

National Spatial Data Infrastructures as a model for global co-operation
Mission is to maximize the use of GI- Spatial Technologies for the benefit of
citizens, good governance and commerce

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Abstract: There is growing nation-wide pressure to create a National Spatial Data Infrastructures (NSDI) keeping the society to be well informed knowledge based systems to produce a uniquely egalitarian society, so they become skilled and knowledgeable to support governmental decision making processes. Conceptually a NSDI can be viewed as the institutional framework, technical standards, fundamental datasets and access arrangements that allow spatial data to use effectively to address various issues. A spatial data infrastructure (SDI) is a powerful tool for economic and social development, and environmental management, at the local, regional, national and global level.

To better appreciate the role of the GPO-Clearinghouse, it is important to understand the interrelation of the work force needed for functional activities and components presents in the NSDI. These work force and elements are not independent; they are complementary to constructing a viable infrastructure.

In the project work the analysis is made on the basis of a survey and workshop carried out during study and fieldwork. Findings are forced to create co-related co-interactive appropriate public help world wide web with web users, GPO-clearing house gateway and www server.

After establishing catalog and table of Contents, go ahead to wards the following:

- *Maintain DTS compliant format on the net by providing www server
- *Establish a Public Information Collection
- *Integrated Library System Procurement Progress
- *Install suitable Software
- *Search Engines/Paid Positioning
- *Continuously update information management programs, decisions, action-plan data's of the web and maintain Data Directories.

WORK-FORCE FUNCTIONS:

- *To launch and advertised knowledge base tool for sending to GPO-Clearing house, in a searchable and brows able web containing to the society for implementing decisions and action plans of the government and its bodies.
- *To gather data from all the depository libraries bi-yearly for performing result of deeply inspected and studied on line conducted Biennial Survey of Depository libraries.
- * Society allows access survey, framework data: Registration is required by mentioning users name and password. Once user sees a confirmation message, he will be logged into the web. If he forgot his password then needed to click the link and to select the forgot password function.
- *Initiatives for outside participation
- *For planning and coordinating the execution of any new information
- *Program initiatives for GPO-Clearing house.
- *Following direction of GPO-Clearing house.
- *Maintaining contacts and relationship with the library, users and general public.
- *Managing collections.
- *Collecting Federal Information from GPO-Clearing house.
- *Transforming Activities
- *FDLP Training and Consultation

The results of this program are expected to be very popular for shaping the future expanding the Global e-Society. Spatial Data Infrastructures have been implemented in developed countries and it is widely believed that also developing countries can benefit by the implementation of NSDI.

INTRODUCTION

The Author in the paper elaborates the concept that public has right to access e-government held geographic information. SDI will provide information crucial to decisions of national policy and to the general public. Every leading country including India tries to endure this concept, the need of twenty-first century. Author explains this through US GPO. If this paper increases the awareness of what GSDI could or should aspire towards, then it will have achieved its aim.

The government as a collector acquires information as mandated by laws and regulations and for day-to-day operation of public administration; as a custodian manages and processes information in a systematic manner; as a regulator prevents the abuse of information and ensures fair and equitable access to information and as a user uses information for day to day operation and policy making.

Access to government-held information is every citizen's right. The right to know is the foundation of modern democracy. Now there is growing recognition of the importance of information or knowledge-based industries to the nation's economic well-being.

Digital libraries make use of new computing, network and information management technologies. India is the twelfth country to adopt laws validating and protecting online transaction. Information GIS on the WWW, has important role in improving public access to environmental and other data, and involvement in decision making.

The rising public demand for access to government information, together with the lower cost of interoperability now that common standards are available, gives rise to a strong opportunity to build a government-wide Clearinghouse that is immediately useful as well as sustainable. Facilitating public access to geographic information is a key National Information Infrastructure (NII) requirement. This gives rise to a strong opportunity to build a government-wide GPO-Clearing house that is immediately useful as well as sustainable.

National Spatial Data Infrastructure (NSDI) addresses issues pertaining to geographic information within the conceptual framework of NII. There is a need to increase the awareness of the value, use and management of geographic data, particularly among federal and state agencies; fostering development of a variety of educational and training opportunities to increase the awareness and understanding of the vision, concepts and benefits of NSDI, and to improve the collection, management and use of geographic data.

