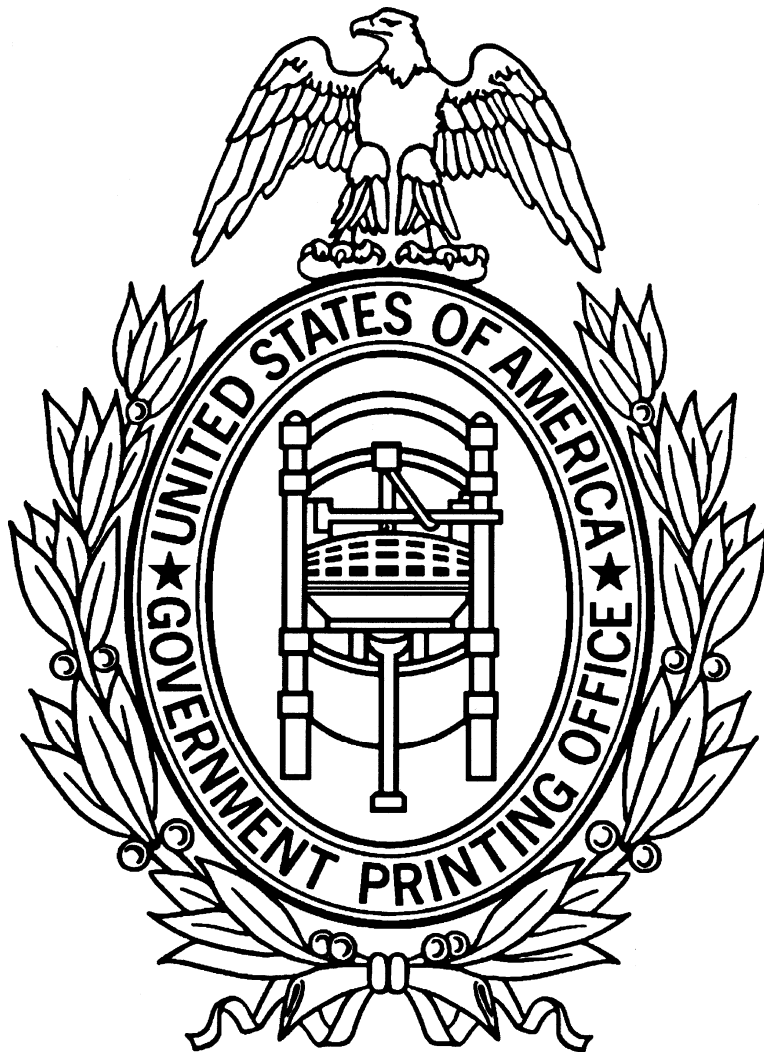


**BIENNIAL REPORT TO CONGRESS
ON THE STATUS OF**

GPO Access

A Service of the U.S. Government Printing Office



**U.S. Government Printing Office
December 31, 1997**

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STATUS REPORT

GPO Access

A Service of the U.S. Government Printing Office

I. Executive Summary

Today's *GPO Access* is a dramatically different service than it was at the time of GPO's last update to Congress. It has grown in size, scope and usage through the addition of new databases, search enhancements, locator applications, and a nationwide series of training sessions and demonstrations. This biennial report highlights these changes, details enhancements and improvements, and describes the service's future.

In accordance with the requirements of Public Law 103-40, the "Government Printing Office Electronic Information Access Enhancement Act of 1993," *GPO Access* was introduced on June 8, 1994 as a combination of subscription services and other services available without charge. Since December 1, 1995, *GPO Access* has offered no-fee public access. Over the 22-month period of January 1996 to October 1997, searches on *GPO Access* increased 1178%, while retrievals of information increased 319%.

GPO Access now includes more than 70 databases and a variety of other electronic Federal information resources. In addition to these official databases, the service provides access to the Federal Bulletin Board, several locator tools for accessing Federal electronic information, and the Sales Product Catalog, which enables users to locate and purchase Government information products available for sale by the Superintendent of Documents.

GPO has also taken responsibility for permanent access to the Government information products provided via *GPO Access*. Steps have been initiated to coordinate permanent public access to Government information products on *GPO Access* servers and through deposits at an electronic storage facility and a distributed networked system of partner institutions.

