutes direct specific agencies to issue specific information dissemination products or to conduct information dissemination programs. Beyond generic and specific statutory requirements, agencies have responsibilities to disseminate information as a necessary part of performing their functions. For some agencies the responsibility is made explicit and sweeping; for example, the Agriculture Department is directed to "...diffuse among people of the United States, useful information on subjects connected with agriculture...." (7 U.S.C. 2201) For other agencies, the responsibility may be much more narrowly drawn.

Information dissemination is also a consequence of other agency activities. Agency programs normally include an organized effort to inform the public about the program. Most agencies carry out programs that create or collect information with the explicit or implicit intent that the information will be made public. Disseminating information is in many cases the logical extension of information creation or collection.

In other cases, agencies may have information that is not meant for public dissemination but which may be the subject of requests from the public. When the agency establishes that there is public demand for the information and that it is in the public interest to disseminate the information, the agency may decide to disseminate it automatically.

The policy in Section 8a(5)(d) sets forth several factors for agencies to take into account in conducting their information dissemination programs. First, agencies must balance two goals: maximizing the usefulness of the information to the government and the public, and minimizing the cost to both. Deriving from the basic purposes of the PRA (44 U.S.C. 3501), the two goals are frequently in tension because increasing usefulness usually costs more. Second, Section 8a(5)(d)(ii) requires agencies to conduct information dissemination programs equitably and in a timely manner. The word "equal" was removed from this Section since there may be instances where, for example, an agency determines that its mission includes disseminating information to certain specific groups or members of the public, and the agency determines that user charges will constitute a significant barrier to carrying out this responsibility.

Section 8a(5)(d)(iii), requiring agencies to take advantage of all dissemination channels, recognizes that information reaches the public in many ways. Few persons may read a Federal Register notice describing an agency action, but those few may be major secondary disseminators of the information. They may be affiliated with publishers of newspapers, newsletters, periodicals, or books; affiliated with on-line database providers; or specialists in certain information fields. While millions of information users in the public may be affected by the agency's action, only a handful may have direct contact with the agency's own information dissemination products. As a deliberate strategy, therefore, agencies should cooperate with the information's original creators, as well as with secondary disseminators, in order to further information dissemination goals and foster a diversity of information sources. An adjunct responsibility to this strategy is reflected in Section 8a(5)(d)(iv), which directs agencies to assist

the public in finding government information. Agencies may accomplish this, for example, by specifying and disseminating "locator" information, including information about content, format, uses and limitations, location, and means of access.

Section 8a(6). Information Dissemination Management System. This Section requires agencies to maintain an information dissemination management system which can ensure the routine performance of certain functions, including the essential functions previously required by Circular No. A-3. Smaller agencies need not establish elaborate formal systems, so long as the heads of the agencies can ensure that the functions are being performed.

Subsection (6)(a) carries over a requirement from OMB Circular No. A-3 that agencies' information dissemination products are to be, in the words of 44 U.S.C. 1108, "necessary in the transaction of the public business required by law of the agency." (Circular No. A-130 uses the expression "necessary for the proper performance of agency functions," which OMB considers to be equivalent to the expression in 44 U.S.C. 1108.) The point is that agencies should determine systematically the need for each information dissemination product.

Section 8a(6)(b) recognizes that to carry out effective information dissemination programs, agencies need knowledge of the marketplace in which their information dissemination products are placed. They need to know what other information dissemination products users have available in order to design the best agency product. As agencies are constrained by finite budgets, when there are several alternatives from which to choose, they should not expend public resources filling needs which have already been met by others in the public or private sector. Agencies have a responsibility not to undermine the existing diversity of information sources.

At the same time, an agency's responsibility to inform the public may be independent of the availability or potential availability of a similar information dissemination product. That is, even when another governmental or private entity has offered an information dissemination product identical or similar to what the agency would produce, the agency may conclude that it nonetheless has a responsibility to disseminate its own product. Agencies should minimize such instances of duplication but could reach such a conclusion because legal considerations require an official government information dissemination product.

Section 8a(6)(c) makes the Circular consistent with current practice (See OMB Bulletins 88-15, 89-15, 90-09, and 91-16), by requiring agencies to establish and maintain inventories of information dissemination products. (These bulletins eliminated annual reporting to OMB of title-by-title listings of publications and the requirement for agencies to obtain OMB approval for each new periodical. Publications are now reviewed as necessary during the normal budget review process.) Inventories help other agencies and the public identify information which is available. This serves both to increase the efficiency of the dissemination function and to avoid unnecessary burdens of duplicative information collections. A corollary, enunciated in Section 8a(6)(d), is that agencies can better serve public information needs by developing finding aids for locating information produced by the agencies. Finally, Section 8a(6)(f) recognizes that there will be situations where agencies may have to take appropriate steps to ensure that members of the public with disabilities whom the agency has a responsibility to inform have a reasonable ability to access the information dissemination products.

Depository Library Program. Sections 8a(6)(g) and (h) pertain to the Federal Depository Library Program. Agencies are to establish procedures to ensure compliance with 44 U.S.C. 1902, which requires that government publications (defined in 44 U.S.C. 1901 and repeated in Section 6 of the

Circular) be made available to depository libraries through the Government Printing Office (GPO).

Depository libraries are major partners with the Federal Government in the dissemination of information and contribute significantly to the diversity of information sources available to the public. They provide a mechanism for wide distribution of government information that guarantees basic availability to the public. Executive branch agencies support the depository library program both as a matter of law and on its merits as a means of informing the public about the government. On the other hand, the law places the administration of depository libraries with GPO. Agency responsibility for the depository libraries is limited to supplying government publications through GPO.

Agencies can improve their performance in providing government publications as well as electronic information dissemination products to the depository library program. For example, the proliferation of "desktop publishing" technology in recent years has afforded the opportunity for many agencies to produce their own printed documents. Many such documents may properly belong in the depository libraries but are not sent because they are not printed at GPO. The policy requires agencies to establish management controls to ensure that the appropriate documents reach the GPO for inclusion in the depository library program.

At present, few agencies provide electronic information dissemination products to the depository libraries. At the same time, a small but growing number of information dissemination products are disseminated only in electronic format.

OMB believes that, as a matter of policy, electronic information dissemination products generally should be provided to the depository libraries. Given that production and supply of information dissemination products to the depository libraries is primarily the responsibility of GPO, agencies should provide appropriate electronic information dissemination products to GPO for inclusion in the depository library program.

While cost may be a consideration, agencies should not conclude without investigation that it would be prohibitively expensive to place their electronic information dissemination products in the depository libraries. For electronic information dissemination products other than on-line services, agencies may have the option of having GPO produce the information dissemination product for them, in which case GPO would pay for depository library costs. Agencies should consider this option if it would be a cost effective alternative to the agency making its own arrangements for production of the information dissemination product. Using GPO's services in this manner is voluntary and at the agency's discretion. Agencies could also consider negotiating other terms, such as inviting GPO to participate in agency procurement orders in order to distribute the necessary copies for the depository libraries. With adequate advance planning, agencies should be able to provide electronic information dissemination products to the depository libraries at nominal cost.

In a particular case, substantial cost may be a legitimate reason for not providing an electronic information dissemination product to the depository library program. For example, for an agency with a substantial number of existing titles of electronic information dissemination products, furnishing copies of each to the depository libraries could be prohibitively expensive. In that situation, the agency should endeavor to make available those titles with the greatest general interest, value, and utility to the public. Substantial cost could also be an impediment in the case of some on-line information services where the costs associated with operating centralized

databases would make provision of unlimited direct access to numerous users prohibitively expensive. In both cases, agencies should consult with the GPO, in order to identify those information dissemination products with the greatest public interest and utility for dissemination. In all cases, however, where an agency discontinues publication of an information dissemination product in paper format in favor of electronic formats, the agency should work with the GPO to ensure availability of the information dissemination product to depository libraries.

Notice to the Public. Sections 8a(6)(i) and (j) present new practices for agencies to observe in communicating with the public about information dissemination. Among agencies' responsibilities for dissemination is an active knowledge of, and regular consultation with, the users of their information dissemination products. A primary reason for communication with users is to gain their contribution to improving the quality and relevance of government information -- how it is created, collected, and disseminated. Consultations with users might include participation at conferences and workshops, careful attention to correspondence and telephone communications (e.g., logging and analyzing inquiries), or formalized user surveys.

A key part of communicating with the public is providing adequate notice of agency information dissemination plans. Because agencies' information dissemination actions affect other agencies as well as the public, agencies must forewarn other agencies of significant actions. The decision to initiate, terminate, or substantially modify the content, form, frequency, or availability of significant products should also trigger appropriate advance public notice. Where appropriate, the Government Printing Office should be notified directly. Information dissemination products deemed not to be significant require no advance notice.

Examples of significant products (or changes to them) might be those that:

- (a) are required by law; e.g., a statutorily mandated report to Congress;
- (b) involve expenditure of substantial funds;
- (c) by reason of the nature of the information, are matters of continuing public interest; e.g., a key economic indicator;
- (d) by reason of the time value of the information, command public interest; e.g., monthly crop reports on the day of their release;
- (e) will be disseminated in a new format or medium; e.g., disseminating a printed product in electronic medium, or disseminating a machine-readable data file via on-line access.

Where members of the public might consider a proposed new agency product unnecessary or duplicative, the agency should solicit and evaluate public comments. Where users of an agency information dissemination product may be seriously affected by the introduction of a change in medium or format, the agency should notify users and consider their views before instituting the change. Where members of the public consider an existing agency product important and necessary, the agency should consider these views before deciding to terminate the product. In all cases, however, determination of what is a significant information dissemination product and what constitutes adequate notice are matters of agency judgment.

Achieving Compliance with the Circular's Requirements. Section 8a(6)(k) requires that the agency information dissemination management system ensure that, to the extent existing information dissemination policies or practices are inconsistent with the requirements of this

Circular, an orderly transition to compliance with the requirements of this Circular is made. For example, some agency information dissemination products may be priced at a level which exceeds the cost of dissemination, or the agency may be engaged in practices which are otherwise unduly restrictive. In these instances, agencies must plan for an orderly transition to the substantive policy requirements of the Circular. The information dissemination management system must be capable of identifying these situations and planning for a reasonably prompt transition. Instances of existing agency practices which cannot immediately be brought into conformance with the requirements of the Circular are to be addressed through the waiver procedures of Section 10(b).

Section 8a(7). Avoiding Improperly Restrictive Practices. Federal agencies are often the sole suppliers of the information they hold. The agencies have either created or collected the information using public funds, usually in furtherance of unique governmental functions, and no one else has it. Hence agencies need to take care that their behavior does not inappropriately constrain public access to government information.

When agencies use private contractors to accomplish dissemination, they must take care that they do not permit contractors to impose restrictions that undercut the agencies' discharge of their information dissemination responsibilities. The contractual terms should assure that, with respect to dissemination, the contractor behaves as though the contractor were the agency. For example, an agency practice of selling, through a contractor, on-line access to a database but refusing to sell copies of the database itself may be improperly restrictive because it precludes the possibility of another firm making the same service available to the public at a lower price. If an agency is willing to provide public access to a database, the agency should be willing to sell copies of the database itself.

By the same reasoning, agencies should behave in an even-handed manner in handling information dissemination products. If an agency is willing to sell a database or database services to some members of the public, the agency should sell the same products under similar terms to other members of the public, unless prohibited by statute. When an agency decides it has public policy reasons for offering different terms of sale to different groups in the public, the agency should provide a clear statement of the policy and its basis.

Agencies should not attempt to exert control over the secondary uses of their information dissemination products. In particular, agencies should not establish exclusive, restricted, or other distribution arrangements which interfere with timely and equitable availability of information dissemination products, and should not charge fees or royalties for the resale or redissemination of government information. These principles follow from the fact that the law prohibits the Federal Government from exercising copyright.

Agencies should inform the public as to the limitations inherent in the information dissemination product (e.g., possibility of errors, degree of reliability, and validity) so that users are fully aware of the quality and integrity of the information. If circumstances warrant, an agency may wish to establish a procedure by which disseminators of the agency's information may at their option have the data and/or value-added processing checked for accuracy and certified by the agency. Using this method, redisseminators of the data would be able to respond to the demand for integrity from purchasers and users. This approach could be enhanced by the agency using its authority to trademark its information dissemination product, and requiring that redisseminators who wish to use the trademark agree to appropriate integrity procedures. These methods have the possibility of promoting diversity, user responsiveness, and efficiency as well as integrity.

However, an agency's responsibility to protect against misuse of a government information dissemination product does not extend to restricting or regulating how the public actually uses the information.

The Lanham Trademark Act of 1946, 15 U.S.C. 1055, 1125, 1127, provides an efficient method to address legitimate agency concerns regarding public safety. Specifically, the Act permits a trademark owner to license the mark, and to demand that the user maintain appropriate quality controls over products reaching consumers under the mark. See generally, McCarthy on Trademarks, Sec. 18.13. When a trademark owner licenses the trademark to another, it may retain the right to control the quality of goods sold under the trademark by the licensee. Furthermore, if a licensee sells goods under the licensed trademark in breach of the licensor's quality specifications, the licensee may be liable for breach of contract as well as for trademark infringement. This technique is increasingly being used to assure the integrity of digital information dissemination products. For example, the Census Bureau has trademarked its topologically integrated geographic encoding and referencing data product ("TIGER/Line"), which is used as official source data for legislative districting and other sensitive applications.

Whenever a need for special quality control procedures is identified, agencies should adopt the least burdensome methods and ensure that the methods chosen do not establish an exclusive, restricted, or other distribution arrangement that interferes with timely and equitable availability of public information to the public. Agencies should not attempt to condition the resale or redissemination of its information dissemination products by members of the public.

User charges. Title 5 of the Independent Offices Appropriations Act of 1952 (31 U.S.C. 9701) establishes Federal policy regarding fees assessed for government services, and for sale or use of government property or resources. OMB Circular No. A-25, User Charges, implements the statute. It provides for charges for government goods and services that convey special benefits to recipients beyond those accruing to the general public. It also establishes that user charges should be set at a level sufficient to recover the full cost of providing the service, resource, or property. Since Circular No. A-25 is silent as to the extent of its application to government information dissemination products, full cost recovery for information dissemination products might be interpreted to include the cost of collecting and processing information rather than just the cost of dissemination. The policy in Section 8a(7)(c) clarifies the policy of Circular No. A-25 as it applies to information dissemination products. This policy was codified by the Paperwork Reduction Act of 1995 at 35 U.S.C. Section 3506(d)(4)(D).

Statutes such as FOIA and the Government in the Sunshine Act establish a broad and general obligation on the part of Federal agencies to make government information available to the public and to avoid erecting barriers that impede public access. User charges higher than the cost of dissemination may be a barrier to public access. The economic benefit to society is maximized when government information is publicly disseminated at the cost of dissemination. Absent statutory requirements to the contrary, the general standard for user charges for government information dissemination products should be to recover no more than the cost of dissemination. It should be noted in this connection that the government has already incurred the costs of creating and processing the information for governmental purposes in order to carry out its mission.

Underpinning this standard is the FOIA fee structure which establishes limits on what agencies can charge for access to Federal records. That Act permits agencies to charge only the direct reasonable cost of search, reproduction and, in certain cases, review of requested records. In the

case of FOIA requests for information dissemination products, charges would be limited to reasonable direct reproduction costs alone. No search would be needed to find the product, thus no search fees would be charged. Neither would the record need to be reviewed to determine if it could be withheld under one of the Act's exemptions since the agency has already decided to release it. Thus, FOIA provides an information "safety net" for the public.

While OMB does not intend to prescribe procedures for pricing government information dissemination products, the cost of dissemination may generally be thought of as the sum of all costs specifically associated with preparing a product for dissemination and actually disseminating it to the public. When an agency prepares an information product for its own internal use, costs associated with such production would not generally be recoverable as user charges on subsequent dissemination. When the agency prepares the product for public dissemination, and disseminates it, costs associated with preparation and actual dissemination would be recoverable as user charges.

In the case of government databases which are made available to the public on-line, the costs associated with initial database development, including the costs of the necessary hardware and software, would not be included in the cost of dissemination. Once a decision is made to disseminate the data, additional costs logically associated with dissemination can be included in the user fee. These may include costs associated with modification of the database to make it suitable for dissemination, any hardware or software enhancements necessary for dissemination, and costs associated with providing customer service or telecommunications capacity.

In the case of information disseminated via cd-rom, the costs associated with initial database development would likewise not be included in the cost of dissemination. However, a portion of the costs associated with formatting the data for cd-rom dissemination and the costs of mastering the cd-rom, could logically be included as part of the dissemination cost, as would the cost associated with licensing appropriate search software.

Determining the appropriate user fee is the responsibility of each agency, and involves the exercise of judgment and reliance on reasonable estimates. Agencies should be able to explain how they arrive at user fees which represent average prices and which, given the likely demand for the product, can be expected to recover the costs associated with dissemination.

When agencies provide custom tailored information services to specific individuals or groups, full cost recovery, including the cost of collection and processing, is appropriate. For example, if an agency prepares special tabulations or similar services from its databases in answer to a specific request from the public, all costs associated with fulfilling the request would be charged, and the requester should be so informed before work is begun.

In a few cases, agencies engaging in information collection activities augment the information collection at the request of, and with funds provided by, private sector groups. Since the 1920's, the Bureau of the Census has carried out, on request, surveys of certain industries at greater frequency or at a greater level of detail than Federal funding would permit, because gathering the additional information is consistent with Federal purposes and industry groups have paid the additional information collection and processing costs. While the results of these surveys are disseminated to the public at the cost of dissemination, the existence and availability of the additional government data are special benefits to certain recipients beyond those accruing to the public. It is appropriate that those recipients should bear the full costs of information collection and processing, in addition to the normal costs of dissemination.

Agencies must balance the requirement to establish user charges and the level of fees charged against other policies, specifically, the proper performance of agency functions and the need to ensure that information dissemination products reach the public for whom they are intended. If an agency mission includes disseminating information to certain specific groups or members of the public and the agency determines that user charges will constitute a significant barrier to carrying out this responsibility, the agency may have grounds for reducing or eliminating its user charges for the information dissemination product, or for exempting some recipients from the charge. Such reductions or eliminations should be the subject of agency determinations on a case by case basis and justified in terms of agency policies.

Section 8a(8). Electronic Information Dissemination. Advances in information technology have changed government information dissemination. Agencies now have available new media and formats for dissemination, including CD-ROM, electronic bulletin boards, and public networks. The growing public acceptance of electronic data interchange (EDI) and similar standards enhances their attractiveness as methods for government information dissemination. For example, experiments with the use of electronic bulletin boards to advertise Federal contracting opportunities and to receive vendor quotes have achieved wider dissemination of information about business opportunities with the Federal Government than has been the case with traditional notices and advertisements. Improved information dissemination has increased the number of firms expressing interest in participating in the government market and decreased prices to the government due to expanded competition. In addition, the development of public electronic information networks, such as the Internet, provides an additional way for agencies to increase the diversity of information sources available to the public. Emerging applications such as Wide Area Information Servers and the World-wide Web (using the NISO Z39.50 standard) will be used increasingly to facilitate dissemination of government information such as environmental data, international trade information, and economic statistics in a networked environment.