Spatial data is made available to GOs. NGOs and national users for developmental processes of the Nation, keeping in view the departmental 'Restriction' policy, monitored by Ministry of Defense. Regular updated map catalogues showing the status of Topographical maps on different scales are being published and circulated.

India will be a major player of the Global Spatial Data Infrastructure (GSDI) efforts and in this direction hosting the 7th International Conference of GSDI in 2004 in Banaglore.

(GSDI is a global and open process for coordinating the organization, management and use of geo-spatial data and related activities)

Survey of India Sol for NSDI, has begun to work out strategic alliances with industry and have already introduced in the market some new products in collaboration with industry

to meet the geo-spatial needs of users and NSDI. On November 20, 2002, the Sol has released the first map in digital format on WGS 84 datum for civilian use.

Canada: (CGDI), United Kingdom: (NGDF), Australia: (ASDI), China: SBSM, Afghanistan: AIMS, India, Brunei Darussalam, Cambodia, Fiji, Georgia Hong Kong, India, Indonesia, Israel, Japan, Jordan, Kiribati, Kuwait, Lebanon, Macau, Malaysia, Mongolia: SAGC, Nepal, Pakistan, Philippines, Qatar, Russia, Singapore: INLIS, Taiwan, Tuvalu etc. are stepped towards NSDI – National Spatial Data Infrastructure

Clearing House

The USGS node of the National Geo-spatial Data Clearinghouse is a component of the National Spatial Data Infrastructure (NSDI). The Clearinghouse provides a pathway to find information about geo-spatial or spatially referenced data available from USGS Clearinghouse uses the Internet infrastructure, including the international standard Global Information Locator Service (GILS) and other standards. Locator records maintained by Clearinghouse will be reviewed for accuracy at least annually, and will be maintained for permanent public access through an arrangement with GPO.

This is the reason to study the newly customer help service announced by the U.S. Government Printing Office (GPO) on 15-10-03.

USGC: FGDC: NSDI:

USGS Geo-spatial Data Clearinghouse is one of the nodes of the National Geo-spatial Data There are two ways of finding data. One is searching by keyword or area of interest through the National Geo-spatial Data Clearinghouse Gateways. Another is through digital virtual electronic spatial libraries. Customer help service of GPO in US is playing a great role providing government held information including GIS to the public through its partners.

In US the Geo-spatial Data Clearinghouse is a collection of over 50 spatial data servers The Federal Geographic Data Committee coordinates the development of the National Spatial Data Infrastructure (NSDI). The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data.

GPO Access: GILS: Geo-spatial Clearinghouse

Program initiatives for GPO-Clearing house.

Examples of GILS Implementations

GPO Access GILS | - some U.S. Federal GILS sites maintained by the Government Printing Office

Geo-spatial Clearinghouse | - Clearinghouse of the Global Spatial Data Infrastructure

U.S. States | - GILS implementations in U.S. States

U.S. Federal

U.S. Federal Clearinghouse | - U.S. Federal Government Information Clearinghouse

Implementers | - a listing of GILS implementers

GILS

The goal of the Global Information Locator Service is to make it easy for people to find information of all kinds, in all media, in all languages, and over time. GILS is a Web-based access tool. The maintenance and management of GILS records at the US Federal level is a decentralized undertaking. The U.S. Government Printing Office

(GPO) is attempting to coordinate these disparate undertakings into a single searchable service.

The US GPO GILS Metadata

GILS is a Z39.50 compliant system. Like other electronic information cataloging systems (MARC, Dublin Core), GILS defines a number of searchable fields or core elements and sub fields or sub elements. US federal GILS consists of the following core elements:

Collecting Federal Information from GPO-Clearing house

The Federal Register, Congressional Record, Congressional Bills and other Federal Government information are available online via GPO Access, a service of the U.S. Government Printing Office (GPO). Public access is available through the Federal Depository Library, or directly from GPO.

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Project Work

In the project work the analysis is made on the basis of a survey and workshop carried out during study and fieldwork. Further from November 1 through November 30, 2003 Biennial Survey of Depository Libraries will be conducted online.