GPO strives to ensure comprehensive and equitable public access to Federal electronic information available through *GPO Access*. Consequently, *GPO Access* continues to support a wide variety of access methods: from dial-up and telnet to the World Wide Web (Web) interface, gateway libraries, and public access terminals. *GPO Access* reaches people with all levels of technical capabilities. GPO is constantly

improving the *GPO Access* service in response to public needs and user feedback. Focus groups and surveys monitor the usability of the service and pinpoint areas for improvement. Such monitoring has led to a streamlining of the *GPO Access* homepage and secondary pages, as well as numerous database enhancements.

As GPO continues to adopt evolving electronic information dissemination technologies, staff have also educated users about *GPO Access* services. *GPO Access* training classes and "Train-the-Trainer" classes have been provided for Federal depository libraries and library networks across the nation. These classes are in very high demand. The *GPO Access* User Support Team (Team) serves as a point-of-contact with the public, educating users about the many electronic products and services offered by GPO. Users can contact the Team by phone, fax, or e-mail for assistance in searching for and using information available through *GPO Access*. For just the past six months, the Team has averaged almost 6,000 inquiries per month.

GPO's electronic information dissemination and innovative, new electronic applications have provided both benefits and financial savings. The most significant benefit is expanded public access for a much larger audience of users than was previously available through the distribution of paper documents. Because of the many benefits the *GPO Access* service provides in increasing the level of public access to Federal information, *GPO Access* has been recognized by several organizations for outstanding service. The costs of operating *GPO Access* are recovered from the Salaries and Expenses (S&E) appropriation provided to GPO for the Depository Library Program and from reimbursable revenue GPO receives for services it provides to other Federal agencies. *GPO Access* has met the requisites of its original mandate and has become an invaluable resource to the American public which needs a diverse variety of Government information. This has been accomplished at a cost much lower than was originally anticipated in the *GPO Access* legislation.

II. Key Provisions of the *GPO Access* Legislation

Summarized below are the key provisions of the U.S. Government Printing Office Electronic Information Access Enhancement Act of 1993 (Public Law 103-40), which charged the Superintendent of Documents within the Government Printing Office (GPO) to develop mechanisms to enhance public access to a wide range of Federal electronic information products.¹

For purposes of this report, key terms and definitions are included in **Exhibit A**.

1. Electronic Directory, Online Access and Storage Facility

The Superintendent of Documents (SuDocs) is required to (1) maintain an electronic directory of Federal electronic information; (2) provide a system of online access to the *Congressional Record*, the *Federal Register*, and, as determined by the Superintendent of Documents, other appropriate publications distributed by the Superintendent of Documents; and (3) operate an electronic storage facility for Federal electronic information. Collectively these are *GPO Access*.²

2. Departmental Requests

To the extent practicable, the Superintendent of Documents will accommodate requests by department or agency heads to disseminate their information through *GPO Access*.

3. Consultation

The Superintendent of Documents will consult with users of *GPO Access*, and with other providers of information services, to assess the quality and value of these services.

4. Fees

The Superintendent of Documents may charge reasonable fees for use of *GPO*

¹The successful implementation of this law requires the combined resources of several components of the GPO including but not limited to the Office of Superintendent of Documents.

²The Senate Report [103-27] incorporated The Federal Bulletin Board into *GPO Access* as well. A World Wide Web site [<http://www.access.gpo.gov>] was added in October 1994, and significantly expanded in June 1995.

Access services, except that Federal depository libraries will have access at no charge. If fees are charged, they must be set so as to recover the incremental cost of dissemination. Depository library access will be paid from the appropriation provided for the Federal Depository Library Program. All retrievals and downloads from *GPO Access* are without charge to the user. Federal agencies can make information available through *GPO Access*, in which case they reimburse GPO for costs incurred by GPO to convert and periodically update data.

5. Status Report; Biennial Report

By June 30, 1994, the Public Printer shall submit to Congress a report on the status of the *GPO Access* services. The Public Printer must submit to the Congress a biennial report, beginning December 31, 1995, on odd-numbered years. This report shall include a description of the functions of this Act and a statement of cost savings in comparison with traditional forms of information distribution.