A basic purpose of the PRA is to "provide for the dissemination of public information on a timely basis, on equitable terms, and in a manner that promotes the utility of the information to the public and makes effective use of information technology." (44 U.S.C. 3501(7)) Agencies can frequently enhance the value, practical utility, and timeliness of government information as a national resource by disseminating information in electronic media. Electronic collection and dissemination may substantially increase the usefulness of government information dissemination products for three reasons. First, information disseminated electronically is likely to be more timely and accurate because it does not require data re-entry. Second, electronic records often contain more complete and current information because, unlike paper, it is relatively easy to make frequent changes. Finally, because electronic information is more easily manipulated by the user and can be tailored to a wide variety of needs, electronic information dissemination products are more useful to the recipients.

As stated at Section 8a(1)(h), agencies should use voluntary standards and Federal Information Processing Standards to the extent appropriate in order to ensure the most cost effective and widespread dissemination of information in electronic formats.

Agencies can frequently make government information more accessible to the public and enhance the utility of government information as a national resource by disseminating information in electronic media. Agencies generally do not utilize data in raw form, but edit, refine, and organize the data in order to make it more accessible and useful for their own purposes. Information is made more accessible to users by aggregating data into logical groupings, tagging data with

descriptive and other identifiers, and developing indexing and retrieval systems to facilitate access to particular data within a larger file. As a general matter, and subject to budgetary, security or legal constraints, agencies should make available such features developed for internal agency use as part of their information dissemination products.

There will also be situations where the agency determines that its mission will be furthered by providing enhancements beyond those needed for its own use, particularly those that will improve the public availability of government information over the long term. In these instances, the agency should evaluate the expected usefulness of the enhanced information in light of its mission, and where appropriate construct partnerships with the private sector to add these elements of value. This approach may be particularly appropriate as part of a strategy to utilize new technology enhancements, such as graphic images, as part of a particular dissemination program.

Section 8a(9). Information Safeguards. The basic premise of this Section is that agencies should provide an appropriate level of protection to government information, given an assessment of the risks associated with its maintenance and use. Among the factors to be considered include meeting the specific requirements of the Privacy Act of 1974 and the Computer Security Act of 1987.

In particular, agencies are to ensure that they meet the requirements of the Privacy Act regarding information retrievable by individual identifier. Such information is to be collected, maintained, and protected so as to preclude intrusion into the privacy of individuals and the unwarranted disclosure of personal information. Individuals must be accorded access and amendment rights to records, as provided in the Privacy Act. To the extent that agencies share information which they have a continuing obligation to protect, agencies should see that appropriate safeguards are instituted. Appendix I prescribes agency procedures for the maintenance of records about individuals, reporting requirements to OMB and Congress, and other special requirements of specific agencies, in accordance with the Privacy Act.

This Section also incorporates the requirement of the Computer Security Act of 1987 that agencies plan to secure their systems commensurate with the risk and magnitude of loss or harm that could result from the loss, misuse, or unauthorized access to information contained in those systems. It includes assuring the integrity, availability, and appropriate confidentiality of information. It also involves protection against the harm that could occur to individuals or entities outside of the Federal Government as well as the harm to the Federal Government. Appendix III prescribes a minimum set of controls to be included in Federal automated information resources security programs and assigns Federal agency responsibilities for the security of automated information resources. The Section also includes limits on collection and sharing of information and procedures to assure the integrity of information as well as requirements to adequately secure the information.

Incorporation of Circular No. A-114. OMB Circular No. A-114, Management of Federal Audiovisual Activities, last revised on March 20, 1985, prescribed policies and procedures to improve Federal audiovisual management. Although OMB has rescinded Circular No. A-114, its essential policies and procedures continue. This revision provides information resources management policies and principles independent of medium, including paper, electronic, or audiovisual. By including the term "audiovisual" in the definition of "information," audiovisual materials are incorporated into all policies of this Circular.

The requirement in Circular No. A-114 that the head of each agency designate an office with responsibility for the management oversight of an agency's audiovisual productions and that an appropriate program for the management of audiovisual productions in conformance with 36 CFR 1232.4 is incorporated into this Circular at Section 9a(10). The requirement that audiovisual activities be obtained consistent with OMB Circular No. A-76 is covered by Sections 8a(1)(d), 8a(5)(d)(i) and 8a(6)(b).

The National Archives and Records Administration will continue to prescribe the records management and archiving practices of agencies with respect to audiovisual productions at 36 CFR 1232.4, "Audiovisual Records Management."

Section 8b. Information Systems and Information Technology Management

Section 8b(1). Evaluation and Performance Measurement. OMB encourages agencies to stress several types of evaluation in their oversight of information systems. As a first step, agencies must assess the continuing need for the mission function. If the agency determines there is a continuing need for a function, agencies should reevaluate existing work processes prior to creating new or updating existing information systems. Without this analysis, agencies tend to develop information systems that improve the efficiency of traditional paper-based processes which may be no longer needed. The application of information technology presents an opportunity to reevaluate existing organizational structures, work processes, and ways of interacting with the public to see whether they still efficiently and effectively support the agency's mission.

Benefit-cost analyses provide vital management information on the most efficient allocation of human, financial, and information resources to support agency missions. Agencies should conduct a benefit-cost analysis for each information system to support management decision making to ensure: (a) alignment of the planned information system with the agency's mission needs; (b) acceptability of information system implementation to users inside the Government; (c) accessibility to clientele outside the Government; and (d) realization of projected benefits. When preparing benefit-cost analyses to support investments in information technology, agencies should seek to quantify the improvements in agency performance results through the measurement of program outputs.

The requirement to conduct a benefit-cost analysis need not become a burdensome activity for agencies. The level of detail necessary for such analyses varies greatly and depends on the nature of the proposed investment. Proposed investments in "major information systems" as defined in this Circular require detailed and rigorous analysis. This analysis should not merely serve as budget justification material, but should be part of the ongoing management oversight process to ensure prudent allocation of scarce resources. Proposed investments for information systems that are not considered "major information systems" should be analyzed and documented more informally.

While it is not necessary to create a new benefit-cost analysis at each stage of the information system life cycle, it is useful to refresh these analyses with up-to-date information to ensure the continued viability of an information system prior to and during implementation. Reasons for updating a benefit-cost analysis may include such factors as significant changes in projected costs and benefits, significant changes in information technology capabilities, major changes in requirements (including legislative or regulatory changes), or empirical data based on performance measurement gained through prototype results or pilot experience.

Agencies should also weigh the relative benefits of proposed investments in information technology across the agency. Given the fiscal constraints facing the Federal government in the upcoming years, agencies should fund a portfolio of investments across the agency that maximizes return on investment for the agency as a whole. Agencies should also emphasize those proposed investments that show the greatest probability (i.e., display the lowest financial and operational risk) of achieving anticipated benefits for the organization. OMB and GAO are creating a publication that will provide agencies with reference materials for setting up such evaluation processes.

Agencies should complete a retrospective evaluation of information systems once operational to validate projected savings, changes in practices, and effectiveness in serving affected publics. These post-implementation reviews may also serve as the basis for agency-wide learning about effective management practices.

Section 8b(2). Strategic Information Resources Management (IRM) Planning. Agencies should link to, and to the extent possible, integrate IRM planning with the agency strategic planning required by the Government Performance and Results Act (P.L. 103-62). Such a linkage ensures that agencies apply information resources to programs that support the achievement of agreed-upon mission goals. Additionally, strategic IRM planning by agencies may help avoid automating out-of-date, ineffective, or inefficient procedures and work processes.

Agencies should also devote management attention to operational information resources management planning. This operational IRM planning should provide a one to five year focus to agency IRM activities and projects. Agency operational IRM plans should also provide a listing of the major information systems covered by the management oversight processes described in Section 8b(3). Agency operational planning for IRM should also communicate to the public how the agency's application of information resources might affect them. For the contractor community, this includes articulating the agency's intent to acquire information technology from the private sector. These data should not be considered acquisition sensitive, so that they can be distributed as widely as possible to the vendor community in order to promote competition. Agencies should make these acquisition plans available to the public through government-wide information dissemination mechanisms, including electronic means.

Operational planning should also include initiatives to reduce the burden, including information collection burden, an agency imposes on the public. Too often, for example, agencies require personal visits to government offices during office hours inconvenient to the public. Instead, agencies should plan to use information technology in ways that make the public's dealing with the Federal government as "user-friendly" as possible.

Each year, OMB issues a bulletin requesting copies of agencies' latest strategic IRM plans and annual updates to operational plans for information and information technology.

Section 8b(3). Information Systems Management Oversight. Agencies should consider what constitutes a "major information system" for purposes of this Circular when determining the appropriate level of management attention for an information system. The anticipated dollar size of an information system or a supporting acquisition is only one determinant of the level of management attention an information system requires. Additional criteria to assess include the maturity and stability of the technology under consideration, how well defined user requirements are, the level of stability of program and user requirements, and security concerns.

For instance, certain risky or "cutting-edge" information systems require closer scrutiny and more points of review and evaluation. This is particularly true when an agency uses an evolutionary life cycle strategy that requires a technical and financial evaluation of the project's viability at prototype and pilot testing phases. Projects relying on commercial off-the-shelf technology and applications will generally require less oversight than those using custom-designed software.

While each phase of an information system life cycle may have unique characteristics, the dividing line between the phases may not always be distinct. For instance, both planning and evaluation should continue throughout the information system life cycle. In fact, during any phase, it may be necessary to revisit the previous stages based on new information or changes in the environment in which the system is being developed.

The policy statements in this Circular describe an information system life cycle. It does not, however, make a definitive statement that there must be four versus five phases of a life cycle because the life cycle varies by the nature of the information system. Only two phases are common to all information systems - a beginning and an end. As a result, life cycle management techniques that agencies can use may vary depending on the complexity and risk inherent in the project.

One element of this management oversight policy is the recognition of imbedded and/or parallel life cycles. Within an information system's life cycle there may be other subsidiary life cycles. For instance, most Federal information systems projects include an acquisition of goods and services that have life cycle characteristics. Some projects include software development components, which also have life cycles. Effective management oversight of major information systems requires a recognition of all these various life cycles and an integrated information systems management oversight with the budget and human resource management cycles that exist in the agency.

Section 8b(2) of the Circular underscores the need for agencies to bring an agency-wide perspective to a number of information resources management issues. These issues include policy formulation, planning, management and technical frameworks for using information resources, and management oversight of major information systems. Agencies should also provide for coordinated decision making (Section 8b(3)(f)) in order to bring together the perspectives from across an agency, and outside if appropriate. Such coordination may take place in an agency-wide management or IRM committee. Interested groups typically include functional users, managers of financial and human resources, information resources management specialists, and, as appropriate, the affected public.

Section 8b(4). Use of Information Resources. Agency management of information resources should be guided by management and technical frameworks for agency-wide information and information technology needs. The technical framework should serve as a reference for updates to existing and new information systems. The management framework should assure the integration of proposed information systems projects into the technical framework in a manner that will ensure progress towards achieving an open systems environment. Agency strategic IRM planning should describe the parameters (e.g., technical standards) of such a technical framework. The management framework should drive operational planning and should describe how the agency intends to use information and information technology consistent with the technical framework.

Agency management and technical frameworks for information resources should address agency strategies to move toward an open systems environment. These strategies should consist of one or

multiple profiles (an internally consistent set of standards), based on the current version of the NIST's Application Portability Profile. These profiles should satisfy user requirements, accommodate officially recognized or de facto standards, and promote interoperability, application portability, and scalability by defining interfaces, services, protocols, and data formats favoring the use of nonproprietary specifications.

Agencies should focus on how to better utilize the data they currently collect from the public. Because agencies generally do not share information, the public often must respond to duplicative information collections from various agencies or their components. Sharing of information about individuals should be consistent with the Privacy Act of 1974, as amended, and Appendix I of this Circular.

Services provided by IPSOs to components of their own agency are often perceived to be "free" by the service recipients because their costs are budgeted as an "overhead" charge. Service recipients typically do not pay for IPSO services based on actual usage. Since the services are perceived to be free, there is very little incentive for either the service recipients or the IPSO managers to be watchful for opportunities to improve productivity or to reduce costs. Agencies are encouraged to institute chargeback mechanisms for IPSOs that provide common information processing services across a number of agency components when the resulting economies are expected to exceed the cost of administration.

Section 8b(5). Acquisition of Information Technology. Consistent with the requirements of the Brooks Act and the Paperwork Reduction Act, agencies should acquire information technology to improve service delivery, reduce the cost of Federal program administration, and minimize burden of dealing with the Federal government. Agencies may wish to ask potential offerors to propose different technical solutions and approaches to fulfilling agency mission requirements. Evaluating acquisitions of information technology must assess both the benefits and costs of applying technology to meet such requirements.

The distinction between information system life cycles and acquisition life cycles is important when considering the implications of OMB Circular A-109, Acquisition of Major Systems, to the acquisition of information resources. Circular A-109 presents one strategy for acquiring information technology when:

- i) The agency intends to fund operational tests and demonstrations of system design;
- ii) The risk is high due to the unproven integration of custom designed software and/or hardware components;
- iii) The estimated cost savings or operational improvements from such a demonstration will further improve the return on investment; or
- iv) The agency wants to acquire a solution based on state-of-the-art, unproven technology.

Agencies should comply with OMB Circular A-76, Performance of Commercial Activities, when considering conversion to or from in-house or contract performance.

Agencies should ensure that acquisitions for new information technology comply with GSA regulations concerning information technology accessibility for individuals with disabilities [41 C.F.R. 201-20.103-7].

Section 9a(11). Ombudsman. The senior agency official designated by the head of each agency under 44 U.S.C. 3506(a) is charged with carrying out the responsibilities of the agency under the PRA. Agency senior information resources management officials are responsible for ensuring that their agency practices are in compliance with OMB policies. It is envisioned that the agency senior information resources management official will work as an ombudsman to investigate alleged instances of agency failure to adhere to the policies set forth in the Circular and to recommend or take corrective action as appropriate. Agency heads should continue to use existing mechanisms to ensure compliance with laws and policies.

Section 9b. International Relationships. The information policies contained in the PRA and Circular A-130 are based on the premise that government information is a valuable national resource, and that the economic benefits to society are maximized when government information is available in a timely and equitable manner to all. Maximizing the benefits of government information to society depends, in turn, on fostering diversity among the entities involved in disseminating it. These include for-profit and not-for-profit entities, such as information vendors and libraries, as well as State, local and tribal governments. The policies on charging the cost of dissemination and against restrictive practices contained in the PRA and Circular A-130 are aimed at achieving this goal.

Other nations do not necessarily share these values. Although an increasing number are embracing the concept of equitable and unrestricted access to public information -- particularly scientific, environmental, and geographic information of great public benefit -- other nations are treating their information as a commodity to be "commercialized". Whereas the Copyright Act, 17 U.S.C. 105, has long provided that "[c]opyright protection under this title is not available for any work of the United States Government," some other nations take advantage of their domestic copyright laws that do permit government copyright and assert a monopoly on certain categories of information in order to maximize revenues. Such arrangements tend to preclude other entities from developing markets for the information or otherwise disseminating the information in the public interest.

Thus, Federal agencies involved in international data exchanges are sometimes faced with problems in disseminating data stemming from differing national treatment of government copyright. For example, one country may attempt to condition the sharing of data with a Federal agency on an agreement that the agency will withhold release of the information or otherwise restrict its availability to the public. Since the Freedom of Information Act does not provide a categorical exemption for copyrighted information, and Federal agencies have neither the authority nor capability to enforce restrictions on behalf of other nations, agencies faced with such restrictive conditions lack clear guidance as to how to respond.

The results of the July 1995 Congress of the World Meteorological Organization, which sought to strike a balance of interests in this area, are instructive. Faced with a resolution which would have essentially required member nations to enforce restrictions on certain categories of information for the commercial benefit of other nations, the United States proposed a compromise which was ultimately accepted. The compromise explicitly affirmed the general principle that government meteorological information -- like all other scientific, technical and environmental information -- should be shared globally without restriction; but recognized that individual nations may in particular cases apply their own domestic copyright and similar laws to prevent what they deem to be unfair or inappropriate competition within their own territories. This compromise leaves open the door for further consultation as to whether the future of government information policy

in a global information infrastructure should follow the "open and unrestricted access" model embraced by the United States and a number of other nations, or if it should follow the "government commercialization" model of others.

Accordingly, since the PRA and Circular A-130 are silent as to how agencies should respond to similar situations, we are providing the following suggestions. They are intended to foster globally the open and unrestricted information policy embraced by the United States and like minded nations, while permitting agencies to have access to data provided by foreign governments with restrictive conditions.

Release by a Federal agency of copyrighted information, whether under a FOIA request or otherwise, does not affect any rights the copyright holder might otherwise possess. Accordingly, agencies should inform any concerned foreign governments that their copyright claims may be enforceable under United States law, but that the agency is not authorized to prosecute any such claim on behalf of the foreign government.

Whenever an agency seeks to negotiate an international agreement in which a foreign party seeks to impose restrictive practices on information to be exchanged, the agency should first coordinate with the State Department. The State Department will work with the agency to develop the least restrictive terms consistent with United States policy, and ensure that those terms receive full interagency clearance through the established process for granting agencies authority to negotiate and conclude international agreements.

Finally, whenever an agency is attending meetings of international or multilateral organizations where restrictive practices are being proposed as binding on member states, the agency should coordinate with the State Department, the Office of Management and Budget, the Office of Science and Technology Policy, or the U.S. Trade Representative, as appropriate, before expressing a position on behalf of the United States.

APPENDIX E: EXCERPTS FROM *INFORMING THE NATION*⁴

FOREWORD

Federal information is essential to public understanding of many issues facing Congress and the Nation, and is used by all sectors of society. Technological advances are opening up many new and potentially cost-effective ways to collect, manage, and disseminate this information. Although traditional ink-on-paper publications will continue to meet important needs for the foreseeable future, many types of Federal information—such as statistical, reference, and scientific and technical—are well suited to electronic storage and dissemination. For example, an entire year's worth of the *Congressional Record* or several Bureau of the Census statistical series can be placed on one compact optical disk that can be easily read with a low-cost reader and basic microcomputer. Press releases, weather and crop bulletins, and economic or trade indices can be disseminated immediately via electronic bulletin boards or online information systems.

This report addresses the opportunities to improve the dissemination of Federal information. It also highlights two major problems: maintaining equity in public access to Federal information in electronic formats, and defining the respective roles of Federal agencies and the private sector in the electronic dissemination process. The report focuses on current and future roles of the U.S. Government Printing Office (GPO) and Superintendent of Documents, the Depository Library Program (administered by GPO), and the National Technical Information Service (NTIS). In addition, this report examines electronic dissemination of congressional information, the Freedom of Information Act in an electronic environment, and electronic dissemination of government information to the press.

In conducting this assessment, OTA drew on expertise and perspectives from numerous sources in and outside of the government. OTA received special assistance from the General Accounting Office (GAO) for the surveys of Federal information dissemination practices and Federal information users, from GPO with respect to Federal printing and related dissemination activities, and from NTIS with regard to dissemination of scientific and technical information. OTA appreciates the participation of the advisory panelists, contractors, working group participants, Federal agency officials and Federal information users who responded to the GAO surveys, and members of the library, academic, business, labor, consumer, and Federal agency communities, among others, who helped bring this report to fruition.

The report responds to an initial request from the Joint Committee on Printing and subsequent expressions of interest from the Subcommittee on Government Information, Justice, and Agriculture of the House Committee on Government Operations, the House Committee on Science, Space, and Technology, the Committee on House Administration, and the Subcommittee on Legislative of the House Committee on Appropriations.