The purpose of the Biennial Survey is to report on conditions in the depository libraries. Required by law (44 U.S.C. §1909), the Biennial Survey gathers data from all the depository libraries every 2 years, supplementing the more in-depth inspections or self-studies that are performed every 6 or 7 years.

Regulations govt. was created as the first step in the online rule-making initiative. Citizens can search, review, and comment on Federal agency rules and proposed rules open for comment from the Regulations govt. website. The GPO Access User Support Team provides support for the site through a toll-free telephone number and e-mail.

DTS

DTS compliant format on the net by providing www server

The Daily Treasury Statements are uploaded daily except for weekends and holidays. The Daily Treasury Statements (DTS) summarize the financial activities of the Federal Government and off-budget Federal entities in accordance with the Budget of the U.S. Government. The DTS are now available via the Federal Bulletin Board.

Daily Treasury Statements are available in PDF and ASCII text format. The electronic version of the DTS is available three days after its printed-paper counterpart. The visual display of the PDF version of the DTS is identical to its printed counterpart.

New Initiative: Establishing a Public Information Collection:

A draft collection plan that focused on building a comprehensive, timely, permanent collection of U.S. Government publications was developed. While primarily designed to proactively acquire, preserve, provide online access to, and make available for other GPO dissemination programs, copies of Government publications, the collection would also include paper copies to ensure future access even if a particular document has to

be re-digitized. Through access to stored digital objects, and by repurposing those objects for print-on demand and document delivery services, the Collection will also support other GPO organizations and operations. In conjunction with regional Federal depository library collections, the collection will serve as the collection of record for the FDLP, as well as the collection of last resort for all Federal depository libraries.

New Initiative: Integrated Library System: LIBRARIES:

There is an important role of Hardware-Software installed Computerized Parliament Library of India in enhancing democracy in the digital age. Speaker's and MPs' home pages are on the Net. "Parliament of India Home Page" is on the World Wide Web Site of the Internet. A Digital Library has been set up in the Computer Centre. The collection of DVDs, CDs, tapes and floppies is being developed keeping in view the core areas of interest of members of Parliament and the latest technological advances. There is a planned computerization of all the activities of the Lok Sabha Secretariat with a definite policy to use advances in information technology for further improving the information management and dissemination system.

Future Proposals under consideration: MPs Interactive System, Committee Information System, to forward parliamentary information in electronic form to the members and allowed them to send parliamentary questions, notices and other communication through e-mail or other electronic media to the Secretariat in a secured environment, to develop an interactive web based system which will allow members to submit requests for and receive information on various topics of their interest from Reference Service of LARRDIS, to develop an integrated constituency information system covering various details of members' constituencies like population, literacy rate, number of villages, number of wells, irrigation facilities, etc. which could be very useful to members of Parliament for their constituency development work. The Library and other Divisions of LARRDIS have been serving the public also. With a view to helping Indian and foreign scholars and students in their research, the Library has been allowing them access to its collections for short duration during inter-session periods.

The 'India Image' Portal, which acts as a gateway to Government of India hosts around 600 Government Websites. These sites receive over 1.5 million hits daily. Digitalisation has also opened up a new opportunity and channel for dialogue between the citizens and parliamentarians on matters of crucial importance.

Examples of WWW sites digital geo-spatial libraries (Geo-libraries) of US:

* The Federal Depository Library Desktop

Examine topic "Locator Tools & Services" for information on searching. See Library Directory to find the library nearest you.

* Alexandria Digital Library Project
Ongoing project to catalog and deliver GIS data resources using a library business model.

* Cornell University Geo-spatial Data Information Repository
FGDC Clearinghouse node for New York state spatial data.

Library Program Service LPS, works with the Cartographic Users Advisory Council (CUAC) to develop any additional specifications, which support GIS applications. Not all libraries have to meet the specifications for "cartographic data use" contained within. Libraries will continue to be evaluated using a "functional approach" LPS works with the

Cartographic Users Advisory Council (CUAC) to develop any additional specifications, which support GIS applications.