6. Operational Deadline

GPO Access shall be operational by June 8, 1994.

III. *GPO Access* Objectives

To implement the legislative mandate, the following objectives have been established for the program. *GPO Access* allows users to locate electronic products available via the Internet and to order Government information products online. The product line includes, beyond congressional information products, many important products from the executive and judicial branches such as the *Federal Register*, the *Code of Federal Regulations*, the *Commerce Business Daily*, and Supreme Court opinions, as well as Government Information Locator Service (GILS) records for a growing number of Federal agencies.

The primary objectives of *GPO Access* are as follows:

- ▶ Improve access to Federal Government information in electronic formats.
- ▶ Provide electronic document delivery and online interactive services that are well-designed, easy to use, and available to the public without charge through the FDLP.
- ▶ Provide access to Government information that is official and complete. GPO secures the integrity of its databases to insure against unauthorized changes in text or graphics.

- ▶ Provide locator tools that assist users in finding Government information.
- ▶ Assure access to a broad spectrum of users with a wide variety of technical capabilities both directly and through an active partnership with Federal depository libraries.
- ▶ Establish and operate an online interactive service that is capable of rapid expansion to meet the needs of Federal agency publishers and public users.
- ▶ Encourage the use of electronic database standards and permit dissemination of the original document, without rekeying, in print and/or electronic format.
- ▶ Utilize a variety of dissemination media and methods, including World Wide Web, bulletin board services and online interactive search and retrieval services in order to achieve cost-effective information delivery that is appropriate to both the type of information being disseminated and the needs of users of that information.
- ▶ Ensure permanent public access of Government information made available through *GPO Access* and the FDLP via direct provision, the electronic storage facility and development of a distributed networked system of partner institutions.
- ▶ Provide services to other Federal agencies on a reimbursable basis, saving time, money, and other resources.

IV. Usage Statistics

The month of October 1997 was a new record for the use of *GPO Access*. Nearly 4 million searches were performed via *GPO Access* and nearly 8.2 million documents retrieved. Searches for January through October 1997 are already 273% higher than for all of 1996, while retrievals have seen a 68% increase since 1996. Over the 22-month period from January 1996 through October 1997, searches on *GPO Access* increased 1178%, while retrievals rose 319%. **[Exhibit B]**

Usage of *GPO Access* has increased dramatically over time. From December 1995 to January 1996, retrievals increased by 36%, with an overall 90% increase in retrievals between November 1995 and January 1996.

Until October 1997, the *Federal Register* consistently had been *GPO Access*' most used database, with the *Code of Federal Regulations (CFR)* and *Commerce Business Daily (CBDNet)* not far behind. In December 1996, document retrievals from the

Federal Register accounted for approximately 58% of *GPO Access* retrievals. Throughout 1997, that proportion has been declining as *CFR* retrievals have increased. In October 1997, the *Code of Federal Regulations* actually surpassed the *Federal Register* as the most popular database: *CFR* retrievals comprised 39% of all *GPO Access* retrievals, while *Federal Register* retrievals comprised 32%. This trend can be expected to continue as GPO continues to add *CFR* titles to the site, with plans of having all *CFR* titles online by the end of 1997, or early 1998. **[EXHIBIT C]**

Since January 1997, retrievals from *CBDNet* have averaged 10.9% of total *GPO Access* retrievals per month, consistently placing it as the second or third most popular *GPO Access* database. For the first eight months the *CBD* was online, retrievals increased each month: in January 1997, the 93,247 retrievals within the *CBD* accounted for 3.3% of all *GPO Access* retrievals. By July of the same year, this figure was up to a high of 17.3%, with 811,923 retrievals.

As part of *GPO Access*' original mandate, GPO was required to provide online access to the *Congressional Record*, in addition to other Federal information. The *Congressional Record* is regularly among the most popular databases. Between January 1996 and October 1997, the *Record* experienced an overall 113.3% increase in retrievals, with 303,242 documents retrieved in October 1997.