⁴ U.S. Congress, Office of Technology Assessment, *Informing the Nation: Federal Information Dissemination in an Electronic Age*, OTA-C IT-396, Washington, DC: U.S. Government Printing Office, October 1988. The text of *Informing the Nation* has been reformatted for inclusion in this publication, but the content is as posted at www.wws.princeton.edu/~ota/disk2/1988/8823_n.html and at www.ota.nap.edu/pdf/data/1988/8823.pdf.

The report is solely the responsibility of OTA, not of those who assisted us in the assessment or of the congressional committees who requested or endorsed the undertaking of the study.

/signed/

John H. Gibbons
Director

CHAPTER 1: SUMMARY⁵

INTRODUCTION

If a Nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be . . . if we are to guard against ignorance and remain free, it is the responsibility of every American to be informed.

—Thomas Jefferson, July 6, 1816

Federal information is used by all sectors of society. For example, the business and financial communities look to price levels and government indicators of economic activity as important inputs to business planning and investment decisions. Similarly, the agricultural community regularly uses government crop and weather bulletins, as well as forecasts, to aid in scheduling crop planting. Scientists and engineers benefit from technical information generated by federally conducted or sponsored research in areas like superconductors, supercomputers, and solar energy. Indeed, information generated by the Federal Government spans the entire spectrum of issues and programs relevant to agency missions—from public health crises, such as AIDs; to environmental problems, such as hazardous waste disposal and water pollution; to demographic and employment trends. And at the most basic level, information about governmental processes—such as the Congressional Record for Congress and the Federal Register for the executive branch agencies—is used by citizens and organizations that wish to monitor and participate in a wide range of government activities.

For most of this Nation's history, Federal information has been disseminated predominantly in the form of paper documents and, in recent decades, to a lesser extent in microfiche. However, in the last few years, technological advances have resulted in a rapid increase in the use of electronic formats for Federal information dissemination. While the use of electronic technology offers many new opportunities for cost-effective dissemination, serious conflicts have arisen over how to maintain and strengthen public access to government information and balance the roles of individual Federal agencies, governmentwide dissemination mechanisms, and the private sector.

OTA has concluded that congressional action is urgently needed to resolve Federal information dissemination issues and to set the direction of Federal activities for years to come. The government is at a crucial point where opportunities presented by the information technologies, such as productivity and cost-effectiveness improvements, are substantial. However, the stakes, including preservation and/or enhancement of public access to government information plus

⁵ Footnotes and tables from the original report are omitted in this excerpt. The full text of the *Informing the Nation* is available electronically at www.wws.princeton.edu/~ota/disk2/1988/8823_n.html and at www.ota.nap.edu/pdf/data/1988/8823.pdf.

maintenance of the fiscal and administrative responsibilities of the agencies, are high and need to be carefully balanced by Congress.

Congress has enacted numerous laws that emphasize the importance of broad public access to Federal information (such as the Printing Act of 1895, Depository Library Act of 1962, Freedom of Information Act of 1966, and Paperwork Reduction Act of 1980) and assign various information dissemination functions to individual Federal agencies (see box A) and governmentwide clearinghouses. The latter include principally the Superintendent of Documents (SupDocs) at the U.S. Government Printing Office (GPO), Depository Library Program (DLP) also at GPO, National Technical Information Service (NTIS), and Consumer Information Center (CIC). However, the existing statutory and institutional framework was established by Congress largely during the pre-electronic era. It is important, therefore, that Congress review this framework to determine what actions are needed to ensure that legislative intent is carried out in an electronic environment and whether any adjustments in legislative objectives or legislation are needed.

This assessment presents information and analyses on a broad range of topics and issues. It is intended to:

- help both Congress and the Nation better understand Federal information dissemination in an electronic age; and
- assist Congress in implementing improvements in Federal information dissemination activities.

The focus of this report is on public information, that is, Federal information that is or should be in the public domain and is not subject to exemption under the Freedom of Information Act (e.g., due to privacy, security, or confidentiality considerations). The report focuses on the process of information dissemination, including the Federal Government's technical and institutional infrastructure for dissemination, not on information collection (although also important). The report considers a wide range of information formats—from paper and microfiche to computer tapes and diskettes, compact disks, and online databases. And the report covers all major types of Federal information at a general level—including agency reports and pamphlets, rules and regulations, periodicals and bibliographies, statistical information, and scientific and technical information, among others.

OPPORTUNITIES

The Federal Government today stands at a major crossroads with respect to the future of Federal information dissemination. Technological advances have opened up many new and potentially cost-effective ways to disseminate Federal information, especially those types of information (such as bibliographic, reference, statistical, and scientific and technical) that are particularly well suited to electronic formats.

OTA expects several key underlying technical trends to continue unabated for at least the next 3 to 5 years and 10 years or more in many cases. These include:

- continued, steady improvement in the price/performance of microcomputers, nonimpact printers, scanners, and desktop software;
- rapid proliferation of desktop publishing systems and continued improvement in the ability of desktop systems to produce higher quality, more complex documents;

- rapid growth in networking of desktop and high-end systems, nonimpact printers, and phototypesetters used for more complex, higher volume, and/or larger institutional applications;
- continued increase in the number and use of computerized online information services and online information gateways (that provide the channels for information exchange), and continued advances in the underlying computer and telecommunication technologies;
- rapid advances in optical disk technologies and applications, including accelerating penetration of CD-ROM (compact disk read-only memory), maturation of WORM (write once read many times) and erasable optical disks, plus emergence of CD-I (compact disk interactive, with audio, video, graphics, textual, and software capabilities all on one disk); and
- rapid advances in the development of expert systems applicable to many aspects of information dissemination—including technical writing, indexing, information retrieval, and printing management.

Many individual Federal agencies already are experimenting with and increasingly implementing information dissemination via electronic bulletin boards, floppy disks, compact optical disks, desktop publishing, and electronic printing-on-demand. For example, statistical data are highly suited to electronic formats, and, based on the results of the General Accounting Office (GAO) survey of Federal agencies (see box B), about one-third of the civilian departmental agencies use magnetic tape or disks, one-fifth floppy disks and electronic data transfer, and one-tenth electronic mail for dissemination of statistical data (see Table H). By comparison, about three-fourths of the agencies use paper and roughly one-tenth use microfiche for disseminating statistical data. Overall, civilian agencies (departmental and independent) reported over 7,500 information products disseminated electronically, as of fiscal year 1987. The number of civilian agency publications in paper format appears to be declining slowly, while the number of electronic products has more than tripled over the past 4 years. The GAO survey results suggest that this trend will continue. For example, by 1990, agency use of electronic mail and bulletin boards, floppy disks, and compact optical disks in disseminating scientific and technical information is expected to more than double, on the average, as shown in Table 1-2.

With respect to demand for Federal information, OTA has concluded that, for the foreseeable future, paper will continue to be the preferred format for many purposes, such as browsing government reports, and microfiche will continue to be used for document storage and archival purposes. However, OTA'S 3- to 5- year outlook for the dissemination of Federal information indicates that overall demand for paper formats will decline modestly and the demand for microfiche will drop rather markedly, while the demand for electronic formats will increase dramatically.

There already is a significant demand for Federal information in electronic formats among user groups, and particularly within the library community, private industry, Federal agencies themselves, and various groups with specialized needs (such as educators, researchers, and disabled persons). OTA projects that this demand will rise sharply over the next few years, especially among the more technically sophisticated user groups.

The results of the GAO survey of Federal information users document this likely trend in demand. For example, the depository library community (as intermediaries reflecting users and user information needs in university, research, Federal, State, local, and public libraries) indicated

a strong preference for obtaining increasing percentages of Federal information in electronic form and declining percentages in paper and microfiche. The survey results for 318 depository libraries out of a sample of 451 (34 of the 51 regional depositories and 284 of the 400 selective depository libraries sampled) are highlighted in Table 1-3. These results show that, by and large, the depository library community desires or anticipates decreases in use of paper and microfiche formats and significant increases in online databases and compact optical disks. Trends for other surveyed segments of the Federal information user community (e.g., nondepository libraries, scientific and technical associations) are not so dramatic, but show a similar pattern.

Electronic publishing and related technologies, when coupled with essential technical standards, offer the near-term prospect for integrated information systems utilizing the “information life cycle” concept. Here, the collection, processing, storage, and dissemination (and ultimately retention or archiving) of information in multiple formats (paper, microform, and electronic) are viewed and implemented as interrelated functions rather than separate, unrelated activities. The life cycle concept offers the prospect of improvements in Federal productivity or cost avoidance through increased efficiencies in the publishing of government reports, reduced paper and postage costs, and the like (see box C).

The Federal Government should be able to realize at least a significant portion of the productivity improvements demonstrated by private business users. Private firms typically report 30 to 50 percent productivity improvement with a payback on investment in the 2- to 3-year range. The Federal Government spends, conservatively, \$6 billion per year on information dissemination (not including the cost of collection, processing, or a prorated share of agency automation). Thus, productivity improvements on the order of hundreds of millions of dollars per year appear to be readily achievable. In addition, the substantial ongoing investment by Federal mission agencies in agency automation, if planned and implemented properly, can incorporate multifunction information dissemination at little additional marginal cost, compared to the total cost of automation, and with the potential for net cost savings in agency information functions.

PROBLEMS AND CHALLENGES

Technological advances are creating a number of problems and challenges with respect to Federal information dissemination:

- At a fundamental level, electronic technology is changing or even eliminating many distinctions between reports, publications, databases, records, and the like, in ways not anticipated by existing statutes and policies. A rapidly growing percentage of Federal information exists at some point in an electronic form on a computerized system as part of “seamless web” of information activities.
- Electronic technology permits information dissemination on a decentralized basis that is cost-effective at low levels of demand, but in ways that may challenge traditional roles, responsibilities, and policies. In contrast, conventional ink-on-paper printing technology tends to be cost-effective with more centralized production and distribution and higher levels of demand.
- Electronic technology is eroding the institutional roles of governmentwide information dissemination agencies. While many Federal agencies disseminate at least some of their information in electronic formats, the central governmentwide dissemination mechanisms (SupDocs, DLP, NTIS,

and CIC) are presently limited largely to paper or paper and microfiche formats and thus disseminate a declining portion of Federal information.

- Technology has outpaced the major governmentwide statutes that apply to Federal information dissemination. The Printing Act of 1895, Depository Library Act of 1962, and Freedom of Information Act of 1966 predate the era of electronic dissemination, and have not been updated to explicitly reflect electronic as well as paper formats. The Paperwork Reduction Act of 1980 was amended in 1986 to include information dissemination within its scope, but substantive statutory guidance on electronic information dissemination per se is minimal.
- The advent of electronic dissemination raises new equity concerns since, to the extent electronic formats have distinct advantages (e.g., in terms of timeliness, searchability), those without electronic access are disadvantaged. In general, the library, research, media, public interest, consumer, and State/local government communities, among others, argue that the Federal Government has a responsibility to assure equity of access to Federal information in electronic formats as well as in paper. These groups contend that they are or will increasingly be disadvantaged to the extent that Federal information in electronic form is not available through normal channels.
- Technological advances complicate the Federal Government's relationships with the commercial information industry. While those companies that market repackaged or enhanced Federal information benefit from access to electronic formats, some of these firms are concerned about possible adverse effects of government competition. Efforts by the Office of Management and Budget (OMB) to establish policy in this area have proven to be controversial. Also, the privatization of major Federal information dissemination activities (such as the NTIS clearinghouse) has not yet been demonstrated to be either cost-effective or beneficial for important governmental functions.
- OMB and industry representatives support government dissemination of Federal information in raw electronic form without software enhancements or searching aids, but oppose government dissemination of enhanced or "value-added" information. This conflicts with the long-established government role in producing and disseminating value-added information products in paper format and its logical extension to electronic formats. Existing policy does not define "value-added" or specify under what conditions value-added electronic information products are inherently or appropriately governmental versus commercial in nature.
- In general information industry representatives strongly favor open government and unimpeded and nondiscriminatory access to Federal information for philosophical and competitive fairness reasons (i.e., so that no single vendor has a captive or monopoly position over Federal information). In these respects, the industry shares common ground with the library, research, and press communities, among others.

The absence of congressional action to address these issues is likely to result in:

- continuing erosion in overall equity of public access to Federal information,
- continuing confusion over institutional roles and responsibilities,

- a significant time and dollar cost to the government and various stakeholders in seemingly endless debate over statutory interpretation and legislative intent,
- inefficiency and excessive duplication in electronic information dissemination research and pilot-testing,
- inability to capture learning from experience and economies of scale, and
- failure to realize the significant opportunities for cost-effective improvements in overall public access to Federal information.

OTA concluded that the government needs to set in motion a comprehensive planning process for creatively exploring the long-term future (e.g., 10 to 20 years from now) when the information infrastructure of the public and private sectors could be quite different. At the same time, the government needs to provide short-term direction to existing agencies and institutions with respect to electronic information dissemination. A central challenge is setting future directions for the governmentwide information dissemination institutions.

Any electronic future for GPO, NTIS, and DLP must consider the increasingly decentralized, competitive environment that characterizes the electronic information marketplace. The Federal Government is moving in the direction of implementing electronic information systems at the heart of most agency activities. In the long-term, the myriad of possible information dissemination alternatives, made possible by technological advances, could serve as a catalyst for significant changes in the current institutional framework. Full understanding of long-term alternatives will require several years of pilot tests, demonstrations, and experiments and related evaluation studies. In the short- to medium-term (3 to 10 years), the basis for setting directions is better established.

. . . an intelligent, informed populace has been, is, and will continue to be the fundamental element in the strength of our Nation. Contributing greatly to that intellectual strength is the so-called Government document, designed to disseminate to the American public important information relative to the activities and purposes of its Government.

—former U.S. Senator Frank J. Lausche, March 1962

CHAPTER 11: FEDERAL INFORMATION DISSEMINATION POLICY IN AN ELECTRONIC AGE⁶

SUMMARY

The rapid deployment of electronic information technologies by Federal agencies, as with all major sectors of American society, is generating a number of issues with respect to public policy on Federal information dissemination.

⁶ Footnotes and tables from the original report are omitted in this excerpt. The full text of the *Informing the Nation* is available electronically at www.wws.princeton.edu/~ota/disk2/1988/8823_n.html and at www.ota.nap.edu/pdf/data/1988/8823.pdf.

This chapter raises and examines several broad information policy issues. These include:

- congressional commitment to public access to Federal information;
- the need for revision of governmentwide information dissemination policy—particularly regarding cost-effectiveness,
- the role of the private sector, and electronic v. paper formats;
- the need for clarification of institutional roles and responsibilities; and
- improvements in information dissemination management.

These analyses are followed by a discussion of ways to improve conventional printing activities of the Federal Government with respect to cost, timeliness and quality, and estimating and billing procedures.

A fundamental cross-cutting issue is public access to Federal information. Debate over the use of electronic formats, privatization, and the like is obscuring the commitment of Congress to public access. Congress has expressed through numerous public laws the importance of Federal information and the dissemination of that information in carrying out agency missions and the principles of democracy and open government. A renewed commitment to public access in an electronic age maybe needed.

Congress may wish to revise governmentwide information dissemination policy. In so doing, Congress would need to consider and reconcile several sometimes competing considerations including:

- enhancing public access,
- minimizing unnecessary overlap and duplication in Federal information activities,
- reducing unnecessary or wasteful Federal information activities,
- optimizing the use of electronic v. paper formats,
- and optimizing the role of the private sector.

The Office of Management and Budget (OMB) has promulgated its own view of appropriate public policy (in the form of OMB Circulars A-130 and A-76). The OMB view is controversial as it relates to Federal information dissemination. In the absence of clear and positive congressional direction, conflict and confusion are likely to continue. Congress may wish to amend specific statutes (including the Printing Act, Depository Library Act, and Paperwork Reduction Act), promulgate its own version of the basic principles addressed in A-130, and establish guidelines on the role of the private sector (including contracting out and provision of value-added information products). Congress could act on a governmentwide, agency-by-agency, or program-by-program basis.

Congress also may wish clarify the roles and responsibilities of Federal institutions involved with information dissemination, including mission agencies and governmentwide dissemination agencies such as the U.S. Government Printing Office (GPO) and National Technical Information Service (NTIS). The advent of numerous options for electronic dissemination has aggravated concerns about statutory authority (e.g., Printing Act v. Paperwork Reduction Act jurisdiction over electronic for mats), separation of powers (e.g., legislative v. executive branch control over agency printing), procurement (Printing Act v. Brooks Act jurisdiction over electronic publishing systems), role of the private sector (e.g., privatization v. government incorporation of NTIS), and

over-all policy guidance (e.g., OMB v. Joint Committee on Printing [JCP] roles). These issues have led to various proposals for reorganization of government information dissemination institutions. In the absence of congressional direction, conflict and confusion are likely to continue.

OTA identified several alternatives for improvement of information dissemination management that could be implemented in the short-term by executive branch action using existing statutory authorities and with the concurrence of Congress, but with no required statutory action. Of course, one or any combination of these alternatives could be incorporated into a legislative package, as amendments to various statutes, should Congress determine that a stronger mandate is needed.

- There is a clear consensus that appropriate technical standards for electronic publishing and dissemination are essential if the government wishes to realize potential cost-effectiveness and productivity improvements. The National Bureau of Standards, (NBS), Defense Technical Information Center (DTIC) or another Department of Defense (DoD) component, and GPO could be assigned lead responsibility to accelerate the ongoing standards-setting process, presumably incorporating accepted or emerging industry standards to the extent possible.
- There is also general consensus in and out of government for the establishment of a governmentwide index to major Federal information products—regardless of format— although there are differing views on how to implement an index. GPO and NTIS (or a Government Information Office, should one be established) with possible assistance from the private sector and information science community, could be assigned responsibility to consolidate and upgrade existing indices, directions, and inventories (including the results of OMB surveys) into one integrated index. The index could be made available in multiple formats and disseminated direct from the government as well as via the depository libraries and private vendors (perhaps in enhanced form).
- Federal agency officials expressed strong support for much improved mechanisms to exchange learning and experience about technological innovations. Information dissemination innovation centers could be designated or established in each branch of government, for example, at DTIC (for the defense sector), NTIS and/or NBS (for the civilian executive branch), and GPO (for the legislative branch), and under grant or contract to a university or other independent, nonprofit research center. Agencies could be required to conduct “agency X2000” studies to creatively explore and develop their own visions of future information dissemination activities.
- Information dissemination is still not an effective part of agency information resources management (IRM) programs. A variety of IRM training, career development, budget, and management actions could be implemented to give information dissemination (including printing, publishing, press, public affairs, and the like) a stronger and better understood role within the IRM concept. Also, whether within the IRM concept or otherwise, Federal agency participation in *electronic press release* activities could be expanded with electronic releases provided directly to the press, to private electronic news and wire services and perhaps to depository libraries.

Finally, OTA identified several alternatives that could be implemented to improve the government conventional ink-on-paper printing. Despite the rapid increase in electronic formats, there is likely to be significant, continuing demand for printed copies of a broad range of Federal reports and other printed materials. Thus, for at least the next 5 years and probably longer, there will be a need to continually improve the Federal Government's conventional printing.