Helpful Hints for searching these databases via GPO Access will be available online. Once you are connected to the database, the search "helpful hints" will retrieve instructions and sample searches. Through the Superintendent of Documents programs, GPO disseminates the largest volume of U.S. government publications and information in the world.

See **annexure-1**

Free Nets & Geographic Information Kiosks:

Geographic information kiosks are public-access terminals set up by government agencies, business organizations or libraries. Applications include: browsing land status information, community and social information, recreation and tourism information, business locations, electronic atlas and street guide, weather reports and maps, local and regional traffic conditions including connection to Web-cams (i.e. video cameras connected to a computer server to provide real-time or interval images on the Web).

Twelve Touch Screen Information Kiosks having facility of accessing the data relating to Questions, Debates, Bio-data, Bulletins, List of Business, Bills, Parliamentary Committees, Telephone Nos., Postal and e-mail addresses of members, etc. have been installed at various vantage points in Parliament House and Parliament House Annexe.

The Video Conferencing facility is being provided. Query Booths act as a Centre for continuous training of members and other users by resolving their queries and enhancing knowledge and skills in the use of computers.

US examples: Buffalo free net (Buffalo NY), and National Capital Free-net (Ottawa ON)

Install suitable Software

CRM Software - A customer relationship management package was procured and readied for implementation by the end of the 2003 fiscal year. It provides an electronic knowledgebase to help answer frequently asked questions, and also will provide Web chat functionality in real-time. This CRM application will help GPO manage and improve contacts with its many customers, including users of GPO. Because of advances in technology it is necessary to update those minimum technical specifications.

See more details in Section 3 of Chapter 4 Electronic Publications.

Search Engines/Paid Positioning

Recognizing that search engines are one of the most popular ways in which users find the resources available via GPO Access, Information Dissemination personnel continued their pursuit of optimizing the visibility of GPO Access pages in major search engines and directories. In addition to ongoing optimization efforts, several successful paid positioning tests were conducted through industry leaders such as campaign conducted on Google search engine for the GPO Access home page, which brought 94,000 new visitors to the site over a three-month period.

Continuously update information management programs, decisions and action-plan data's of the web and maintain Data Directories

The active database was updated continuously. Agencies update their records on an irregular basis. As part of on going efforts to provide users with the highest quality service, the GPO has announced on 15-10-03, the launch of a new customer help service. This service includes a Knowledge Base that has been populated with answers to frequently asked questions related to the following services: GPO Access, the U.S. Government Online Bookstore and the Federal Depository Library Program. As GPO continues its reorganization efforts, more services may be added. The knowledge base is constantly being updated on user inquiries. Phone assistance for the service is also available. The Information Dissemination (Superintendent of Documents) organization participated in a wide range of new initiatives and made many exciting changes during FY 2003. These efforts have all served to improve our ability to carry out our mission and to better position the organization to help the agency in keeping America informed.

The Public Printer approved the reorganization plan for Information Dissemination in June and work immediately began on the implementation process, with completion targeted for April 2004. The plan aligns the Information Dissemination organization into the following four functional areas:

- Program Development Service
- Program Planning and Coordination Service
- Library and Customer Relations Service
- Collections Management Service

List of Reference Links for Data Management NAO

1. Federal Register: February 22, 2002, Volume 67, Number 36, [Notices] Pages 8451-8460, Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, (Scroll down to "Management and Budget Office" for file link.)
2. National Archives and Records Administration (NARA) Records Management Regulations (36 CFR Chapter XII, Subchapter B, Parts 1220-1238),

Work-Force Functions:

See Work force Chart in **Annexure-2**

Authorized by Title 44, U.S.C., the FDLP, Cataloging and Indexing Program, which produce the Monthly Catalog of the United States, are administered by the Library Programs Service (LPS). Out of a total GPO work force of more than 3,200, LPS has slightly more than 100 employees. While most of the GPO work force is engaged in processes for printing documents, procurement of printing or CD-ROM replication, developing World Wide Web applications, or tasks relating to or in support of these functions, LPS has unique responsibilities within GPO and is comprised of two divisions: Library Division and Depository Distribution Division. LPS also manages the distribution component of the International Exchange Service (IES) Program for the Library of Congress.