V. *GPO Access* Services

1. Government Information Databases

The *GPO Access* service has met the original goals of Public Law 103-40 which required GPO to provide a system of online access to the *Congressional Record*, the *Federal Register* and other publications deemed appropriate by the Superintendent of Documents. The popularity of the *GPO Access* system is partly due to the large number of databases available. In fact, the number of online databases has increased since the introduction of *GPO Access*.

When *GPO Access* services were made available on June 8, 1994, the initial online databases consisted of the *Congressional Record*, the *Federal Register*, the *Congressional Record Index* and *Enrolled Bills*. By September 1995, the available databases had expanded to include *Congressional Bills*, the *History of Bills* from the *Congressional Record Index*, the *United States Code*, *Public Laws*, and *General Accounting Office (GAO) Reports*. As of November 1997, online databases include the *Code of Federal Regulations*, the *Commerce Business Daily (CBDNet)*,

Congressional Directory, *Congressional Calendars*, the *Budget of the United States*

and many more. A list of all of the *GPO Access* databases is provided in **Exhibit D**.

When designing the initial WAIS server applications, GPO identified requirements that this service should:

- ▶ Be capable of meeting the operational deadline stipulated by the law.
- ▶ Where possible, utilize existing equipment in order to minimize costs.
- ▶ Be compatible and work with the Internet as well as be accessible through asynchronous communications (modem and telephone).
- ▶ Satisfy publisher and public requirements that online access to the *Record* and *Register* include the complete publications, with all tables, graphics, and other attributes.
- ▶ Include at least one means of access that is compliant with the Americans With Disabilities Act (Public Law 101-336).

A. *The Congressional Record*

The *Congressional Record (Record)* online via *GPO Access* contains daily issues of the *Congressional Record* from the 103d Congress, 2d Session (Volume 140, 1994) forward. The current year's database is updated by 11:00 a.m. each day the *Record* is published, unless late adjournment delays production of the daily issue. The *Record* from the 104th Congress forward provides access to both ASCII and Adobe Acrobat Portable Document Format (PDF) files. As an added feature, beginning in 1997, Web users have the ability to select the *Daily Digest* of the current issue in either ASCII or PDF format.

B. *The Federal Register*

The *Federal Register* Online via *GPO Access* contains the daily issues of the *Federal Register* beginning with calendar year 1994 (Volume 59) forward. The database is updated by 6:00 a.m. each day the *Register* is published. The text of Notices, Final Rules, Proposed Rules, Presidential Documents, and Executive Orders, as well as the contents and finding aids in the 1994 *Register* are included as ASCII files, with all graphics included as individual scanned-image files in TIFF format. Brief ASCII text summaries of each major entry are also available. These summary files are so popular that GPO has added them as an option in many other *GPO Access* databases.

From calendar year 1995 (Volume 60) forward, the *Register* is also available as PDF files. This allows users with the free Adobe Reader software to display and print the typeset pages of the *Register*, including all graphics. The 1995 database forward also offers users the ability to search by date and/or page number, as well as the ability to limit searches to specific sections of the *Register*. Since 1997 the current issue of the Table of Contents is available for Web users in both text and PDF format.

The Office of the Federal Register has added text to the preliminary pages of the *Federal Register* stating that the online version of the *Federal Register* via *GPO Access* is the OFFICIAL legal equivalent to the paper edition. *GPO Access* is the only such official site for the *Federal Register*.

C. *The Code of Federal Regulations*

The *Code of Federal Regulations (CFR)* online via *GPO Access* was introduced in the fall of 1996 and is now GPO's most popular database. GPO has worked diligently to ensure that *CFR* volumes are added to the online service concurrent with the release of the paper editions. When revised *CFR* volumes are added, the prior editions will remain on *GPO Access* as a historical reference set.

CFR volumes appear online as WAIS databases, accessible through the Web, with WAIS client software, or via telnet or dial-in access. Documents may be retrieved in PDF or ASCII text format. The Web interface presents users with several different options for searching the *CFR*. Users have the option to: "Search the entire set of *CFR* databases by keyword," "Retrieve available *CFR* sections by citation," and "Search your choice of *CFR* titles and/or volumes." If the last option is chosen, a table is provided which lists the subject of each title and allows users to choose either current or historical versions.