Some Federal agencies have raised concerns about the cost, timeliness, and quality of GPO printing. Based on information available to OTA, the cost of GPO's procured printing appears to be competitive, and there appears to be no financial basis for dismantling the GPO printing procurement program. However, GPO main plant inhouse work is more expensive than procured work. There are several alternatives for reducing the cost to Federal agencies including: use of special rates, reducing indirect costs and overhead, and use of cost-saving technology. With respect to timeliness of GPO procured work, the overall data do not suggest a widespread delinquency problem. However, the percentage of delinquent printing jobs at the GPO main plant is two to three times higher than procured jobs. This warrants further evaluation to determine the extent of the problem and possibly to take action to smooth the work flow, encourage realistic delivery estimates, and limit priority work. With respect to quality of GPO printing, again, the overall data do not suggest a widespread problem, although the defect rate for inhouse work is somewhat higher than for procured work. Other areas that appear to be in need of improvement are cost estimating and billing procedures. Routine itemized billing warrants consideration.

There is need for even stronger cooperative working relationships between agency printers and publishers and GPO staff, and between publishers, printers, public information officers, financial and procurement officers, and the like within the agencies. Existing intra- and interagency advisory groups could be reviewed and strengthened and/or new groups established.

Other potential improvements in conventional printing identified, but not examined by OTA, include use of nonacidic paper, alternative printing inks, and expert systems software for printing management.

RENEWED COMMITMENT TO PUBLIC ACCESS

A major crosscutting issue for this study is public access to Federal information. In the broadest sense, all of the technical, institutional, and policy mechanisms discussed in previous chapters are intended to facilitate public access. The debate in recent years over cost-effectiveness, privatization, and the like has sometimes obscured the fundamental and enduring commitment of Congress and, indeed, of public law to the principle of public access. Information is the lifeblood of Federal Government programs and activities and is essential not only to the implementation of agency missions, but to informed public debate, decision, and evaluation concerning such programs and activities. Broad public access to such information has been established by Congress as a primary policy objective to be accomplished through a variety of information dissemination mechanisms, including government-initiated activities such as the GPO and NTIS document sales programs, the GPO depository library program (DLP), and citizen-initiated activities such as submitting FOIA requests.

The policy framework establishing public access as a goal of Federal information dissemination consists of both governmentwide and agency-specific statutes plus various legislative and executive branch directives, circulars, and guidelines.

Many governmentwide statutory provisions have been codified in Title 44 of the U.S. Code (“Public Printing and Documents”). Several key chapters of Title 44 include the following illustrative provisions:

- Chapter 1—establishes the JCP “to remedy neglect, delay, duplication, or waste in the public printing and binding and the distribution of Government publications.” (44 U.S.C. 103).
- Chapters 3 and 5—establish GPO to be headed by the Public Printer; require that all printing, binding, and blankbook work for the Government be done at GPO, except as approved by the JCP; and authorize GPO to procure printing with approval of the JCP. (44 U.S.C. 301, 501, 502).
- Chapters 7 and 9—establish rules, procedures, and authorities for printing, binding, and distribution of congressional documents, including the *Congressional Record*, and specify responsibilities of the JCP and GPO, among others.
- Chapters 11 and 13—establish rules, procedures, and authorities for printing, binding, and distribution of executive and judicial branch documents.
- Chapter 15—establishes the Office of the *Federal Register* (now located in the National Archives and Records Administration [NARA]) and rules and procedures for preparation of the *Register* and printing by GPO.
- Chapter 17—establishes the Superintendent of Documents (SupDocs) within GPO and the rules, procedures, and authorities for SupDocs sale and distribution of public documents, preparation of an index to public documents and catalog of government publications, and international exchange of government publications;
- Chapter 19—establishes rules, procedures, and authorities for the DLP to be administered by the SupDocs.
- Chapters 21, 29, 31, and 33—establish rules, procedures, and authorities for the preservation of historical materials (e.g., books, documents, papers, maps) of the government, and for management, retention, and disposal of government records; assign responsibilities to the Administrator of General Services (GSA), Archivist of the United States, and Federal agencies; and assign administrative responsibility to the Archivist of the United States (and now NARA).
- Chapter 35—establishes rules, procedures, and authorities for coordination and management of Federal information policy relevant to the collection, maintenance, use, and dissemination of Federal information and the acquisition and use of automatic data processing and telecommunications technologies by the Federal Government; establishes the Office of Information and Regulatory Affairs (OIRA) in OMB; and assigns responsibilities to OIRA and Federal agencies.

Prior analyses by the Congressional Research Service (CRS) have found that Congress has enacted literally hundreds of specific laws that assign information collection, clearinghouse, directory, dissemination, and related functions to Federal agencies. ⁷ Some illustrative laws enacted by the 95th through 99th Congresses are shown in Table 11-1.

A review of prior OTA reports also revealed that information dissemination is an important aspect of many issues facing Congress, ranging from medical technologies to hazardous waste disposal to ocean resource management to energy conservation. Excerpts from selected OTA reports are capsulized in Table 11-2. Congress frequently includes the establishment or strengthening of information dissemination (and related collection) mechanisms in legislative actions to address current problems, such as AIDS or international competitiveness. The CRS list of legislation introduced in the 100th Congress provides a further indication of congressional intent, as highlighted in Table 11-3.

There is a history of congressional actions to institutionalize information dissemination functions, as illustrated by the establishment of the Library of Congress in 1800, the Federal Depository Library Program in 1813, the Library of the Surgeon General's office in 1836 (later to become the National Library of Medicine [NLM]), the GPO in 1860, National Agricultural Library (NAL) in 1862, and NTIS in 1970. In addition, Congress has articulated the importance of access to and dissemination of public information in enacting, for example, the Printing Act of 1895 (remodified in 1968 as Part of Title 44 of the U.S. Code), Depository Library Act of 1962, Freedom of Information Act of 1966, Public Law 91-345 establishing the National Commission on Libraries and Information Science in 1970, Federal Program Information Act (P.L. 95-220, creating a database on Federal domestic assistance programs), and Paperwork Reduction Act in 1980 (codified as part of Title 44).

Thus, taken as a whole, congressional intent with respect to Federal information is clear. In general, unimpeded dissemination of and access to Federal information is encouraged or frequently required and is vital to performance of agency and programmatic missions established by statute as well as to the principles of open government and a democratic society.

Despite the breadth and depth of legislated congressional commitment to Federal information dissemination and the overriding goal of public access, major policy issues have developed in several different areas. This is especially true with respect to the use of electronic information technologies.

Based on the results of commissioned research, surveys, and various outreach activities conducted as part of this assessment, significant segments of the interested public desire access to Federal information in electronic formats where it is appropriate, useful, and cost-effective. The results of the GAO survey of Federal information users, as detailed in chapter 4, confirm this desire. Overall, the library, research, media, public interest, consumer, business, State/local government, and physically handicapped communities, among others, support the principle of public access to Federal information regardless of formats.

However, many of these groups believe that Federal information users are increasingly disadvantaged to the extent Federal information in electronic form is not available through the normal governmentwide dissemination channels and/or that there are significant barriers to access to Federal electronic information. They argue that the Federal Government has a responsibility to assure equity of access to Federal information in electronic formats as well as in paper, to the degree that electronic formats offer significant cost or usefulness advantages.

Consumer, library, and public interest groups also have expressed concern about the decline in availability of and increase in user charges for Federal information products and services. Both the number of total and the number of free Federal publications appears to have declined over the

past decade, and many agencies have adopted some form of marginal cost recovery as the basis for pricing agency publications and other information products or services.

Congress may wish to consider making a renewed commitment to the overriding goal of public access and perhaps even a reaffirmation of principles established by Congress in previous statutes but updated to reflect the increasingly electronic nature of Federal information.

CLARIFICATION OF GOVERNMENTWIDE INFORMATION DISSEMINATION POLICY

Over the last decade implementation of the overall goal of public access to Federal information has been complicated by several sometimes competing public policy goals with respect to cost-effectiveness of Federal information activities. These include a desire to:

- minimize unnecessary overlap and duplication in Federal information activities;
- reduce unnecessary or wasteful Federal information activities; and
- optimize or (in the opinion of some stakeholders) maximize the role of the private sector.

The goal of public access is complicated by the lack of clear congressional guidance on the use of electronic, v. paper formats in Federal information dissemination activities, and how goals of public access and cost-effectiveness are to be reconciled. OMB has promulgated its own view of appropriate public policy, but the OMB view is controversial and, as discussed below, not necessarily consistent with at least what can be reasonably inferred from a variety of congressional actions. However, absent a clear and positive congressional clarification, probably in statutory form, conflict and confusion are likely to continue.

Cost-Effectiveness

Both the legislative and executive branches of government have expressed concern about whether electronic information technologies are being deployed by the Federal Government in a cost-effective manner. There are several subelements to this issue. One is simply the need to minimize overlap and duplication in technology-based Federal information activities through effective management and coordination. The Paperwork Reduction Act of 1980 was directed in large part at this problem, and required that OMB, through OIRA and the major executive agencies, implement an integrated approach to planning for and managing information resources. This has become known as the Information Resources Management (IRM) concept, and all major agencies have since designated ‘senior IRM officials.’ While the legislative history of the Paperwork Reduction Act indicates that information dissemination was intended to be covered, the language of the act as originally enacted was ambiguous. However, 1986 amendments to the Paperwork Reduction Act explicitly included ‘information dissemination in the statutory language.

One purpose of the amended Paperwork Reduction Act is, ‘to maximize the usefulness of information collected, maintained, and disseminated by the Federal Government.’ And the authority and functions of the OIRA Director and of Federal agencies extend to ‘sharing and dissemination of information.’

A second aspect of concern about cost-effectiveness involves reducing unnecessary or wasteful Federal information activities. The Paperwork Reduction Act is clear in its intent that the

government information collection burden on the public be reduced, reflecting the presumption that government information collection activities were, at least at that time, uncoordinated and included a significant portion of unnecessary collection requests. The Act is silent on reduction of information dissemination activities. Also, the Deficit Reduction Act of 1984 called for reductions in certain Federal publishing, public affairs, and audio-visual activities. Some cuts were made in response to the Act and as part of OMB's general initiative to reduce fraud, waste, and abuse. OMB claimed that about 4,000 government publications were eliminated or consolidated by 1985 and that more than 100 agency printing/duplicating plants had been eliminated or consolidated (out of about 850 agency plants operating in the continental United States and another 200 overseas). GPO had provided OMB with recommendations for the consolidation, downgrading, or closure of 250 of these plants, of which 70 were ultimately closed. OMB concluded in 1985 that any further significant reductions in publishing and related activities would compromise essential agency missions.

Neither the Paperwork Reduction Act nor the Deficit Reduction Act explicitly mention reductions in electronic information dissemination activities. Current OMB officials concur that the Paperwork Reduction Act does not provide guidance on electronic (or any) information dissemination. Indeed, according to Dr. Timothy Sprehe of OMB:

While the Paperwork Reduction Act in several places uses the term "dissemination," neither in that act nor elsewhere has Congress given the executive branch a single comprehensive set of statutory directions regarding responsibilities of all Federal agencies for actively disseminating Government information. Put another way, the Paperwork Reduction Act provides fairly explicit statutory policy regarding information input to Government—controlling the collection of information and imposition of record-keeping requirements—but says little regarding information output from Government.

The act and its legislative history do articulate congressional intent to maximize public access to government information. For example, the original purpose of the act was, among other things, "to maximize the usefulness of information collected by the Federal Government (and extended to specifically include information maintained and disseminated, per the 1986 amendments as noted earlier)". The Senate report accompanying the original act stated that "the Committee expects the Director [of the Office of Information and Regulatory Affairs] to take appropriate steps to maximize public access to the information the Federal Government collects." Also, the Federal Information Locator System, which the original act required OMB to establish, was intended to help serve this purpose. The 1986 amendments further strengthened this statutory requirement. However, it is correct that the act does not provide the kind of detailed guidance on information dissemination that was provided on information collection.

A third part of the concern about cost-effectiveness involves the role of the private sector. Pursuant to the Paperwork Reduction Act, OMB has promulgated Circular A-130 on "Management of Federal Information Resources. A-130 emphasizes the role of the private sector in information dissemination activities. The history of A-130 is informative. The draft circular, formulated after a public input process, strongly emphasized reliance on the private sector and user charges. For example, the draft circular recognized that government information dissemination could be necessary and even essential to agency missions. But the draft circular would have permitted such dissemination by the government only if the information product or service was not already provided by other government or private sector organizations or could reasonably be provided by such organizations in the absence of agency dissemination. Moreover, while the draft circular noted that dissemination should be conducted "in a manner that reasonably

ensures the information will reach . . . the public, . . .” the draft circular required that ‘maximum feasible reliance’ be placed on the private sector for dissemination and that the costs of dissemination be recovered through user charges, where appropriate.

The draft circular proved to be controversial, and numerous objections were received. The final version of the circular, issued by OMB in December 1985, gives more explicit recognition to the importance of government information. For example, the circular states that “government information is a valuable national resource, and “[t]he free flow of information from the government to its citizens and vice versa is essential in a democratic society . . . ” The circular still emphasizes the role of the private sector. Federal agency dissemination must be either “specifically required by law’ or “[n]ecessary for the proper performance of agency functions, ’ provided that the information products and services disseminated “do not duplicate similar products or services that are or would otherwise be provided by other government or private sector organizations.” The circular requires that “maximum feasible reliance” be placed on the private sector for dissemination, and that costs be recovered through user charges, where appropriate.

The statutory authority for the information dissemination provisions of OMB circular A-130 appears to be unclear. While much of the circular clearly is responsive to the Paperwork Reduction Act, the act does not specifically speak to the role of the private sector or user charges in Federal information dissemination. While the act does assert the need to minimize the cost to the government of collecting, using, and disseminating information, the act does not address how this need should be met.

The cost recovery provision of OMB Circular A-130 was and is controversial, and is widely interpreted by agencies as strongly encouraging, if not requiring, user charges for information dissemination. However, a careful reading of A-130 indicates that:

- the decisions on pricing are left up to the discretion of agency heads;
- the user charge where applied should be set to recover the cost of information reproduction or dissemination only and not the cost of collecting or creating the information;
- user charges should take into account both the nature of the agency mission and client groups; and
- user charges can be waived or eliminated if necessary to carry out mission objectives.

In effect, OMB policy on user charges permits the individual Federal agencies considerable latitude as to pricing of Federal information dissemination regardless of format. In promulgating A-130, OMB applied the philosophy of OMB circular A-25 regarding user charges for government goods and services in general to information dissemination in particular. (Note that OMB has issued a draft revision to A-25.) Similarly, OMB applied the philosophy of OMB circular A-76 regarding contracting out of commercially available services in general to information dissemination in particular.

The private sector already has a major role in Federal information dissemination. A key issue is how this role relates to the government goal of access broadly defined. The private sector traditionally has a major role as contractor to the government for a wide range of services, some of which are information related. Both the Printing Act (P.L. 90-620) and the Brooks Act (P.L. 89-306), and their implementing guidelines, facilitate contracting out of Federal printing and

computer-related activities. Private sector printing contracts through the GPO are averaging about \$600 million annually, and private sector information technology contracts through GSA and the line agencies are averaging, conservatively, \$8 billion annually (for hardware, software, and services).

Over the past 5 years, an estimated \$3 billion in printing contracts and \$40 billion in information technology contracts have been awarded to the private sector. Much of the information technology contracting is for the general information infrastructure of the Federal Government. The fraction devoted directly or indirectly to information dissemination functions is not known, since the OMB and agency IRM budgets and plans do not collect or provide financial data by type of application. The 114 civilian departmental agency components responding to the GAO survey reported collectively an average of \$1.1 billion annually for fiscal year 1983 through fiscal year 1987 in private sector contracting for information clearinghouse operations. The extent of overlap between this figure and the IRM figures is unknown. Recent automation programs for information dissemination-related activities at agencies such as the Securities and Exchange Commission (SEC) and Patent and Trademark Office (PTO) have included private sector contracting in the range of tens to hundreds of millions of dollars per agency. In addition to its role as a government contractor, the private sector is a major user and reseller of Federal information, as will be discussed later in this chapter.

Electronic v. Paper Formats

The second major issue cluster involves the applicability of the existing statutory framework and implementing directives to electronic as opposed to paper forms of information dissemination. As noted earlier, the Paperwork Reduction Act provides little substantive guidance on electronic information dissemination. Unfortunately, the two other critically important statutes, the Printing Act and Freedom of Information Act, were enacted in 1895 and 1966 respectively, and both predated the era of widespread electronic information exchange. Neither has been updated to reflect electronic formats; as a result, there is considerable controversy about their applicability to electronic formats. Much of the debate turns on such narrow questions as whether terms such as “printing,” “publication,” “record,” and “document” are to be interpreted as limited to paper formats or to include relevant Federal information regardless of format.

Today, most Federal agencies are operating in a partial policy vacuum when it comes to electronic information dissemination. In addition to the confusion and controversy over governmentwide statutory application, the results of the GAO survey indicate that the majority of agencies do not have documented policies or procedures on providing public access to electronic databases, on the electronic dissemination of information by agency contractors, or on the applicability of FOIA to public information in electronic formats. The results are highlighted in Table 11-4 for 114 civilian departmental agency components and 48 independent civilian agencies.

The absence of explicit, governmentwide policy on electronic information dissemination is recognized by key legislative and executive branch officials. As early as the late 1970s, the JCP recognized the need to review and possibly update the Printing Act with respect to electronic printing and dissemination. In 1979, the JCP issued a comprehensive overview of a wide range of relevant issues.¹⁷ In the early 1980s, the JCP initiated a revision of the Government Printing and Binding Regulations to deal in part with technological change.¹⁸ While the revision effort did not come to fruition, the JCP did issue a requirement in 1985 that agencies submit to the JCP comprehensive printing program plans that included new technology.” Also during this time

period, the JCP actively explored the provision of electronic formats to the depository libraries, and issued two reports on this topic.

In 1986, the Senate Committee on Governmental Affairs introduced legislation to amend the Paperwork Reduction Act to provide much clearer guidance on information dissemination. A few of the relevant provisions were incorporated in the Paperwork Reduction Act Amendments enacted by Congress at the close of the 99th Congress. Also, in 1986, the House Committee on Government Operations issued a comprehensive report and policy overview of issues pertaining to electronic collection and dissemination of Federal information.²² The report was prepared by the Subcommittee on Government Information, Justice, and Agriculture based in part on hearings that explored early agency initiatives in electronic dissemination. Subsequently, the House Committees on Government Operations, Energy and Commerce, and the Judiciary have collaborated on statutory language to address issues raised by SEC and PTO automation plans that affect access to and dissemination of agency information. In 1987, the JCP passed resolutions authorizing and encouraging the GPO to offer electronic formats and services and to conduct appropriate pilot tests. A few agencies, such as the Department of Commerce (DOC), have initiated internal task forces to address electronic dissemination policy issues. (The DOC task force recently issued a draft policy on electronic dissemination.)

Also, in 1987, OMB issued Bulletin No. 87-14 which directed all executive departments and agencies to inventory their information dissemination products and services, and report the results to OMB. This bulletin essentially revises OMB Bulletin 86-11 on government publications to include electronic formats, such as machine-readable data files (e.g., magnetic tapes, floppy disks, software, online electronic databases, and electronic bulletin boards). In addition to activity reports, agencies are directed to establish and maintain electronic inventories of all information dissemination products and services, and to make these inventories available to the public. Agencies may provide these inventories either directly, as long as there is no duplication with other agency or private sector offerings, or indirectly through other agencies or private sector entities. The agency responses to this bulletin have not yet been released by OMB. OMB has issued:

- a draft policy on electronic information collection or filing, which is relevant since electronic collection and dissemination can be part of the same system; and
- a draft policy on Federal statistical activities, which states that agencies are expected to conform to A-130 with respect to dissemination of statistical information.