Work force launch and advertise knowledge base tool for sending to GPO, in a searchable and brows able web containing to the society for implementing decisions and action plans of the government and its bodies.

Work force also gather data from all the depository libraries bi-yearly for performing result of deeply inspected and studied on line conducted Biennial Survey of Depository libraries. Most of the databases gathered and listed are structured by year.

Society allows access survey, framework data:

Make free registration by mentioning users name and password. Once user sees a confirmation message, he will be logged into the web. If he forgot his password then needed to click the link and to select the forgot password function.

Re-Design of GPO Access - GPO Access was re-launched with a new and enhanced look and became the agency homepage. This was accomplished as a result of feedback from users, through surveys, usability studies, focus groups, and contacts received through the GPO Access User Support Team.

Taking initiatives for outside co-operation

Initiatives for outside participation to aid in the reorganization process, is prepared for the future, and assume a leadership role in the information industry, the Information Dissemination organization joined or increased participation in a number of significant groups during FY 2003. These included:

- Book Industry Study Group (BISG)
- National Information Standards Organization (NISO)
- Commerce, Energy, NASA, Defense Information Managers Group (CENDI)
- Coalition for Networked Information (CNI)

For planning and coordinating the execution of any new information

In September 2003, the Deputy Public Printer and the IRM Policy Manager signed the GPO PKI policy. GPO signed an historic agreement with the National Archives and Records Administration (NARA) on August 12, 2003, making GPO an official "archival affiliate". Electronic Depository Library Pilot Project - September 1, 2003, and evaluation and documentation by both GPO and the University of Arizona will continue.

On-Demand Inventory – Information Dissemination planned and set in motion an effort to set up a means of utilizing on-demand printing technology to meet dissemination needs without having to produce and maintain costly inventories until the products are actually needed.

Maintaining contacts and relationship with the library, users and general public

GPO is responsible for all aspects carrying out the day-to-day contacts that Documents has with its library partners and various customers.

Managing collections-

Collection Plan" or "Collection Management Plan" refers to the policies, procedures, and systems developed to manage and ensure permanent public access initially to remotely accessible electronic Government information products maintained in the Collection

See Annexure-2

This organization is responsible for the day-today acquisition, bibliographic control, collection management, and dissemination of tangible and electronic Federal information from GPO's information dissemination collections.

A cross-organizational team was charged with arranging assistance for employees in preparing resumes, addressing knowledge, skills and abilities (KSAs), and interviewing skills to successfully apply for positions as GPO reorganizes. The team's initial efforts focused on preparing personnel from the existing Superintendent of Documents

organization prepare for the transition to the functionally aligned Information Dissemination organization. These efforts included conducting an employee survey so that management could address employee questions and concerns, conducting orientation sessions for employees, bringing in an expert to discuss resume building, KSA development, and hosting career development workshops for staff.

GPO Transforming Activities

In addition to the reorganization effort, Information Dissemination played a key role in a number of efforts to transform GPO's information programs to meet the future needs of users and GPO's partners.

FDLP Training and Consultation Pilot Project

A significant amount of collaborative effort took place in FY 2003 between GPO and its library partners to look for ways to transform the inspection process through which GPO works with depositories to ensure that they provide the best possible service to depository users. The regional depository libraries were encouraged to develop proposals for pilot projects to test a new consultation concept to augment the traditional inspection process. GPO established plans to develop locally based "consultants", who would be assigned responsibility for approximately 40 to 60 depository libraries in a geographic area.

They would visit each of those libraries at least once per quarter, some for only a few hours and others for a day or more, depending on the need. They would offer training and attend local, state and regional documents meetings to speak and answer questions. They could assist with self-studies, help train new documents librarians, and advise on problems related to item selection, collection development policies, etc.

Federal Depository Library Program (FDLP) electronic collection, or "Collection", refers to the set of remotely accessed electronic Government information products. **GPO** holds in storage for permanent public **access** through the FDLP, or is held by libraries and other institutions operating in partnership with the FDLP.

U.S. National Commission on Libraries and Information Science

The Commission recommends that the United States Government formally recognize and affirm the concept that public information is a strategic national resource.