2. **Federal Bulletin Board**

The Senate Report on the *GPO Access* legislation incorporated the Federal Bulletin Board (FBB) into *GPO Access*. Since the introduction of *GPO Access* in June 1994, the FBB has undergone major improvements. The most notable improvement came with the introduction of the FBB Web interface in the spring of 1996. This new Web interface is extremely user-friendly as compared to the dial-in and telnet interfaces. However, for those who still wish to access the FBB via these methods, that capability remains.

The FBB enables Federal agencies to provide the public with immediate, self-service

access to Government information in electronic form. It provides a means for on-demand delivery of information that is not suitable for, or not time-sensitive enough to warrant online interactive access, such as a database. As of December 1997, the FBB had approximately 4,700 files representing more than 20 Federal agencies and organizations from all three branches of the Federal Government. During October 1997, more than 24,000 files were downloaded from the FBB. Information from agencies is made available on the FBB in a variety of file formats chosen by the publishing agencies including ASCII text, PDF, WordPerfect and dBase.

3. Locator Tools and Access To Collections of Government Information

Under the *GPO Access* legislation, GPO is required to maintain an electronic directory of Federal electronic information (Locator Service). This locator service has taken several paths since 1994, those paths being: Monthly Catalog of United States Government Publications, Pathway Services and GILS (Government Information Locator Service).

A. Catalog of United States Government Publications

Taking responsibility for a Government-wide locator was a logical extension of GPO's responsibility for publishing the Catalog of United States Government Publications. Title 44 USC 1711 requires GPO to "prepare a catalog of Government publications which shall show the documents printed during the preceding month, where obtainable, and the price."

The Catalog is now available as a daily-updated *GPO Access* database, as well as through a CD-ROM edition of the monthly catalog. This database is now referred to online as the Catalog of United States Government Publications. Users can search for Government information products available in the Federal Depository Library Program and locate a library in their state or area code that has that product in its collection. Hot links are also available to search the Sales Product Catalog if a user wishes to purchase the product.

B. Pathway Services

The *GPO Access* legislation gave GPO responsibility for providing a comprehensive directory/locator of electronic information available from the Federal Government. Consequently, GPO developed an application called Pathway Services.

Pathway services allow users to locate Government information in the following ways:

- ▶ Browse or search a list of Federal agency Internet sites.
- ▶ Browse Government information by topic. (Using SuDocs subject bibliographies to categorize Government Web sites that fall under that particular category.)
- ▶ Browse a list of titles available online by agency. (Titles that were typically part of the FDLP.)
- ▶ Search the Internet using the Pathway Indexer or Federal agency search engines. (Allow users to search the entire Internet for official Government or military web pages related to the search terms entered and locate products available from particular agencies at their sites.)

C. Government Information Locator Service (GILS)

OMB Bulletin 95-01 initiated the creation of a Government Information Locator Service (GILS). GILS is a way to identify, locate, and describe publicly available Federal information resources, including electronic information resources. GILS records identify public information resources within the Federal Government, describe the information available in these resources, and help users in obtaining the information. GILS is a decentralized collection of agency-based information locators using network technology and international standards to direct users to relevant information resources within the Federal Government.

GPO has gone to great lengths to make GILS as user friendly and centralized as possible. These attempts will be discussed in further detail in Case Study 2 within Section VIII of this report.

D. Sales of Government Information Products Through GPO Access

Available through the "Find Products for Sale by GPO" link on the SuDocs Web page, *GPO Access* offers the public several resources for locating and purchasing Government information products.

The Sales Product Catalog database--formerly the Publications Reference File --contains the descriptions, stock numbers, prices, and availability status of Government information products sold by the Superintendent of Documents. The

Catalog, updated daily, offers citations on forthcoming products, as well as notes concerning superseded titles. A variety of Government information products, including pamphlets, books, print and electronic subscriptions, diskettes, and CD-ROMs are all available for sale through *GPO Access*. Users have the option of searching for information by title, stock number, and author in the Sales Product Catalog database. Products that are in stock can be ordered directly from a hypertext link on the search results page.

Customers may also browse lists of products to obtain product descriptions and online order forms. A chronological listing of "New Products and Services Announcements" links customers to press releases describing specific products.