Another example of ambiguity and controversy about statutory applicability concerns the Depository Library Act of 1962. Both this act and the related Printing Act of 1895 pre-date electronic dissemination and use conventional paper-based terminology. The word “electronic” does not appear in these acts. However, the legislative history of the Depository Library Act of 1962 can be interpreted to suggest that congressional intent was inclusive with respect to government information (see chs. 6 and 7 for further discussion). While the primary formats available at the time of enactment were traditional paper-based reports, publications, and documents, historical debate suggests that new formats could and should be accommodated. Indeed, microfiche is now a well established part of the depository program. Moreover the JCP, as noted earlier, has instructed the GPO (and, by extension, the depository program run by GPO) to include electronic formats. OMB, in circular A-130, directed agencies to provide all publications to depository libraries via GPO, but explicitly used the definition of ‘publication (informational matter published as an individual document)’ found in the 44 USC 1901 rather than

the broader term “information” (informational matter in any medium, including computerized databases, microform, or magnetic tape, as well as paper) used elsewhere in A-130. Also, in Bulletin 87-14, OMB excluded electronic formats from the agency reporting requirements for materials provided to the depository library program.

In sum, OMB appears to have reservations or at least be quite uncertain about whether and to what extent electronic formats should be included in the depository library program. In sharp contrast, the chairman of the JCP has stated that: ²⁵

When a Federal agency publishes Government information in electronic format for mass or general distribution, whether as a complement to or as a substitute for conventionally printed material, the GPO should and must continue to provide its full range of services and support in the production, distribution, and sale of such publications. This, of course, includes the distribution of such electronic Government publications to depository libraries.

One final example of ambiguity over statutory applicability to electronic formats involves the Freedom of Information Act (FOIA). Enactment of FOIA in 1966 shifted the burden of proof from the public to Federal agencies when questions of access to Federal information are in dispute. The act served to establish full agency disclosure as the operating principle, unless information was in one of the categories (e.g., classified, proprietary) specifically exempted. The advent of electronic information technology largely postdated the act and, as a result, numerous issues have arisen in the agencies and the courts. For example, what is a ‘reasonable’ search for the desired information when the information is in electronic form and the search can be conducted in a computer-assisted fashion? What is the definition of an agency ‘record’ when a record could be in a machine-readable format such as a database, floppy disk, or optical disk? If computer software is needed to access electronic agency information effectively, does or should the software be defined as an integral part of the agency record and of a reasonable search? Does a legal agency record exist when the record has never been (and may never be) in hardcopy paper format? These and other questions present a growing challenge to the interpretation of FOIA in an increasingly electronic environment. In many areas, the FOIA case law on electronic formats is limited, ambiguous, or contradictory, and the courts have suggested the need for legislative remedies (see ch. 9).

Possible Congressional Actions

If Congress wishes to preserve and strengthen the principle of public access to Federal information, a number of possible actions warrant consideration. These range from amending specific statutes with respect to electronic formats, to articulating an overall statement of congressional intent.

For example, if Congress wishes to maintain the integrity of FOIA for electronic as well as traditional paper formats, the option of amending the statute deserves serious consideration and, indeed, may well be essential. Various specific electronic FOIA issues that could be addressed by amendments are discussed in some detail in chapter 9.

Similarly, if it is congressional intent that the DLP should include Federal information in all formats, then Congress may need to amend appropriate statutes to eliminate the current ambiguity and controversy. Various specific depository library issues that could be addressed are discussed in detail in chapter 7.

Another congressional action that warrants serious consideration is the promulgation of congressional views, perhaps in statutory form, on the information dissemination principles addressed in OMB's Circular A-130. The most important contribution could be to establish a clearer sense of congressional priority with respect to public access and cost-effectiveness goals. A central question is—which comes first, if choices must be made. For example, one possible interpretation of congressional intent regarding Federal information dissemination is to give highest priority to unimpeded and open dissemination in order to realize the overriding policy goal of public access. This could be achieved as cost-effectively as possible without compromising public access, and utilizing the private sector where appropriate as one means to achieve these ends. This interpretation is philosophically somewhat different from that reflected in OMB Circular A-130, and also from OMB Circular A-76 which requires contracting out of commercially available services when cost-effective to the government. Note that the applicability of A-76 to arguably inherent governmental functions such as information dissemination, and the cost-effectiveness of private contracting of such functions, are also in dispute. These topics are considered below and in chapter 12 under the discussion of possible privatization of NTIS or GPO. Given the potentially conflicting interpretations of congressional intent, congressional clarification or reaffirmation appears warranted, possibly through amendment of relevant statutes such as the Printing Act or Paperwork Reduction Act.

Congress may need to clarify its intent about whether and under what conditions privatizing Federal information dissemination functions is appropriate given the vital governmental nature of many dissemination activities, and whether and under what conditions privatizing is cost-effective.

OMB Circular A-76 on "Performance of Commercial Activities" (August 4, 1983) states that the "Federal Government shall rely on commercially available sources to provide commercial products and services . . . if the product or service can be procured more economically from a commercial source. . . [and is not] inherently governmental in nature." Circular A-76 defines a governmental function as "so intimately related to the public interest as to mandate performance by Government employees" such as:

- management of government programs requiring value judgments;
- selection of program priorities;
- direction of Federal employees;
- regulation of the use of space, oceans, navigable rivers, and other natural resources; and
- regulation of industry and commerce.

A-76 does not specifically address whether information dissemination is a governmental function in this sense. However, A-76 does list the following information-related activities as being commercial not governmental in nature, along with numerous other activities illustrated below:

Information-Related

Distribution of audiovisual materials
Library operations
Cataloging
Printing and binding
Reproduction, copying, and duplication
Management information systems

Other

Operation of cafeterias
Laundry and dry cleaning
Architect and engineer services
Operation of motor pools
Word processing/data entry/typing
Laboratory testing services

A-76 does point out that whether or not these (or other commercial) activities serve inherently governmental functions and should be performed by the government, there should be analyses and decisions on a case-by-case basis. And the library community for example, among others, has challenged OMB's assertion that information-related activities such as library operations are essentially commercial in nature.

OMB Circular A-130 on "Management of Federal Information Resources, on the other hand, asserts that policies contained in A-76 are applicable to information dissemination. The OMB policy is, in general, reliance on the private sector for information dissemination when cost effective and when not an inherently governmental function. Although not explicitly stated, the OMB drafters of A-130 apparently intended to draw a distinction

. . . between the issues of whether the government should offer an information product or service and how the product or service should be offered. The first question is whether the government should undertake an information activity at all, or leave it to the private sector. Answering this question appears to be an inherently governmental function. However, once it has been determined that the government has a proper role, the second question of how to carry out the role arises. Here it is appropriate to inquire whether the activities involved in carrying out the role are commercial, and hence might be accomplished through grant or contract.

There are two problems with current OMB policy. First, there has not been a systematic analysis of what information dissemination functions are inherently governmental. An analysis of NTIS and GPO privatization proposals (see ch. 12) suggests that many NTIS and GPO dissemination functions are not suitable for privatization. Many other agency information dissemination functions arguably are vital to agency performance of statutory missions, and would thereby qualify as governmental. However, whether these functions are inherently governmental and therefore not amenable or suitable for contracting out, as appears to be the case for many NTIS and GPO functions, has not been carefully examined. Second, there have not been credible analyses of whether and under what conditions the contracting out of Federal information dissemination functions is cost-effective. Conducting such analyses is not easy.

Numerous GAO audits of agency contracting out activities have identified serious problems that have the effect of overstating savings to the government. ²⁸ In many instances, it is difficult to develop a fair initial comparison between inhouse and contracted out costs. Secondly, contract costs frequently escalate rapidly after the initial contract award, for variety of reasons. It is difficult to tell if in fact contracting out ends up being less expensive than retaining the activity inhouse (net savings), but it is clear that projected gross savings often do not fully materialize. Other concerns expressed about contracting out, especially in technology-intensive areas, are the loss of governmental expertise necessary to monitor contracts and set overall direction, and the potential for the government to become dependent on the incumbent contractor.

As a matter of general philosophy, some OMB and information industry officials have argued that while Federal agency electronic dissemination of raw data is acceptable, government

dissemination of so-called value-added information products and services is not an appropriate governmental function and should be the province of private industry. In this view, dissemination by the Bureau of the Census of statistical data on magnetic computer tapes would be appropriate, but dissemination of value-added or enhanced information— such as a CD-ROM with the data and search software for retrieving and manipulating this data—would not. The major problem with using value-added as a line of demarcation between governmental and private sector roles is that many Federal agencies have mandates (see Tables 11-1, 11-2, and 11-3) to develop and disseminate what amounts to value-added information and have been doing so for years or decades. Providing value-added information is a well-established and, indeed, a mandated function of government. Restricting the Federal Government from providing value-added information, or from providing such information in electronic form (even if previously available in paper), would appear to substantially diminish the government's role and erode the ability of agencies to carry out numerous statutory responsibilities.

At the same time, however, the concept of multiple levels of value-added may be viable with the private sector frequently providing additional levels of value or enhancement beyond those provided by the government. Federal agencies would continue to provide information as they do today using electronic formats where appropriate and desired by *users*, and employing private sector contractors where cost-effective and/or necessary to provide the desired quality or timeliness. The private information industry would be able to repackage and resell any Federal information products, and would be able to add further value to create enhanced information products where the market exists, much as the industry does today. The only real difference is that both the governmental and private sector offerings would be moving to a higher and more sophisticated technological level. Congress could address the value-added question in hearings, reports, oversight, and/or legislation.

In addition, Congress could establish guidelines for the role of private sector contractors in Federal information dissemination. For example, based on experience with agency automation programs to date—particularly those of the SEC and PTO and other agencies cited in the 1986 House Committee on Government Operations report ²⁹—with respect to agency contracting out of information dissemination activities, at least six basic principles have emerged from the congressional debate. Briefly, these are that agency contracting out of information dissemination activities should:

1. not impede or erode vital governmental functions;
2. maintain or strengthen public access to agency information;
3. be more cost-effective compared to governmental performance;
4. maintain open and competitive procurements for private vendors (e.g., contractors would have no exclusive rights to develop value-added products);
5. preclude monopoly control by contractors over agency information dissemination; and
6. preclude cross subsidies between contractor services and agency operations.

Also, Congress could establish guidelines on the role of Federal agencies in information dissemination and especially electronic dissemination. Again, at least six basic principles have emerged from the congressional debate to date. These are that agency electronic dissemination activities should:

1. strengthen public access to agency information;
2. improve the cost-effectiveness of agency information dissemination;
3. encourage a diversity of mechanisms for agency information dissemination and preclude copyright-like or monopoly controls over Federal information;
4. include information sources, users, and potential contractors in the planning of information dissemination systems, products, and services;
5. limit user fees to no more than the marginal cost of information dissemination, and preclude fees that compromise agency statutory missions; and
6. minimize competition with the private sector and encourage the private sector, so long as public access to agency information is assured and agency statutory mission requirements are met, to provide additional value-added services and products (beyond the value of those offered by the agency).

These or similar principles could be enacted into law as amendments to the Paperwork Reduction Act, the Printing Act, or other appropriate statutes. The urgency for such action is heightened as individual agencies promulgate their own policies and initiate activities that may not be consistent with the above 12 principles.

Also, Congress could clarify the roles and responsibilities of the governmentwide information dissemination institutions and/or mandate a variety of specific improvements in the management of conventional as well as electronic information dissemination. These are discussed later in this chapter and in chapter 12.

Clarification of Institutional Roles and Responsibilities

Another major issue cluster that warrants congressional attention and action involves institutional responsibilities for Federal information dissemination. The focal points for current debate are the GPO (and related functions of the JCP), NTIS, and the proposals for reorganization of the Federal Government information dissemination institutions and oversight. These are discussed briefly below in turn. (The role of the DLP in electronic information dissemination, mentioned earlier, can also be viewed as an institutional issue. See chs. 6 and 7 of this report for discussion.)

GPO. The Printing Act of 1895 (remodified in 1968 by P.L. 90-620) requires that all Federal printing (with the exception of the Supreme Court) be done by or through GPO, except where the JCP has approved field printing plants or printing procurement by specific agencies. Three specific policy issues have arisen. One is whether the act extends to electronic dissemination or, more broadly, to information dissemination in general, regardless of format. At present, OMB has taken the position that electronic-based information dissemination by executive agencies falls outside of the act's purview. As of August 1988, very few of the electronic dissemination products of the executive agencies are produced by or through GPO or are provided to the GPO Superintendent of Documents for possible inclusion in the sales program. A few agencies participate on a voluntary basis in GPO's magnetic tape sales program, and a few are participating in pilot projects on electronic data transfer and the like. Almost all Federal information products and services in electronic format are produced and disseminated by the individual agencies themselves (or through agency contractors). The JCP has directed (by a 1987 resolution and 1988 letter) that the GPO include electronic formats in the Sales Program and the

DLP. However, OMB has taken the position that while executive agencies may participate on a voluntary basis in GPO electronic activities, GPO and JCP *may not* require agency participation.

A second GPO institutional issue is whether GPO (and JCP) procurement authority extends to computer-based electronic printing technology, at least with respect to the executive branch. Over the past 10 to 15 years, printing technology has incorporated significant electronic and computer-based components, to the point where page layout and composition are heavily computerized. At GPO, about 70 percent of the input textual material is provided in electronic format. Increasingly, the printing process is becoming a largely electronic one, with material remaining in electronic form from initial keyboarding, through layout, composition, and revision cycles, until a final version is ready for production. The production format can be, and frequently still is, paper, but it can also be microform, magnetic tape, diskette, and other nonpaper formats. Thus, the dividing line between traditional “ink on paper” printing and electronic or computerized printing is no longer clear or, perhaps, even a valid or a feasible distinction.

A GPO procurement for electronic printing on behalf of the U.S. Army (the 600-S program) was terminated in part because of alleged contracting irregularities (that are outside the scope of this study), but, more importantly, because of possible conflict with the Brooks Act that governs executive agency procurement of automatic data processing, computers, and telecommunication-related equipment. GPO took the position that the 600-S procurement, like other GPO printing procurements, was exempted from the requirements of the Brooks Act as provided for in the Legislative Branch Appropriations Act of 1977. The House Committee on Government Operations took the position that the 600-S procurement included a substantial amount of computer-related technology and, thus, should have been procured under the Brooks Act and GSA contracting procedures rather than the Printing Act and GPO contracting procedures. Congress subsequently (in 1986) amended the Brooks Act to cover any agency procurement that included significant ADP or related technology or services. The revised statutory definition of automatic data processing is:

. . . any equipment or interconnected system or subsystems of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching interchange, transmission, or reception of data or information (1) by a Federal agency or (2) under contract with a Federal agency which (a) requires the use of such equipment or (b) requires the performance of a service or the furnishing of a product which is performed or produced making significant use of such equipment.

The term equipment is defined to include “computers; ancillary equipment; software, firmware, and similar procedures; services, including support services; and related resources as defined by regulations issued by the Administrator for General Services.”

GPO acknowledges that comprehensive electronic publishing systems include significant amounts of both printing and computer technologies, and that procurement of these so-called “mixed resource” systems requires close cooperation between GPO and GSA. The Public Printer has called for the development of a GPO-GSA joint procurement program for major electronic publishing systems that would satisfy GPO’s obligations under the printing provisions of Title 44 of the U.S. Code and GSA’s obligations under the Brooks Act. This may require involvement of the JCP, which has approval authority over GPO procurements, and the House Committee on Government Operations, which has oversight authority over GSA and Brooks Act procurements, and possibly other committees, with respect to major procurements on the scale of 600-S (several hundred million dollars). The much smaller Air Force 50-S electronic publishing procurement

(\$10 million over 3 years) was awarded by GPO in January 1988 without incident or controversy under existing GPO contracting procedures.

This issue highlights the ambiguity about the applicability of the Printing Act, Brooks Act, and Paperwork Reduction Act to agency electronic information dissemination systems and those systems in particular in which are imbedded conventional printing functions. Since the major thrust of agency automation programs (including automation of information collection and dissemination functions) is towards integrated systems, these statutory ambiguities and conflicting interpretations are likely to be aggravated over time, thus providing even more impetus for further congressional review and, perhaps of necessity, statutory adjustments.

The third GPO institutional issue is whether the statutory basis for GPO (and JCP) control over executive branch printing activities is constitutional. The U.S. Supreme Court 1983 decision in *INS v. Chadha* struck down the legislative veto as unconstitutional.³² This decision has been interpreted by the U.S. Department of Justice (DOJ) as invalidating provisions of the Printing Act that provide for control over and prior approval of executive branch printing by the JCP. (*INS v. Chadha* was also cited as part of the basis for DOJ opposition to JCP proposals for revising the *Government Printing and Binding Regulations* in 1983 and 1984.) Based on this DOJ interpretation, the Federal Acquisition Regulations (FAR) were revised in 1987 and provided that executive agencies need only give the JCP advance notice of agency printing plans—not seek JCP approval. Further, agencies with their own printing plant or printing procurement capability would not be required to obtain their printing from or through GPO. The DOJ interpretation and FAR revisions were disputed by the JCP and GPO. The Public Printer testified that the FAR revisions would:

- be inconsistent with the legislative intent of Title 44;
- substantially increase the government's printing costs; and
- jeopardize the GPO sales and depository library programs.

While the legal issues remain unresolved, Congress included a provision in the fiscal year 1988 Continuing Appropriations Resolution that mooted the FAR revisions and was intended to maintain the status quo. This provision is also included in the Legislative Branch Appropriation Bill for fiscal year 1989 (H.R. 4587).

NTIS. The major institutional issue concerning NTIS is the Administration's proposal to privatize the agency. In late 1985, the Office of Management and Budget (OMB) asked the Department of Commerce to develop proposals for privatizing NTIS. While OMB did not initiate a formal contracting out procedure, the initial impetus for NTIS privatization can be viewed in part in the context of OMB Circular A-76, which states that the "Federal Government shall rely on commercially available sources to provide commercial products and services if the product or service can be procured more economically from a commercial source." As noted earlier, A-76 requires detailed cost comparisons and explicit determination of inherently government functions that are not subject to contracting out. Based, in part, on the results of Department of Commerce studies conducted in 1986, OMB decided in 1987 to pursue a substitute contracting out procedure for NTIS known as Fed Co-Op (discussed later), rather than follow the formal A-76 process.

These proposals have become very controversial. The Administration has argued that NTIS provides what is essentially a commercial service performed by the Government and that it should be contracted out or otherwise privatized. The Administration has asserted that privatizing NTIS would maximize reliance on and minimize competition with the private sector, reduce the

cost of government, and/or increase the quality and effectiveness of NTIS services. Several private firms have expressed interest in operating NTIS. The academic, research, and scientific communities, however, have argued, in general, that NTIS performs an important and inherently governmental function that is not suitable for privatization, and that no cost savings or service improvements have been demonstrated to occur if NTIS were to be privatized. The Federal scientific and technical agencies, the source of NTIS information, have expressed concerns about the viability of NTIS if privatized and whether U.S. and foreign government agencies would continue to cooperate with a privatized NTIS.