RECOMMENDATIONS of the Commission, is in **Annexure: 3**.

It should be emphasized that the foregoing recommendations are just that, recommendations. The Commission believes that implementation of these recommendations will vastly improve the condition of government information dissemination in the United States, but it also recognizes that others have different views. It is up to the President and Congress, as the recipients of this report, to determine whether and to what extent these recommendations should be implemented.

The Commission stands ready to fulfill its statutory obligation to provide advice to the President and Congress in whatever way may be helpful.

United States is most developed country in the world. GPO is stepping towards reducing the paper consumption by adopting information technology. There is an act for this purpose in US. In the past the flood destroyed most valuable paper documents of GPO. India's vision is to become a Geo spatial Democratic Developed Country before

2020. There should be no hesitation to adopt partially as per requirement of our Nation, the U.S. GPO's procedure. We can amend or add the material as needed.

References:

(1) Public Access to Geographic Information

Written by: Albert K. Yeung

Ontario Ministry of Northern Development and Mines, Canada

URL: "<http://www.ncgia.ucsb.edu/giscc/units/u190/u190.html>"

(2) The 7th Biennial Conference 9-14 September 2002, Ankara, Turkey

Theme: Role of the parliamentary libraries in enhancing democracy in the digital age , a country report on India: By R.C. Ahuja, Director, Parliament library India.

(3) U.S. GPO related web sites: gpo.gov/

<http://www.access.gpo.gov/>

<http://fedbbs.access.gpo.gov/dailys.htm>

<http://www.fgdc.gov/NSDI/Nsdi.html>

<http://nsdi.usgs.gov/>

<http://www.gils.net/examples.html>

http://www.access.gpo.gov/su_docs/fdip/bisurvey/03survey.html

<http://www.regulations.gov>

http://www.access.gpo.gov/su_docs/fdip/pubs/proceedings/98pro9.html

http://access.gpo.gov/su_docs/fdip

<http://www.alexandria.ucsb.edu/>

<http://cugir.mannlib.cornell.edu/>

http://www.access.gpo.gov/su_docs/fdip/pubs/adnotes/ad031597.html

http://www.access.gpo.gov/su_docs/fedreg/a020222c.html

<http://www.gpoaccess.gov/help>

<http://www.gpoaccess.gov/cfr/index.html>

http://www.access.gpo.gov/su_docs/fdip/pr/lpstour/

<http://frwebgate.access.gpo.gov/database.lst>

<http://www.lib.umich.edu/govdocs/adnotes/2003/241203/an2412e.htm>

Annexure:

(1) GPO organization chart, which includes LPS under the Superintendent of Documents: <http://www.gpo.gov/aboutgpo/orgchart98.html>

(2) Chart GPO

(3) RECOMMENDATIONS of the U.S. National Commission on Libraries and Information Science

1110 Vermont Avenue, NW, Suite 820, Washington, DC 20005-3552

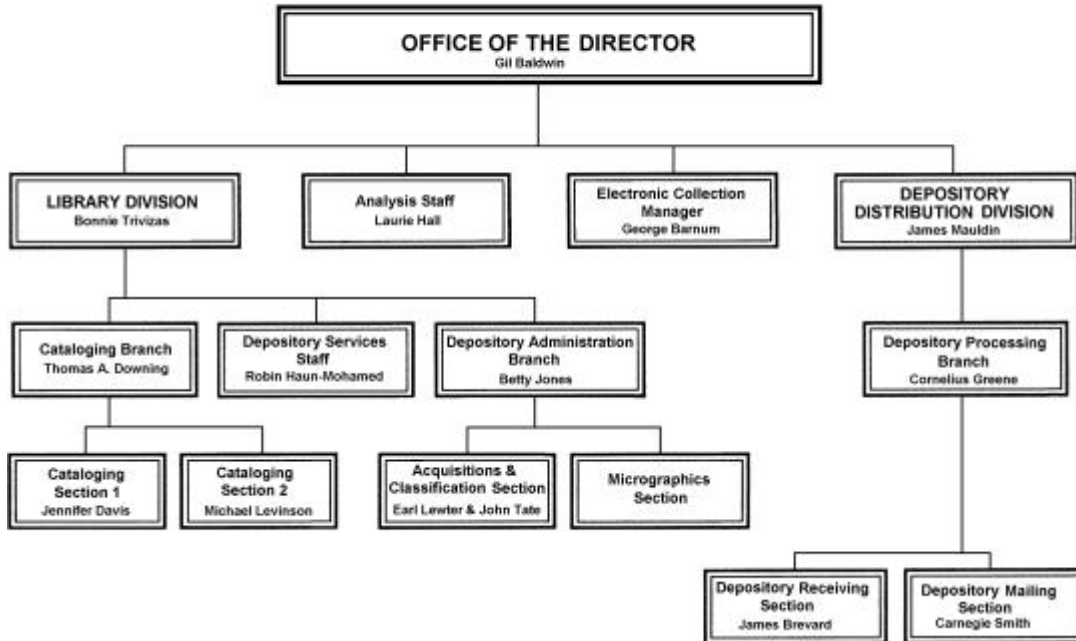
The Commission recommends that the United States Government formally recognize and affirm the concept that public information is a strategic national resource