Users can also "Browse Government Information Products for Sale by Topic." By selecting one of approximately 150 broad subject headings called subject bibliographies, customers can locate Government information products about a particular topic. Linking to "Browse a Catalog of Available Subscriptions," provides access to information on paper, microfiche, and electronic subscriptions by both topic and agency listings.

Finally, "Browse a List of CD-ROM's Available for Purchase" offers an alphabetical listing of all CD-ROMs available from the Superintendent of Documents. Each listing provides a product description, system requirements, stock number, price, and order options.

For patrons who wish to visit a U.S. Government Bookstore to purchase Government information products, *GPO Access* also provides maps and the hours of operation for each of the 24 stores nationwide.

Customers can order products directly from *GPO Access* via the Web order form or they can fax, call, or mail their orders to GPO. Ordering via Internet order forms, whether directly submitting orders online or printing out and mailing the online forms, is an increasingly popular and efficient means by which the public can purchase GPO's information products. Between mid-1995 and mid-1997, GPO received 3,455 Internet orders that produced \$78,755 in revenue.

4. Improvements to the Superintendent of Documents World Wide Web Pages

The Superintendent of Documents recently introduced a new *GPO Access* homepage for the Web interface, redesigned to provide users with easier and more efficient access to the online resources. The new homepage is available at the following URL:

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

The *GPO Access* Web pages have been redesigned to be more intuitive to users. Redesign efforts focused on creating a new homepage that provides new users with clear and easy paths for locating the *GPO Access* services they need, while still providing a useful starting point for more experienced users. In addition to the homepage, several new "second level" pages have been developed that allow users to quickly and conveniently access GPO products and services. These pages are available as hot links from the new SuDocs page, with quick jumps to the most popular applications and databases. Sample *GPO Access* pages are provided in **Exhibit E**.

Through the Web, files are available in both ASCII text and PDF formats, and in many cases, specialized search pages are available for databases that contain fields, multiple years or some feature that makes the database unique to search. These specialized search pages allow users to build very specific searches that result in very concentrated and precise lists of search results. Unlike the *GPO Access* customized WinWAIS client, Web users are not required to update their source files as new databases are introduced or as older databases are moved to other servers.

In response to the needs of *GPO Access* users, new features to the Web interface are constantly being added and old applications are being enhanced. The Web interface allows for much more customization than other methods of access. One example of customization is the increasing number of databases that contain lists of documents with hot links to the actual referenced documents. Both the *Congressional Directory* and the *Government Manual* demonstrate this feature.

Pathway services applications have been developed and greatly enhanced to assist users in finding collections of Government information available at Federal Depository Libraries, and general administrative information about the FDLP. Pathway services use advanced indexing, searching and retrieval tools to identify, describe and link users to Federal information. One example of this is the Browse Electronic Titles Page. Browse Electronic Titles provides direct access to individual Government information products located on servers at official Federal agency Web sites. A "What's New" page now provides hypertext links to both current and retrospective products, and the agency index is being expanded to include Government publishers of older titles. Steps have been taken to decrease download time for this page by creating smaller, interrelated files.

5. Federal Agency Web Sites

GPO Access hosts 13 Federal agency Web pages. GPO develops and maintains these sites, and access is offered through direct connection and through links from *GPO Access*. GPO also offers domain name registration services for agencies that

would rather give their site an intuitive and independent uniform resource locator (URL), ie: <www.flra.gov> instead of <www.access.gpo.gov/flra>. GPO staff are working with other agencies who are interested in using GPO's web development services and in hosting through *GPO Access*. **[EXHIBIT F]**

VI. Permanent Access and Storage of the Collection of Government Information Products on *GPO Access*

Traditionally, FDLP Regional depository libraries have provided the means for permanent access to relatively complete collections of Government information products dispersed throughout the country.³ The *GPO Access* legislation addressed the issue of storage or permanent access to electronic Government information products as one of its major provisions, by mandating an electronic storage facility. The fundamental purpose of the storage facility was "to provide a facility for storage of electronic information made available on the system of access by the Superintendent of Documents." (House Report 103-108, p. 171)

At the time of our last status update report to Congress, GPO had addressed the goal of operating an electronic storage facility for Federal electronic information. The most visible accomplishments relative to that goal are the production and maintenance of the online *Congressional Record* and *Federal Register*, and the establishment of a remote online computer information facility at Owensboro, Kentucky. Current editions of these and other *GPO Access* databases are located in the GPO's main facility in Washington, D.C.. Earlier editions of major *GPO Access* databases, such as the *Record* and *Register*, are migrated to GPO's remote site for permanent public access. **[Exhibit G]** Additionally, storage of selected Federal agency electronic information products are provided as a service to agencies on GPO's Federal Bulletin Board (FBB).