As an agency of the U.S. Department of Commerce, NTIS operates under the statutory authority of the Secretary to collect, exchange, and disseminate scientific and technical information (Title 15, U.S. Code, Sections 1151-1157). At OMB direction, the Department of Commerce has conducted numerous studies and public meetings over the past 2 years to develop and evaluate proposals for NTIS privatization. A review of all available documents indicates that the cost-effectiveness of privatizing NTIS has not been established, and that the departmental task force studying the matter recommended against privatization on various grounds. A 1986 departmental analysis of the entire range of options concluded that only minor adjustments were warranted, and recommended against privatization on the grounds that it would not be cost-effective and could jeopardize important government functions.³⁹ Consequently, OMB directed that privatization proceed not via the usual A-76 contracting out procedures, but through the new Federal Employee Direct Corporate Ownership Opportunity Plan (known as Fed Co-Op) procedures issued in early 1987 by the Office of Personnel Management. Under Fed Co-Op, Federal employees are transferred into a private company or organization and receive stock ownership. Opponents argue that the Fed Co-Op approach is circumventing otherwise unattainable A-76 requirements, and is essentially another privatization mechanism with unproven value to the government. Nonetheless, the Department of Commerce issued a request for information in January 1988, held a pre-bidders meeting on January 29, 1988, and proceeded down the Fed Co-Op path. A congressional hearing held February 24, 1988 by the House Committee on Science, Technology, and Space, Subcommittee on Science, Research, and Technology, revealed widespread opposition to the Fed Co-Op privatization plan, including, notably, opposition from the Information Industry Association.⁴¹ Subsequently, the Secretary of Commerce rejected the plan.

The controversy over NTIS has precipitated legislative action by the relevant House and Senate authorizing committees to block privatization. Both the House Committee on Science, Space, and Technology and the Senate Committee on Commerce, Science, and Transportation have enacted language prohibiting the contracting out of NTIS, or any major NTIS activities, without explicit statutory approval. This prohibition was included as part of Title V ('Technology Competitiveness' of the comprehensive trade legislation (H.R. 4848) signed into law on August 23, 1988. Other congressional actions included language incorporated by the House Committee on Science, Space, and Technology in the National Bureau of Standards Authorization Act for fiscal year 1989 that would convert NTIS to a government corporation within the Department of Commerce, to be known as the National Technical Information Corporation. The House Committee on Energy and Commerce, on a sequential referral, reported out the NBS Authorization Act with amendments that would prohibit NTIS privatization and would authorize NTIS use of net revenues for capital investment. However, the amendments would retain NTIS as a line agency of the Department of Commerce, not as a government corporation.

Government reorganization. The NTIS controversy has been one more factor contributing to heightened interest in proposals for reorganization of the major Federal information institutions.

Such proposals have been considered over the past 8 years. As early as 1979, an advisory group appointed by the JCP considered the possibility of establishing a new central office combining the functions of GPO, NTIS, and OMB with respect to public information policy, in order to facilitate public access and eliminate duplication. A National Publications Act of 1980 was introduced to establish a National Publications Office along with a Commission that would replace the JCP, but the bill was not enacted.” In the past two Congresses, legislation was introduced that would combine the information dissemination functions of GPO, NTIS, and the dissemination or sales offices of major agencies into one governmentwide Government Information Office (GIO).⁴⁵ The legislation would also establish a Joint Committee on Government Information in Congress. In 1987, the National Academy of Public Administration completed a study that favored an NTIS corporation.) Subsequently, legislation was introduced to reorganize NTIS into a government corporation, and now incorporated into the House Science Committee version of the NBS Authorization Act, as noted above.⁴⁷ In 1987 hearings on these and other related bills, the Public Printer testified that GPO would be pleased to provide an institutional home for NTIS as an alternative to privatization. And in 1988, the Librarian of Congress suggested that the Library of Congress also could serve as a home for NTIS.

The legislation introduced specified that the Joint Committee on Government Information would consist of 8 members, 4 from the House and 4 from the Senate, and, would not have legislative authority, but would have the authority to hold hearings, and conduct other nonlegislative functions. The relationships with existing joint and standing committees were not specified. Depending on its jurisdiction, a new joint committee could be designed to essentially supercede and replace the existing JCP, or it could complement the JCP. A new joint committee would be unlikely to supercede the functions of standing legislative committees, unless Congress were to depart from a now well established tradition that joint committees not be assigned legislative authority.

The current JCP consists of 10 members, 5 from the Committee on House Administration and 5 from the Senate Committee on Rules and Administration. A new or reorganized joint committee could draw from a larger number of committees. There are many possible combinations. For example, with a total membership of 10, 2 members could be selected from each of the House Committee on Administration and Senate Committee on Rules and Administration, 2 members could be selected from each of the House Committee on Government Operations and Senate Committee on Governmental Affairs, 1 member could be selected from the House Committee on Science, Space, and Technology and 1 from the Senate Committee on Commerce, Science, and Transportation. There are several other committees with potentially relevant jurisdictions, depending on the scope of the new joint committee’s charter, including the House and Senate Committees on the Judiciary and the House Committee on Energy and Commerce.

Other alternatives include establishing Special or Select Committees on Government Information in the House and Senate, and/or strengthening existing subcommittees (such as the House Government Operations Subcommittee on Government Information, Justice, and Agriculture) or establishing new subcommittees (such as within the Senate Committee on Government Affairs).

The primary rationale for a new joint committee would be that government information issues:

- are becoming (or already are) priority national issues in their own right;
- cut across the jurisdictions of several legislative committees;

- reflect the merging of information technologies along one continuum (from collection and processing to storage and dissemination in a variety of printed and electronic formats); and
- need a broad, cross-cutting forum and focal point in Congress.

As in any congressional reorganization, the actual jurisdiction and scope of a new joint committee (or special or select committees) would need to be agreed upon by the various existing affected committees and, of course, by the House and Senate leadership. Achieving such a consensus has proven to be a formidable task in prior congressional reorganizations but has been accomplished.

Other alternatives include: limiting the scope of a new joint committee to “government information dissemination, or possibly revision of relevant provisions of Title 44. The JCP’s statutory responsibilities could be revised to more accurately reflect the broader concept of government information dissemination in contrast to the typically narrowly understood concept of printing.

Improvements in Information Dissemination Management

OTA has identified several alternatives which could improve the management of Federal information dissemination, irrespective of other policy or institutional actions. These management improvements could be implemented by executive action using existing statutory authority with the concurrence of Congress, but with no required statutory action. One or any combination of these alternatives could be incorporated into a legislative package, as amendments to various statutes, should Congress determine that a stronger mandate is necessary.

Electronic Publishing/Dissemination Technical Standards

As discussed in chapters 2,3, and 4, the government is increasingly adopting electronic publishing technologies and systems and a variety of electronic dissemination formats. There is consensus in and out of government that appropriate technical standards are essential if the government wishes to realize potential cost-effectiveness and productivity improvements. Technical standards could facilitate electronic connectivity between the various agency systems and those of the central information dissemination agencies (such as NTIS and GPO), and flexibility among different formats (so that the same electronic text or database can be out-putted in a variety of formats—paper, microform, and/or electronic as appropriate). Electronic publishing can also serve to connect office automation systems, publishing systems, database systems, records management or document storage systems, and the like. Since the initial keyboarding or inputting of material can be the most expensive step in the process, capturing this input for purposes of later processing, revisions, composition, and reproduction is very important.

Standards developed through the widely accepted governmental-private industry cooperative standards-setting mechanisms should be adequate, but the process may need to be accelerated. Key standards-setting areas include:

- optical disks,
- text markup and page/document description
- languages, and
- electronic data interchange, including the open systems interconnection concept as discussed in chapter 3.

It is important that the lead government agencies coordinate closely on standards-setting activities. These agencies include the National Bureau of Standards (NBS) for the civilian executive branch units, a designated DoD unit (that can integrate and represent the activities of numerous DoD components), and a designated representative(s) of the legislative branch. With respect to text markup and page/document description standards, and perhaps other areas, GPO should be centrally involved.

All major text markup languages (including Standard Generalized Markup Language and the GPO's Full Text Database language) and hybrids thereof should be considered in developing an agreed upon Federal Government standard. This standard (along with others agreed to) could be issued concurrently by NBS as a Federal Information Processing Standard (FIPS), by DoD as a Milspec standard, and possibly by GPO (and the JCP) as an amendment to Federal printing and binding regulations.

Congress may need to accelerate the standard-setting process and/or assign responsibilities, although the standards setting itself would presumably be delegated to the technical specialists. (See chs. 3 and 4 for related discussion.)

Governmentwide Information Index

There is also consensus in and out of government for the establishment of a governmentwide index to major Federal information products—regardless of format. Scholars, researchers, and librarians have for years pointed out the need for improved indexing of Federal information. The results of the GAO surveys summarized earlier indicate strong support for an index among the depository libraries, other libraries, scientific and technical associations, and general associations surveyed. Also, OTA meetings with Federal agency officials identified considerable support for an index, although some agency officials were concerned that an index might be used to thwart rather than enhance agency information dissemination and/or that a governmentwide index might unnecessarily duplicate agency indices. Information industry representatives participating in the OTA study supported the concept of improved indexing of government information, but some were concerned that an index developed by the government could discourage private sector indexing initiatives and might result in a more costly, lower quality product.

At present, GPO prepares an index to official Federal publications, primarily printed reports, pamphlets, and periodicals. NTIS prepares an index to the so-called "gray" literature, that is, scientific and technical reports and papers prepared by government staff and contractors. These materials are primarily in paper (or microfiche) format, and generally have very limited demand. There is a small amount of overlap between the GPO and NTIS indices. Some individual agencies prepare indices to their own information products and services, including all of the major information dissemination mission agencies (such as the Bureau of the Census, Bureau of Labor Statistics [BLS], DOE's Energy Information Administration [EIA], Bureau of Justice Statistics [BJS], and U.S. Geological Survey [USGS]). Coverage of electronic formats is irregular and incomplete. GAO at one time prepared an index to Federal information products and services, but this effort has been terminated. There is no complete index. NTIS indexes some electronic products. Several private vendors have prepared directories to Federal databases and/or various categories of Federal information. The agency response to OMB Bulletin 87-14 could lead to the development of improved agency indices and provide the basis for an integrated governmentwide index.

While there is support for an index, there are differences of opinion on how and by whom the index should be implemented. Respondents to the GAO surveys were not asked to specify whether an index should be provided by the government, commercial vendors, or not-for-profit organizations. One possible alternative would be for either GPO or NTIS to consolidate the various agency indices into one integrated index. The index could then be produced in a variety of formats—ranging from paper and microfiche to optical disk and online.

Should Congress conclude that an index is warranted and should be provided by the government, Congress may need to assign responsibility for developing the index and require that a detailed implementation plan be prepared. The plan would need to consider: the different bibliographic and indexing methods currently employed by NTIS, GPO, and other Federal agencies; the cumulative experience of the library and information science communities with respect to indexing; and the successes and failures of prior governmental and private sector indexing initiatives.

Since the index information would not be copyrightable, private sector vendors would be able to add value to, repackage, and/or resell the information on the commercial market. As noted earlier, OMB Bulletin 87-14 directs agencies to establish and maintain an electronic index (or inventory) of all their information dissemination products and services, and to make the index available to the public directly or through another Federal agency or the private sector. The bulletin directs agencies not to offer information services already available from the private sector (or other agencies). It is unclear whether this restriction is intended to apply to the indices themselves. Also, the bulletin does not address whether and how the agency indices should be consolidated into a governmentwide index and/or maintained in a centrally-accessible location. Congress may need to define the government's interest and establish how, if at all, any pre-existing privately developed indices would need to be accommodated.

Government Information Dissemination Innovation Centers/Committees

Federal agency officials expressed strong support for much improved mechanisms to exchange learning and experience about technological innovations. Federal agencies are involved in a very wide range of research, development, and operations activities with respect to information dissemination. To this end 114 civilian departmental agency components reported having conducted studies as indicated in Table 11-5.

There appears to be a substantial knowledge base within the civilian sector of government, and this is paralleled by a similar or, if anything, greater level of knowledge-generating activity in the defense sector.

However, Federal officials at all levels, from technical specialists to program managers to senior policy makers, in both the civilian and defense sectors, agree that current mechanisms for the sharing and synthesis of this knowledge are very seriously deficient. This view is corroborated by OTA staff and contractor research. Typically, knowledge is not shared effectively even within a single agency component, let alone between several agency components within a single department or between departments.

There are some noteworthy efforts to address part of this problem, such as by the Federal Publishers Committee, and the Special Interest Group on CD-ROM Applications and Technology (SIGCAT), both of which are quasi-official interagency groups. Other examples are CENDI (Commerce, Energy, NASA, Defense Information), an interagency group of Federal science and

technology agencies concerned with scientific and technical information dissemination, and the Depository Library Council, an advisory group to the Public Printer that has devoted attention to electronic dissemination pilot projects. Also, several agencies have recently established laboratories for the testing, evaluation, and demonstration of new technologies. These include the CD-ROM and Electronic Publishing Laboratories at NBS, and the Artificial Intelligence, Video Laser Disk, High Density Information Storage, and Defense Information Gateway Laboratories operated as an activity of the Defense Technical Information Center. GPO has established a prototype dial-up microcomputer-based electronic publishing and training program. Also, the Public Printer has proposed that GPO establish a Federal Publishing Institute to provide a cohesive training program for Federal printing and publishing officials. And there are a variety of relevant training programs and courses offered in support of agency IRM activities.

As commendable as these activities are, further efforts seem necessary. Congress may wish to consider legislating or directing the establishment of information dissemination innovation centers in each branch of government. These could be located at DTIC (for the defense sector), NTIS and NBS (for the civilian executive branch), GPO (for the legislative branch), and possibly, the Federal Judicial Center (for the judicial branch). These major centers could be complemented by agency innovation centers, perhaps operated as part of a strengthened and revised agency IRM program (see later discussion), and possibly by an academic research center funded to provide outside input to agency innovation. Also, Congress may wish to consider establishing or otherwise directing the formation of an interagency information dissemination task force or coordinating committee with a primary task of encouraging innovation and exchange of knowledge gained from studies, pilot projects, and operational experience. (For examples of pilot projects, see chs. 2, 3, 4, 5, 7, and 8.)

Finally, Congress may wish to encourage or require agencies to conduct planning studies, similar to that conducted by DTIC, to creatively explore and develop their own visions of future information dissemination activities. In 1984, DTIC completed its DTIC 2000 study and concluded that by the year 2000:

DTIC will be a highly automated operation where the vast majority of data transfers are electronic. It will be situated in an environment where all users have access to computer work stations; where computer storage has the density, access speeds, and reliability to permit full-text storage of all items; . . . where mailing of paper products has been replaced by electronic transmissions; [and] where the power/speed of computers and the sophistication of software eliminate the need for both manual indexing and development of intricate search strategies.

Today DTIC is already beginning to implement this vision. Although few Federal agencies have conducted a formal “Agency 2000” study, many are experimenting with electronic information dissemination. And variations on the year 2000 scenario projected by DTIC could be helpful to many other agencies in planning their information future.

Revised Information Resources and Personnel Management

The Information Resources Management (IRM) concept, as originally conceived and debated in the 1970s, was intended to include all phases of the information life cycle—collection, processing, analysis, storage, and dissemination. The Paperwork Reduction Act of 1980 essentially enacted the IRM concept, but the original statutory language was vague as to coverage of information dissemination. 1986 amendments to the act removed most of the ambiguity by including “information dissemination” in the statutory language. However, numerous Federal

officials have observed that information dissemination is still not an effective part of many agency IRM programs or, if information dissemination is included, it is not well understood by many senior IRM officials. These observations have been confirmed by OTA staff and contractor research, and by studies by nongovernmental groups.

For example, a 1987 National Academy of Public Administration study titled *Federal Information Resources Management: Bridging Vision and Action* found that roughly half of agency IRM offices surveyed did not include responsibility for library services, printing, or reproduction. Of the 16 departmental IRM offices surveyed, only 8 covered library services and 9 covered printing and reproduction, while 15 of 16 covered paperwork reduction and 14 of 16 covered computer operations and data telecommunications. Eleven of 16 covered voice telecommunications and record management.

Two situations appear to warrant congressional attention. The first concerns senior IRM officials, typically with ADP, computer, and/or management information system backgrounds, who are viewed as frequently failing to understand or appreciate their agency's information dissemination functions, including library, printing, publishing, and public information activities, among others. These, in many cases, appear to be the less understood or supported members of the IRM family. Congress may wish to encourage or direct agency actions to remedy this problem. Possible actions include:

- requiring that either the senior agency IRM official or his/her deputy have information dissemination training and experience;
- establishing or designating continuing education programs for senior IRM staff to learn more about information dissemination;
- strengthening the role of already existing cross-cutting groups such as the Federal Publishers Committee, the Federal Library and Information Center Committee, and the Interagency Advisory Council on Printing and Publishing Services;
- involving senior IRM officials directly in agency or innovation centers and interagency task force that may be established; and
- establishing new or revised job definitions and career tracks for information dissemination professionals working in the government.

Developing career tracks for information dissemination professionals could be particularly important, since new technological applications are changing the nature of many printing, publishing, writing, public information, library, and related jobs. However, there is little focused effort or agreement on how these job definitions should be revised. There is growing attention to the need to reclassify computer-related positions and to develop appropriate training and career advancement opportunities (as evidenced by Office of Personnel Management course offerings on this subject). However, the focus to date has been on traditional automated data processing positions and not on information dissemination positions.

There are no definitive estimates of the number of Federal employees involved with information dissemination. However, if the definition is applied broadly to include some portion of writers, editors, librarians, printers, public affairs personnel, computer and communication operators, and the like, the total would appear to be in the tens of thousands of employees. The number of total Federal employees in relevant job categories is shown in Table 11-6, along with OTA's estimate of the percentage directly involved with information dissemination. Based on the assumed

percentages of each job category involved with information dissemination (100 percent of printing, public affairs, and librarians; 50 percent of audio-visual, writing, editing, and archiving; 10 percent of computer and communications), about 30,000 Federal employees are included. This is about 30 percent of the total employees for the job categories listed, and undoubtedly understates the actual number since significant, but unknown, numbers of engineers, technicians, analysts, statisticians, and administrators in other job categories are involved with information dissemination.

The Office of Personnel Management (OPM), the General Services Administration, and GPO could be assigned responsibility to review all Federal job categories potentially relevant to information dissemination, assess the need for reclassification, redefine the jobs as needed, and establish necessary training and career development programs. To be most effective, these activities would be carried out with full participation of employees and employee organizations, including relevant labor unions.

Involvement of GPO labor unions would be particularly important for printing and related occupations. GPO is the third largest Federal blue-collar employer in the Washington, D.C. area, as shown in Table 11-7. Also, GPO has the largest number of printing positions of all Federal agencies, as indicated in Table 11-8. These figures include printing occupations and not supporting occupations such as carpentry, maintenance, mechanic, and industrial equipment operator. (For further discussion of the GPO labor force, see ch. 4.)