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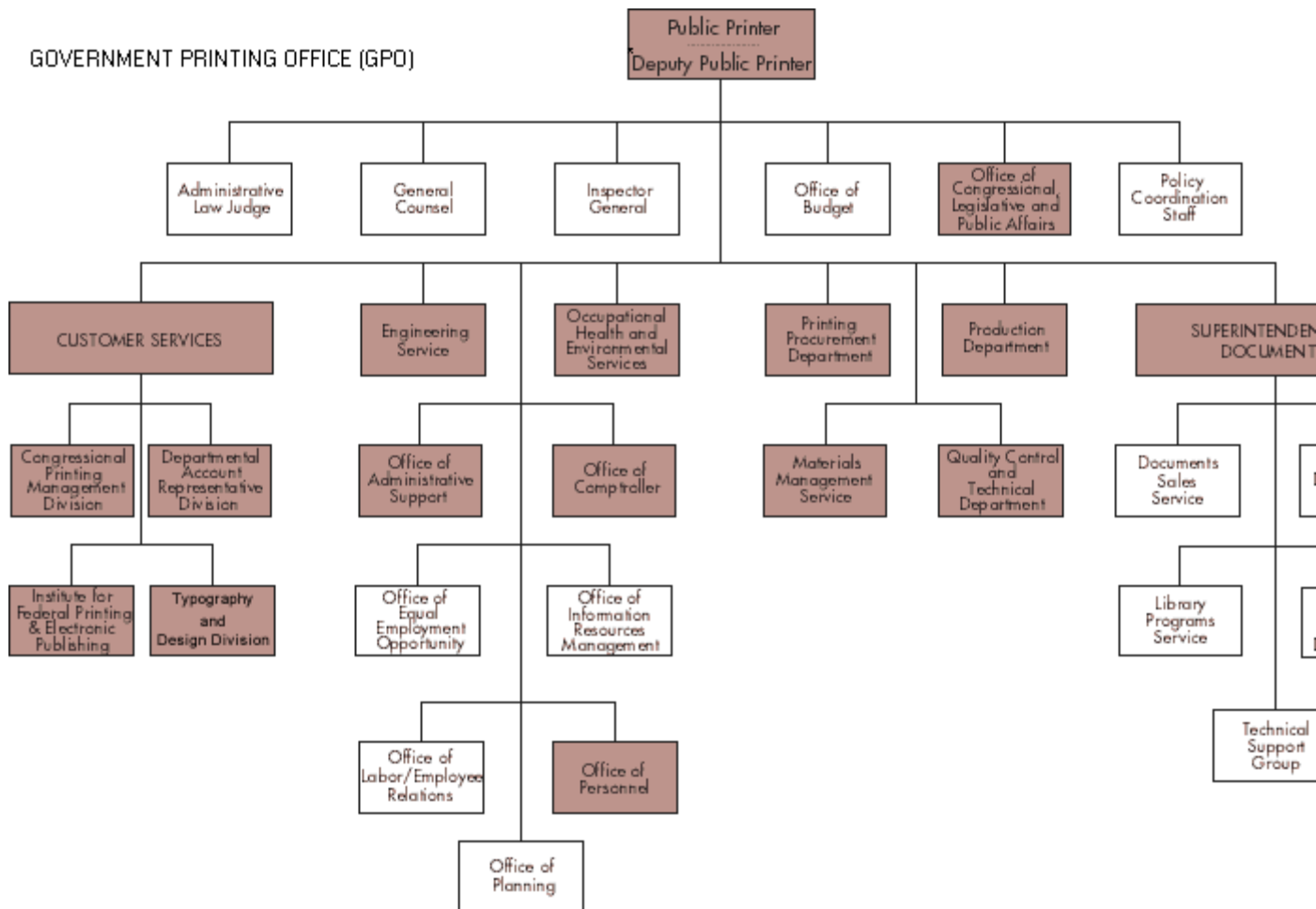
http://www.access.gpo.gov/su_docs/fdip/pubs/fdlm/93fdlm.html