A second situation meriting congressional consideration is management information, especially budget and contracting data, about information dissemination activities. Annual as well as 5-year agency and governmentwide information technology plans generally do not break out expenditures for information dissemination. The agency responses to OMB Bulletin 87-14 may help in this regard, since OMB asked for agency expenditure data for all dissemination products and services, including electronic formats. However, the responses are not yet available. If this process does not work, Congress may wish to establish a reporting requirement. Also, the OMB bulletin may have excluded significant DoD activities. For example, DoD officials estimate that, of the \$85-100 billion total annual weapons systems procurement, 5 to 10 percent is spent on technical information (i.e., the creation, maintenance, updating, and dissemination of technical documentation for design, maintenance, and operation of weapon systems). This translates into an annual expenditure of \$4-\$10 billion for technical information just within the weapons procurement accounts. The problem is that there is no separate reporting of contractual costs for technical information and information systems. Therefore, DoD officials are at a severe disadvantage in managing technical information and information systems procurement, monitoring contractual performance, negotiating contract modifications and follow-ons, and evaluating actual capabilities against planned or projected performance. Even though DoD officials recognize the need for improved reporting, management of the DoD bureaucracy is so difficult that congressional action may be needed.

For changes in information resource and personnel management to be successful, a clear understanding by senior agency officials that the new information dissemination technologies can, and probably will, significantly change organizational structures, job definitions, and administrative procedures is necessary. The successful senior official will likely have a good strategic sense of where the agency is or should be headed, and will define and implement the necessary training, career development, and managerial reporting techniques needed to move the agency in the desired direction.

Finally, to the extent that agency press and public information activities are included with the IRM umbrella, then IRM provides a possible focal point for electronic dissemination of press releases and other perishable information. Federal agency public information officials and members of the press interviewed by OTA generally supported the concept of electronic press releases, although not as a total substitute for the paper format. Several agencies already provide electronic press releases directly to the press and/or via private electronic news and wire services. The major question seems to be not whether but how the electronic press releases should be provided. Of particular concern are the relative advantages of various electronic formats and the equity implications of alternative delivery and pricing mechanisms. For example, while small, out-of-town newspapers could be major beneficiaries of electronic releases, since mailed press releases arrive several days late, these small newspapers may be the least able to pay for electronic services. This suggests the possible need for consideration of action to minimize economic barriers to access. (For further discussion, see ch. 10.)

APPENDIX F: EXCERPTS FROM *A NATION OF OPPORTUNITY*⁷

A Nation of Opportunity: A Final Report of the United States Advisory Council on the National Information Infrastructure recommends goals for the implementation of the National Information Infrastructure, and action to be taken to assure that the Information Superhighway enhances key areas of American life.

EXECUTIVE SUMMARY

I. THE COUNCIL'S VISION

The United States stands today in the midst of one of the great revolutions in recorded history: the Information Age. The Information Superhighway provides the infrastructure that enables enormous benefits in education, economic well-being, and quality of life.

The Council urges that the Nation adopt the following five fundamental goals.

First, let us find ways to make information technology work for us, the people of this country, by ensuring that these wondrous new resources advance American constitutional precepts, our diverse cultural values, and our sense of equity.

Second, let us ensure, too, that getting America online results in stronger communities, and a stronger sense of national community.

Third, let us extend to every person in every community the opportunity to participate in building the Information Superhighway. The Information Superhighway must be a tool that is available to all individuals -- people of all ages, those from a wide range of economic, social, and cultural backgrounds, and those with a wide range of functional abilities and limitations -- not just a select few. It must be affordable, easy to use, and accessible from even the most disadvantaged or remote neighborhood.

Fourth, let us ensure that we Americans take responsibility for the building of the Superhighway—private sector, government at all levels, and individuals.

And, fifth, let us maintain our world leadership in developing the services, products, and an open and competitive market that lead to deployment of the Information Superhighway. Research and development will be an essential component of its sustained evolution.

In charting a course to meet these goals for the Information Superhighway, the Advisory Council identified what it believes are four critical issues that must be addressed and must be addressed early:

- What are the key areas of American life and work that will be impacted?

⁷ U.S. National Advisory Committee on the National Information Infrastructure, *A Nation of Opportunity: Realizing the Promise of the Information Superhighway*, West Publishing, January 1996. The text of *A Nation of Opportunity* has been reformatted for inclusion in this publication, but the content is as posted at www.benton.org/Library/KickStart/nation.home.html.

- What is the role of universal access in the digital age?
- What are the rules of the road regarding intellectual property, privacy, and security?
- Who are the key stakeholders, and what are their roles?

The following recommendations reflect the Council's major proposals for addressing those issues.

II. RECOMMENDATIONS

A. IMPACT ON KEY AREAS OF AMERICAN LIFE AND WORK

1. **Electronic Commerce.** The Federal Government, in conjunction with others, should take steps to identify and resolve, wherever possible, legal, regulatory, and policy issues that restrict the development of electronic commerce on the Information Superhighway.
2. **Education and Lifelong Learning.** Create targeted Federal, State, and local initiatives, in full cooperation with the private sector, to accelerate access to the Information Superhighway and to facilitate the effective integration of Information Superhighway technologies and resources into all lifelong learning environments. Such initiatives should encourage the development and wide availability of quality Information Superhighway learning resources and stimulate the development of a viable market for Information Superhighway-related educational products and services.
3. **Emergency Management and Public Safety.** The Federal Government should convene a broad-based committee composed of those entities involved in standard setting, those involved with the development of new technology, and relevant State, local, and Tribal agencies to meet the needs of the emergency management, public safety, and criminal justice communities. The Federal Government also should involve local governments in regional planning and review to ensure the best possible coordination of resources within a region and involve community-based organizations for more effective gathering and dissemination of public information.
4. **Health.** The Federal Government, in conjunction with Tribal, State, regional, and local governments, should take steps to resolve, wherever possible, conflicting legal or regulatory barriers to the delivery and reimbursement of health information and health care across State borders. Such efforts should be accompanied by government funding of evaluation of telemedicine applications in the areas of cost, access, and quality.

Since protection of health information is a primary concern to everyone, the Council's recommendations on privacy and security should apply to the area of health information and should ensure both that information can be protected, and that it is available in properly authorized treatment situations.

5. **Government Information and Services.** All levels of government should use information infrastructure technologies to provide basic pointers* to government information and services, thus simplifying public access to relevant government information; improving delivery of government services and the management and use of government information; and enabling the private sector to develop and provide enhanced and expanded value-added information products and services. (* The term "pointers" in this context refers to information sources that would enable individuals and organizations in both the public and private sectors to identify and access government

information and services. The pointers are not the sought-after information and services themselves. Rather, they provide direct pathways to the desired government information and services. Current examples include the Federal Register, the Government Information Locator Services, and legislative calendars.)

B. ENSURING ACCESS FOR ALL

1. **Information Superhighway deployment.** Commercial and competitive forces should drive the development of the Information Superhighway. Regulatory disincentives to Information Superhighway development should be removed. All subsidies should be made explicit and applied in a competitively neutral manner.
2. **Universal access and service.** The definition of universal service should evolve to accommodate converging technologies. All individuals should have affordable, ubiquitous, convenient, and functional access to Information Superhighway services. All individuals should be able to be both consumers and producers of information. Design of its components should accommodate the needs of disabled individuals.
3. **Government's role.** Government should act when commercial and competitive forces are failing to achieve the goals of universal access and universal service. Government should lead by example in the use of the Information Superhighway for offering and using information and services.

C. RULES OF THE ROAD

1. Intellectual Property

- All levels of government should promote ongoing public education about the meaning and importance of intellectual property, including copyright and the fair use doctrine.
- The Federal Government should strive to have other countries implement consistent, effective, and appropriate policies and protections for intellectual property in the digital environment.

2. Privacy

- The Federal Government should follow through on privacy policy issues with the initial task of reviewing existing laws and practices to implement the Council's privacy principles and the recommendations of the IITF Privacy Working Group.

3. Security

- The Federal Government should encourage private sector awareness of security issues, initiate a public-private security consultation process, and foster mechanisms to promote private accountability for proper use of security measures.
- The Federal Government should not inhibit the development and deployment of encryption by the private sector.

4. **Free Speech**

- The government should not be in the business of regulating content on the Information Superhighway. It should defer to the use of privately provided filtering, reviewing, and rating mechanisms and parental supervision as the best means of preventing access by minors to inappropriate materials.

D. KEY ROLES

1. **The Private Sector Must Be the Builder.** The private sector -- defined broadly to include an array of nongovernmental entities -- must have the primary responsibility for the continued design, deployment, and operation of the Information Superhighway.
2. **Communities Are Key to Access and Learning.** As demonstrated in the Council's companion volume, *KickStart Initiative: Connecting America's Communities to the Information Superhighway*, it is the access at local institutions, especially schools, libraries, and community centers, that will continue to facilitate the Superhighway at the neighborhood level and open new opportunities to young students, working people, and older persons alike.
3. **Government Has a Critical Role as Catalyst.** Although not the primary builders of the Information Superhighway, all levels of government have a significant role to play in ensuring its effective development and deployment.
4. **Individuals Must Take Charge.** To realize the benefits of the Information Superhighway, individuals must be its champions at the local level, learn about and seize its opportunities, and respect the rights of others.

PART 2: IMPACT ON KEY AREAS OF AMERICAN LIFE AND WORK⁸

Questions of enormous importance surround the deployment and implementation of the Information Superhighway, questions that the Council has sought to address and for which it provides a framework for answers. These questions include:

- Who will use it and for what purposes?
- How can policy at all levels of government ensure that important social and economic goals are achieved by the use of the Information Superhighway?

In Part 2, the Council reports on its work in the key areas of uses to which the Superhighway will be put. In addressing these issues, the Council identified five areas where it believes the Information Superhighway will have the most dramatic effect in terms of changing the way Americans live and work.

- Electronic Commerce;
- Education and Lifelong Learning;
- Emergency Management and Public Safety;

⁸ *A Nation of Opportunity*, Part 1, America on the Information Superhighway, is omitted from this excerpt, but is available at www.benton.org/Library/KickStart/nation.america.html. *A Nation of Opportunity*, Part 2, Impact on Key Areas on American Life and Work, includes five sections, but only the section on Government Information and Services is included in this excerpt. All of Part 2 is available at www.benton.org/Library/KickStart/nation.impact.html.

- Health; and
- Government Information and Services.

These are by no means the only areas that will be touched and changed by the Information Superhighway. The Council believes that information technologies are tools that can transform and enhance almost every facet of American life.

In Part 2, brief descriptions of each area are followed by the key Council messages relevant to each area, and then by Principles and Action Recommendations that the Council developed to guide policymakers.

GOVERNMENT INFORMATION AND SERVICES

Democracy requires public access to government information and services. The Information Superhighway provides the opportunity to enhance the public's participation in government by promoting an informed and knowledgeable populace through increased access to government facilities. Information infrastructure technologies will also transform the effectiveness and efficiency of government services and their delivery. This section presents the basic principles of government information and services, followed by action recommendations.

Democracy requires public access to government information and services. The Information Superhighway provides the opportunity to enhance the public's participation in government by promoting an informed and knowledgeable populace through increased access to government information. Information infrastructure technologies will also transform the effectiveness and efficiency of government services and their delivery.

The free flow of information between the government and the public enables the public to meet their civic responsibilities, protect their rights, and provide for their consent. Government information belongs to the people, is owned by them, and should be accessible to them. These principles have been fundamental tenets of this Nation since its inception.

The Information Superhighway will provide all levels of government—Federal, State, local, and Tribal—with the opportunity to contribute to information infrastructure development. It must be recognized that different levels of government operate within differing jurisdictions, however, each with its own requirements, assumptions, and practices. Different jurisdictions often have differing interpretations regarding creation, use, ownership, dissemination, disposition of, and charges for government information. Despite these differences, cooperation and partnering among all levels of government are essential to efficient management, use, and delivery of government information and services.

The Information Superhighway will fundamentally transform the public's interactions with their governments, providing new opportunities for enhanced accountability, access, and service. The Advisory Council recognizes that there are categories of government information that may be withheld to protect a legitimate public or private interest, and the principles below should be interpreted consistently with applicable law.

Information and information technologies have also begun to transform the way the American people receive government information and services and relate to their elected officials, offering an unprecedented opportunity to enhance participatory democracy in the United States. Some States have put public kiosks in places that offer "one-stop shopping" for government information

and services. These interactive, multilingual, touchscreen kiosks, located in places such as shopping malls, libraries, and supermarkets, are making it easier for the public to obtain important government information and handle routine tasks such as applying for government jobs, renewing automobile licenses, ordering birth certificates, and learning about job-training programs.

All levels of government have entered the Information Age, using information and information technologies to improve communication with constituents, enhance delivery of government information and services, and increase public safety. For example, the White House has developed its own "Homepage," a user-friendly menu of information available from the White House. Congress, too, has created an online service called "Thomas." Like the White House Homepage, Thomas is accessible through the Internet and provides legislative information such as the text of bills, the *Congressional Record*, and Congressional Research Service summaries of legislation. Some States use broadband systems to improve their criminal justice systems, enabling video arraignments, depositions, and first appearances. The system saves costs and protects the public by reducing the need to transport prisoners from one location to another. The current uses of technology as a means to improve the efficiency and effectiveness of government are just the beginning. An enhanced Information Superhighway would prompt more widespread use of the types of services now available and prompt the development of new and better services. Development of the Information Superhighway to deliver these benefits should be based on the following Council principles.

PRINCIPLES OF GOVERNMENT INFORMATION AND SERVICES

1. Government information, including records of the actions of government, should be conveniently accessible to all persons, utilizing information infrastructure capabilities whenever feasible and appropriate.
2. Government services should be accessible to all persons eligible for such services, utilizing information infrastructure capabilities wherever feasible and appropriate.
3. The Federal Government should not charge for making its information available on the Information Superhighway nor charge for access to that information. Hard copy material, when available, should continue to be distributed under existing practices.
4. Government should encourage the widest possible cost-effective dissemination of government information in a wide diversity of formats and sources.
5. Government should encourage the private sector to take the lead in providing value-added information and services over information infrastructures.
6. Government entities must ensure and protect the quality, integrity, and security of government information and services over information infrastructures and provide appropriate preservation and archiving of government information to ensure continued usability and availability.
7. Government should safeguard the privacy of persons about whom information exists in government records, as well as persons who use or request government information.
8. Government employees, and ideally all individuals, should be educated and trained regarding their rights and responsibilities under existing information laws.

9. The public should be given an opportunity to contribute meaningfully to decisions affecting government information and services over information infrastructures.

ACTION RECOMMENDATION FOR GOVERNMENT INFORMATION AND SERVICES

All levels of government should use information infrastructure technologies to provide basic pointers* to government information and services, thus simplifying public access to relevant government information; improving delivery of government services and the management and use of government information; and enabling the private sector to develop and provide enhanced and expanded value-added information products and services. (*The term "pointers" in this context refers to information sources that would enable individuals and organizations in both the public and private sectors to identify and access government information and services. The pointers are not the sought-after information and services themselves. Rather, they provide direct pathways to the desired government information and services. Current examples include the *Federal Register*, the Government Information Locator Services, and legislative calendars.)

DEFINITIONS

Government information means information, regardless of format, which is created, collected, processed, disseminated, or disposed of by or for a government entity, at either the Federal, State, local, or Tribal level, according to the applicable laws of the relevant jurisdiction.

Government services are services provided by government entities as required by legislative mandates, including, for example, provision of social services, public safety, and criminal justice.

Government records are documentary materials, regardless of format, made or received by a government entity under law or in connection with the transaction of public business and preserved or appropriate for preservation by that entity or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of a government entity or because of the informational value of the data in them.

Private sector includes, for the purposes of these principles, for-profit, not-for-profit, and nonprofit entities.

APPENDIX G: A RETROSPECTIVE APPRAISAL OF THE 1982 NCLIS PUBLIC SECTOR/PRIVATE SECTOR TASK FORCE REPORT

By Robert M. Hayes
Professor Emeritus, Department of Library and Information Science, University of California, Los Angeles
August 15, 2000

Note: NCLIS invited Professor Emeritus Robert M. Hayes, who chaired the 1982 NCLIS Public Sector/Private Sector Task Force, to look back at the findings, conclusions, and recommendations made by his Task Force in the light of very dramatic interim developments, particularly the evolution of the World Wide Web and the Internet. He was asked to assess whether or not those interim events, in his view, change in any significant way those 1982 findings and recommendations.

THE PRIMARY ISSUES

The Report of the NCLIS Public Sector/Private Sector Task Force identified two primary issues:

1. The crucial importance of information resources, products, and services in our economy and society.
2. The conflicting views concerning the proper role of government in providing those information resources, products, and services.

Everything that has happened in the twenty years since that Report has, without question, confirmed the first issue. With respect to the second issue, probably there continue to be conflicting views concerning the "proper role of government", but I think the focus of that issue has shifted as the political context has shifted and repeatedly has done so. In that respect, the technological developments may affect the focus of attention but do not change the fundamental debate.

THE PRINCIPLES

The Report presented a set of seven principles:

Principle 1. The Federal government should take a leadership role in creating a framework that would facilitate the development and foster the use of information products and services.

The "leadership" is perhaps best represented by the development of the Internet. I think everyone will agree that it was a direct result of U.S. governmental investment in creating the basic structure, through ARPANET and the NSF super-computer network. It must be said that the pace in explosion of the Internet during the 90s, from the rather limited and essentially academic growth of the late 80s (which was exponential, yes, but nothing like we have experienced) to the current rate of commercial growth has been almost unbelievable.

Among the important policy decisions by the federal government which clearly has fostered the development and use of *electronic* information products and services was the Telecommunications Act and its provisions to subsidize telecommunications access for the nation's libraries, educational institutions, and health delivery agencies. Equity of access, so that geographic location and economic status are not insurmountable barriers, has been made a matter of government policy.

But there has been another arena in which the U.S. government has taken a position of leadership that in some respects is of even more fundamental importance. It is in the replacement of the SIC⁹ code for classification of industry data to the NAICS¹⁰ at least in part in recognition of the growing importance of the "information sector" of the economy. By doing so, the federal government has provided real encouragement to investment because now the data will more clearly show the magnitude of that investment and the effect of it on the economy.

In the same vein, though slightly different in the nature of its leadership role is the policy position of the federal government with respect to capitalizing information investments. In a Los Angeles Times article of Friday, October 29, 1999, it was reported that, "As part of its periodic update of its methods, the Commerce Department redefined software as an investment, something of value in its own right and thus counting toward economic output." It went on to say, "For last year alone, the refiguring added about \$250 billion to estimates of total economic output. Fully two-thirds of that was due to the redefinition of software." Now, that is getting somewhere! Later, I will comment further on the broader implications of this kind of policy. My hope (as I will try to identify) is that this principle of support to investment will be extended to other than simply investment in software.

Principle 2. The Federal government should establish and enforce policies and procedures that encourage, and do not discourage, investment by the private sector in the development and use of information products and services.

This principle is certainly reflected in the example of federal policy with respect to information investment already alluded to above. By stating, as a policy, that investment in "information resources, products, and services" should be treated precisely that way, as an investment, the federal government, at least in principle, is encouraging and not discouraging such investment. It is certainly a most tangible means of doing so.

Principle 3. The Federal government should not provide information products and services in commerce except when there are compelling reasons to do so, and then only when it protects the private sector's every opportunity to assume the function(s) commercially.

The related recommendations are to be considered as integral parts of this principle, since they embody the procedures for determining that there indeed are "compelling reasons" for the government to provide services in commerce.

In my view, this principle is among the most important contributions of the PS/PS Task Force Report. The federal government should not put itself in the position of commercial information distribution but should leave that to the private sector, "unless there are compelling reasons for it to do so". One clear example of a compelling reason is the nation's health, and the Congressional

⁹ Standard Industrial Classification

¹⁰ North American Industry Classification System

mandate that NLM should engage in active distribution of medical-related information is consistent with that principle. Furthermore, it in no way precludes the private sector from adding value to NLM information products, and I personally know of many companies that have done just that.

Looking at that principle in the context of developments in the two decades since the PS/PS Task Force Report, one of the most remarkable things that happened during the 1980s was the *President's Private Sector Survey on Cost Control* (the "Grace Commission"). For some strange, unaccountable reason, it adopted the position that the federal government *should* actively get into commercial activities, in every area of government, as the means for funding government operations and with the identified objective to replace taxation as the source of funding, in fact. I cannot conceive of anything that would be more destructive of the private sector than for the government to "get into the business" of doing anything.

Leaving that bit of history aside, though, have the technological developments of the past twenty years changed the first part of this principle in any way? Clearly not. If anything, they have made it easier for the government to conform to the intent of the principle. There are now many means, through the Internet especially, for the private sector to fill the needs in regions of the country and for groups of persons that might not in the past been well served without government intervention in the marketplace.

In this respect, I return to the leadership of the federal government in the policy of equitable access to telecommunications, as embodied in the Telecommunications Act and its provisions to subsidize the nation's libraries, educational institutions, and health care delivery agencies in access to basic telecommunications services, the Internet being simply one example. Such subsidy clearly makes it feasible for the private sector to meet needs at prices that can be afforded.

Having said all of that, I suspect that this principle may underlie some of the current concerns of NCLIS. The role of agencies such as NTIS become ambivalent when viewed in the context of this principle. Might not the activities of NTIS be better performed by private sector companies? The problem is that, without NTIS, the basis for private sector entry would become so marginal as to preclude investment by any company. It would simply be too difficult for any private sector company to perform the role of NTIS in assembly of the basic data. That role for NTIS is necessary for governmental management of the results of its programs and for distribution of them for governmental purposes. Therefore, in my view continuation of NTIS in that role is totally consistent with this principle.

The ambivalence appears when the role of NTIS in *distribution* becomes important. Now, that ambivalence was present during the PS/PS Task Force discussions, with specific reference to NTIS, which were at a time when electronic distribution via the Internet was discussed as feasible but had not assumed the importance it now has. Assuming NTIS were to continue in its role as the central manager of access to governmental scientific and technical report, should it play a role in distribution? In my personal view, clearly YES, in the same way that the Department of Commerce distributes *Statistical Abstract of the United States*. But the objective in doing so should be to make the government information readily available to all who want access to it (such as individuals, like me). But beyond that, the objective is to encourage private sector companies to add value to those data, by re-packaging, by producing products that are tailored to specific markets, etc.

The point as far as the PS/PS Task Force was concerned, though, is that two groups of institutions (libraries and private sector information agencies), taken together, provide the best means for ensuring public access to government information. On the one hand, use of libraries, especially public and academic libraries, ensures that "ability to pay" does not raise barriers which effectively deny access to information. On the other hand, the use of private sector organizations, in the business of providing information services, ensures that individual freedom and initiative will be dedicated to developing and marketing a multiplicity of information services whose value is determined by the purchasers rather than by government. The principles and recommendations emphasize the importance of using this balance of means for access, in contrast to creating new agencies to do so. Everything that has happened for the past twenty years, with respect to technological developments in particular, confirms that this combination indeed is effective.

Principle 4. The Federal government, when it uses, reproduces, or distributes information available from the private sector as part of an information resource, product, or service, must assure that the property rights of the private sector sources are adequately protected.

The problem with which this principle was intended to deal was the potential that private sector data might, inadvertently or perhaps even by design, become incorporated into governmentally supplied information with the result that the property rights might be diluted.

Among all of the principles (at least among those I've reviewed to this point), this may be the one that has been most affected by technological developments over the past twenty years. One need merely look at the controversy over Napster to see the problem. I don't think effects of technology change the intent of the principle, but they certainly complicate the reality. The potential for *inadvertent* inclusion of electronic material under copyright is very real.

The problem, though, should not arise if we are dealing with *deliberate use* of copyrighted material. I know that in non-governmental contexts, responsible agencies, such as libraries, are very aware of the necessity of protecting private rights. As the nation's libraries advance in the development of "digital libraries", they are doing so with the utmost care with respect to private rights. I think the principle continues to be valid as a warning to federal agencies that they should operate with equal attention to individual rights.

Principle 5. The Federal government should make governmentally distributable information openly available in readily reproducible form, without any constraints on subsequent use.

With respect to Principle 5, the U.S. federal government is now actively distributing "information from government activities" through the Internet as well as through CD-ROMs. Census for the year 2000, for example, may well be distributed primarily in electronic form, with print serving only archival purposes. (See "U.S. counting on Web to be census source; Bureau plans to post most of its 2000 enumeration data on the Internet. Switch from paper to hypertext raises information issues", Los Angeles Times, Sunday, November 15, 1998, Home Edition, Section A.) The Library of Congress has launched an extensive means for access to its collections and activities. The ERIC system is now actively disseminating its materials through the Internet. The Department of Commerce distributes Statistical Abstract of the United States both online through the Internet and on CD-ROM. I could go on and on but the point is clear. This principle has been heartily endorsed by reality if not by policy.

Principle 6. The Federal government should set pricing policies for distributing information products or services that reflect the true cost of access and/or reproduction, any specific prices to be subject to review by an independent authority.

This principle is also of exceptional importance. To be specific, the intent was not only that the price should "reflect the true costs for access and/or reproduction" but more to the point that it should not be set to recover the costs in producing or assembling the information. Now, I must record that I am expressing my own understanding, my own interpretation, and my own views. There may well have been members of the PS/PS Task Force that were ready or even desired to have the price set at "market". But the wording was based on the view that the price should be set to cover only the costs of making the information available.

Principle 7. The Federal government should actively use existing mechanisms, such as the libraries of the country, as primary channels for making governmentally distributable information available to the public.

I suspect that this principle may be another part of the reason for the current concerns of the NCLIS. The particular example that the PS/PS Task Force had in mind was the Depository Library program, in fact. I think there have been attempts to eliminate that program, and to do so would be totally counter to the intent of this principle.

THE RECOMMENDATIONS

The Report presented a set of twenty-seven recommendations.

Recommendation #1. Provide an environment that will enhance the competitive forces of the private sector, so that the market mechanisms can be effective in allocating resources in the use of information and in directing innovation into market determined areas.

Everything I have seen, at least for the decade of the 90s, confirm the picture of a thriving competitive, private, market-based sector for the information economy. Federal policies clearly have been effective in every respect, including increasing use of information and innovation in development of products.

Recommendation #2. Affirm the applicability of the First Amendment to information products and services.

Clearly, the Internet has raised many First Amendment issues. Congressional efforts to impose means for censorship were stopped by the courts based on First Amendment arguments. The view of the PS/PS Task Force was precisely that the First Amendment should not be limited to "the press" (taken in some limited sense) but should encompass other means for information distribution, such as the Internet (which was explicit in the discussions). As an ardent believer in the importance of First Amendment imperatives, I continue to endorse this principle.

Recommendation #3. Encourage Congress to be consistent in the language used and in the application of principles relating to information products and services, such as those identified in this Report, when it formulates legislation and when it exercises its oversight role.

Frankly, I do not recall the precise reasons that the PS/PS Task Force considered this to be worthy of recommendation. Looking at it now, it really is "preaching", and I would be inclined to eliminate it.

Recommendation #4. Encourage government agencies to utilize the most efficient (information) technologies.

This too is "preaching", this time to the Executive Branch. I think that the PS/PS Task Force objective was to urge that those agencies should be in the forefront of *use* of the information technologies and not simply in the *support to development* of them. Again, I would be inclined to eliminate it.

Recommendation #5. Encourage the setting and use of voluntary standards that will not inhibit the further development of innovative information products and services.

The debate in the PS/PS Task Force on this topic was intense. Standards were viewed with great ambivalence. On the one hand, clearly they foster development by creating a framework on which products can be inter-related without concern about compatibility. On the other hand, they can also restrict creativity. The intent of this recommendation was to identify the balance between these two concerns but to do so in a way that, if anything, put greater emphasis on setting standards. Has this changed by the technological developments of the past twenty years? I think not. The balance still must be maintained but standards still are the means by which products can be inter-related.

Recommendation #6. Encourage and support educational programs that provide the professional skills needed to further the development and use of information as an economic and social resource.

It is clear that this recommendation continues to have dramatic importance. From all of the reports from the information industries, there is a shortage of qualified persons for employment. The recent expansion of the basis for hiring foreign workers with technological skills clearly is based on the perception that there are needs that are not being met. Beyond that, there are needs in preparing managers in the use of information resources.

Recommendation #7. Encourage and support both basic and applied research in library and information science.

I suppose that this recommendation were blatantly self-serving, but I think it is consistent with Recommendation #6. The facts are that financial support for research in the specific arena of "library and information science" has declined in the past two decades, and I think the loss is a serious problem.

Recommendation #8. Encourage and support statistical programs and related research to provide the data needed to deal with information policy issues.

I think that the shift from SIC to NACIS coding represents *exactly* what the PS/PS Task Force had in mind. Prior statistics have grievously under-estimated the magnitude of the information sector of the economy, and by doing so have meant that policy decisions in both the legislative and executive branches have been based on inaccurate picture of the effect of those policies. Now, while the current statistical programs have made some steps in the direction of improved reporting, there is still much that needs to be done. To me, this is therefore one of the most important recommendations.

Recommendation #9. Conduct a periodic economic assessment of the impact of Federal government information products and services.

Recommendation #10. Encourage Federal agencies to regard the dissemination of information, especially through the mechanisms of the private sector (both for profit and not for profit), as a high priority responsibility.

I think that these recommendations are valid and even self-evident.

Recommendation #11. Identify and evaluate alternatives to existing Federal information dissemination mechanisms.

Recommendation #12. Develop and support the use of libraries as active means for access to governmental information by the public.

As are these.

Recommendation #13. Identify and eliminate legal and regulatory barriers to the introduction of new information products and services.

Frankly, I'm not sure what barriers the PS/PS Task Force had in mind in making this recommendation. But an example that comes to mind is the change in policy concerning *capitalization of software*. In my view that should be extended to other kinds of information investments (such as in databases). Now, these may not represent "barriers" so much as accounting policies that in the past treated investments in information as parts of "goodwill" in assessing the value of companies. By doing so, they in effect debased the currency for measuring the return on such investments. There may be other examples that can be brought to mind. But whether so or not, I think this recommendation still has value. In fact, I would put greater stress upon the issue of proper evaluation of investment in "intangibles" such as "information", as my illustration here are intended to highlight.

In passing, I want to comment on one of the debates that occurred during the discussions of the PS/PS Task Force. It concerned whether "information" should be regarded as a "resource" and as a "capital investment". My view was that it clearly was a resource and an investment, at the least for companies in the information industries. But there were some on the Task Force who vociferously argued against that position, claiming that to do so would give it too much importance. They said, in so many words, "Information is a support to decision-making, not an investment." Certainly that position was correct if it was set in the context of management decision-making. But in the context of information product development, it is in my view totally incorrect. The database of an ISI or an OCLC is as much a capital investment, necessary for production of information products and services, as is a machine tool in Ford or General Motors, necessary for production of automobiles. Yet today, the information investment is always expensed but the machine tool investment is almost always capitalized.

Recommendation #14. Encourage private enterprise to "add value" to government information (i.e., to re-package it, provide further processing services, and otherwise enhance the information so that it can be sold at a profit).

Of all the recommendations, it seems to me that this one gets to the heart in resolution of the issues with which the PS/PS Task Force was concerned. Specifically, the distribution of government information by the government should not be considered as competition (assuming that the principles and recommendations in that respect are followed) but as opportunity. It provides the private sector with the opportunity to utilize that information, to develop their own products and services based on it and with the expectation that the government will continue to

provide the information, not as a competitor but as a source. I continue heartily to endorse this principle.

Recommendation #15. Provide incentives to existing organizations, such as libraries and bookstores that will encourage them to expand their activities in dissemination of governmentally distributable information.

The Depository Library program represented the precise case in point for this recommendation. The point is that libraries, in particular, provide the "safety-net" for those who do not have the economic resources to pay for what can be exceptionally expensive private sector added-value services. When the general public may not be able to afford those private sector services, they should still have access to the governmental data on which those value-added services are based. It is this objective to which this recommendation refers. Now, does the Internet reduce the importance of this recommendation? I think not. If anything, it enhances it, since the library again serves as the safety net both for access to the government information and, more importantly, for access to the professional assistance in support of evaluation and use of it.

Recommendation #16. Establish procedures which will create a realistic opportunity for private sector involvement in the planning process for government information activities.

Recommendation #17. Involve the private sector in the process of formulating standards relating to Federal information activities.

Recommendation #18. Create or improve mechanisms for ensuring that the actions of government agencies, in developing information resources, products, and services, are consistent with the policies, goals, and long range plans that are announced.

Recommendation #19. Announce intentions sufficiently ahead of time to provide an opportunity for private sector involvement when a government agency, for reasons it regards as compelling, should plan to develop and/or to market an information product or service.

Recommendation #20. Review and approve, before implementation, any plans for the government to develop and/or market an information product or service, the review to be carried out by an agency appropriate to the branch of government (such as OMB, GAO, CBO).

Recommendation #21. Include an "information impact and cost analysis" as part of the process of review, evaluation, and approval of any plans for the government to develop and/or to market an information product or service, the analysis to cover economic and social effects, effects on existing products and services, effects on potential private sector products and services, and benefits to the public.

Recommendation #22. Review periodically to evaluate the desirability of continuation of any information product or service as a governmental activity.

Recommendation #23. Do not arbitrarily restrict the Federal government from enhancement of information products and services, even if solely to meet the needs of constituencies outside the government itself.

Recommendation #24. Announce the availability of governmentally distributable information and maintain one or more registers to help the public determine what governmentally distributable information is available.

Recommendation #25. Deposit governmentally distributable information, in whatever forms it may be available, at national and regional centers, including regional depository libraries, where it may be examined at no charge.

Recommendation #26. Do not assert any Federal government copyrights on information the Federal government makes domestically available.

Recommendation #27. Use the nation's libraries and non-governmental information centers as means for distribution of governmentally distributable information instead of creating new governmental units or expanding existing ones.

All of these recommendations were focused not so much on the general objectives as on the specifics of means. The private sector representatives on the PS/PS Task Force wanted to assure that their interests would be heard and listened to. They wanted to assure that procedures in making policies and in implementing programs would be as open as possible so as to make it possible for them to participate in the process. I think those aspects continue to be necessary, not only to meet the needs of private sector entrepreneurs but as a general policy of good government.

In parallel, the members of the PS/PS Task Force that represented the "public sector" in the debate wanted to assure that their interests were also recognized in areas such as equity in access, maintaining the role of libraries, assuring that the safety-nets for meeting needs continued to stay in place. In this respect, these recommendations tried to balance the two sets of interests. And I think that that too continues to be necessary.

DEFINITIONS

There were an untold number of definitions.

In any area of controversy, the terms used in the discussion become not only means for expressing the ideas but the very focus of the conflicts themselves. It is thus necessary to develop specific definitions for the terms used, so as to assure common understanding and to clarify the conflicts. The definitions, as presented here, are not intended to be universally accepted, but the principles and recommendations must be read with them in mind.

I won't here review the array of definitions, but I do want to highlight some of them that I think continue to be critical.

A key issue, here, was the ambiguous position of the third sector organizations (universities, libraries, research institutes, professional societies). In some situations, they are public sector institutions (public libraries and public universities, for example, are clearly part of government, in the sense that they are governmentally funded and operated), but in other contexts they function as part of the private sector. The basis for resolution of this ambiguity was never clarified, so the third sector organizations--the not-for-profit institutions and comparable activities of government--were usually treated as part of their respective sectors rather than being identified as a group separate from the

other two. The fact remains, though, that the very membership of the Task Force was chosen to represent three sectors, not two.

I think that in public policy debates, certainly in the information field if not more generally, this group of institutions, which lie between the "public sector" and the "private sector" needs to be given more attention than it usually receives, as an independent set of participants and not buried in one or the other of the two. In the international arena, the NGOs (non-governmental organizations) are being explicitly recognized as necessary and independent participants, sitting between government and business. And that is precisely the group I am talking about here.

The term "information" was repeatedly used in the Task Force discussions, but it was impossible to arrive at an agreed upon definition. It appeared and was generally understood to refer to the content or symbolic substance of a communication, as separate from the physical form in which the communication occurred. But despite the appearance of a general understanding of the term, it simply eluded specific definition.

The problem faced by the Task Force is exemplified by the definition of "information" given in the 9 June 1980 draft statement from the OMB, concerning "Improved Management and Dissemination of Federal Information: Request for Comment". In it, "information" is defined as "...publications and other documents, such as reports, studies, and brochures, which are available in a paper or microform media (sic)." That definition (in identifying "information" with the media that convey it, and with a limited set of such media at that) is irreconcilable with the usage in the Task Force.

Although the Task Force did not define "information", at least characteristics of it as an "economic entity" were explicitly recognized. I won't here review what the PS/PS Task Force report said in this respect, but I think that what was said continues to be important. It has become especially so as the information economy and the information technologies continue to expand. The economic role of information needs to be identified, and not simply in the traditional way in which the economists have treated it (i.e., simply as part of the decision-making process).

The differences between an information product and an information service were a matter of extensive debate and, in fact, seemed to exemplify rather fundamental issues in the discussion.

This distinction or rather the blurring of this distinction has become increasingly important as a result of information technology developments in the past two decades. Indeed, online publication is both a product and a service. Now, it may be that a distinction does not need to be made, but the facts are that government policies seem to treat them as different.

There was disagreement over whether the information industry should be limited to private sector organizations, thus excluding governmental agencies such as NTIS and the GPO. Those arguing that it should include government agencies and their contractors saw the term as representing a kind of function; those arguing against doing so, saw the term as representing the difference between public and private sectors, "industry" being confined to the private sector.

My own view is that the term "information industry" should be treated as a function and that "industry" is not confined to the private sector. In saying that, I must reiterate that I am not suggesting that the government (i.e., the "public sector") should get into the business of marketing its products as a source of income and in competition with the private sector. But I

strongly believe that governmental information activities, as functions, should be treated on a par with private sector function, certainly in statistical accounting.

Most of the Task Force deliberations focused on the availability of "government information", but the definition of that term fluctuated widely during the discussion. At times, the term was taken very broadly, including all kinds of information generated by or collected by the government or by its contractors. At other times, the term was taken very narrowly, limited to the definition given by the OMB, in which it is restricted to mean "...for which the government is the primary user"; that usage contrasts "government information" with "public information", the latter being interpreted as "... information to inform or educate the public".

There are many problems underlying the diversity of definitions. I won't here try to review them, as they are recounted in the PS/PS Task Force report, but each of the problems interacts with the others, and while there is some overlap among them, there are no easy ways of reducing them to a limited number of sub-categories of government information. This complicated the task of coming to agreement on several principles, since different categories of government information will almost certainly require different conditions for availability. I think that the problem in definition of the term "government information" continues.