ANNEXURE 1

Library Programs Service



ANNEXURE 2



* OIRM Designated Senior Of

ANNEXURE 3

RECOMMENDATIONS of the U.S. National Commission on Libraries and Information Science

Based on the findings and conclusions, the Commission is setting forth thirty-six recommendations. These recommendations are stated more fully and discussed in the main body of the report. The list that follows is intentionally designed to be a shorthand reference and certainly does not capture the subtlety or complexity that the full recommendation contains.

4 Strategic Recommendations

1. Adopt the national goal that public information is a strategic resource.
2. Establish the Public Information Resources Administration (PIRA).
3. Include broad, explicit public information dissemination authority in all agencies' missions.
4. Implement an Information Dissemination Budget.
5. Enact "The Public Information Resources Reform Act of 2001."
6. Establish the Congressional Information Resources Office (CIRO).
7. Establish the Judicial Information Resources Office (JIRO).
8. Extend key provisions of the Paperwork Reduction Act to the Legislative and Judicial

Branches.

9. Encourage state, local, and tribal governments to adopt comparable policies and programs for their public information resources.
10. Retain, temporarily, the National Technical Information Service (NTIS) in the Commerce Department.
11. Provide funding for the public good functions of NTIS and other comparable information service agencies.
12. Update the NTIS business model.
13. Partner with the private sector, both for-profit and not for-profit, to perform public information dissemination functions.
14. Remove barriers to public information for individuals with disabilities and for other special populations.
15. Coordinate the information dissemination activities among the Legislative, Judicial and Executive Branches.
16. Improve training of librarians and other information professionals to better assist users of public information.

Other Recommendations

17. Implement recommendations regarding NTIS in the Commerce Department.
18. Improve Congressional oversight of public information dissemination laws.
19. Review and harmonize all laws that deal with public information resources.
20. Strengthen cooperative efforts to promote public information sharing.
21. Improve "Government Information Life-Cycle Planning and Management."
22. Modernize current awareness systems for public information.
23. Make consistent federal identifiers for information across all agencies.
24. Harmonize information identifiers at all levels of government—federal, state, local and tribal.
25. Evaluate pre-electronic government information for digital conversion.
26. Develop guidelines regarding the availability of public information by branch and level of government.

A Comprehensive Assessment of Public Information Dissemination

27. Develop a comprehensive inventory and database of public information resources.
28. Specify the metadata by which agencies classify records prior to archival retention or disposal.
29. Partner broadly, in and outside government, to ensure permanent public availability of public information resources.
30. Identify the public's most critical unmet requirements for public information resources.
31. Identify the federal government's most critical requirement for technologies to manage public information resources.
32. Involve the Office of Science and Technology Policy in the effective management of scientific and technical information.
33. Monitor cooperation between PIRA and the National Archives and Records Administration.
34. Require that data elements set forth in the Government Paperwork Elimination Act be reported in XML, and review the impact of this requirement regularly.
35. Ensure the availability of a trained federal workforce with skills in Internet Age technologies.
36. Advance the recommendations of this Assessment report to other nations worldwide.

ANNEXURE 4

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http://www.access.gpo.gov/su_docs/fdlp/pubs/fdlm/93fdlm.html

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