By establishing these and other *GPO Access* databases, GPO has in effect taken responsibility for permanent access to the Government information products residing on *GPO Access* servers. GPO also has initiated steps to coordinate permanent public access to Government information products through a distributed networked system of partner institutions. This distributed system provides users with an opportunity to locate and use Government information products from multiple sources or providers, rather than from a single source or location.

Planning for this type of storage is being accomplished through the development of an FDLP Electronic Collection Plan. The Plan will provide a policy framework through

³Permanent access is required by 44 U.S.C. §1911.

which the collection of products is developed and maintained, and defines the near-term parameters and requirements for the electronic products and services that constitute the Collection.

The Collection will consist of core legislative and regulatory *GPO Access* products that will reside permanently on GPO servers, and additional products either maintained by GPO or other institutions. Parts of the Collection, other than core legislative and regulatory *GPO Access* products, may be maintained at the remote storage site and partner institutions, including depository libraries, consortia, or other institutions. For example, GPO, the U.S. State Department, and the University of Illinois-Chicago (UIC) recently agreed to insure permanent storage and accessibility to the electronic Government information products in the Department of State Foreign Affairs Network (DOSFAN) through UIC. This and other similar types of arrangements serve to promote recognition among Federal agencies that GPO is dedicated to ensuring permanent access to Government electronic information products, regardless of whether those products are held on GPO servers, the remote site, or by an institution with which GPO has a partnership agreement.

VII. User Access and Retrieval

1. Supported Methods of Access

User access and retrieval of Government information products made available through *GPO Access* is in accordance with the principle that the public has a right to access Government information that has been prepared and published at public expense. One of GPO's continuous goals for the *GPO Access* service has been to assure that access to and retrieval of Government information products is available to a broad spectrum of users possessing a wide range of technical capabilities. Consequently, *GPO Access* can be reached in a variety of ways. The Web has quickly become the most popular method of accessing *GPO Access*. However, direct dial-up access is available to those without Internet access or who need to use assistive technologies. Telnet and WAIS client access are available to persons who do not have access to the Web.

2. Public Access Terminals

GPO Access users can access and retrieve Government information products through public access workstations available at Federal depository libraries. This is a critical role for libraries, assisting users who may not have access to a computer elsewhere.

There are nearly 1,400 Federal depository libraries located throughout the country, one in almost every Congressional district as well as in U.S. territories and possessions. These libraries play an important role as information intermediaries that can help the public use *GPO Access* to find information. All depositories are expected to offer users access to workstations with a graphical user interface, CD-ROM capability, Internet connections, and the ability to access Government information via the Web.

3. Gateways

Federal Depository Library Gateways continue to provide remote off-site public access to *GPO Access*. Through the Gateway program, Federal depository libraries facilitate public access without charge by offering off-site access to *GPO Access* through their own computer systems or those of partner networks in their local areas. Users connect to the depository library gateway host, which in turn establishes a transparent connection to the *GPO Access* service.

The implementation of the Gateway Program has proven to be an effective model in providing access to Government information at the local level. Local depository libraries sponsor the program and assist in supporting its users, who can dial a local number in their area to connect to *GPO Access*. Although Gateways are no longer necessary to gain access without charge to the *GPO Access* service, many users still find them to be a viable alternative to directly connecting to the *GPO Access* service. Most Gateways provide users with different types of interfaces, helpful hints, and other customized options designed to meet the needs of their local patrons.

Currently, more than 40 Federal depository libraries in 31 states and the District of Columbia serve as Gateways and offer *GPO Access* through the Web, WAIS, or SWAIS connections. Each Gateway has selected methods of access that support the majority of its patrons, as well as its technological level. **[Exhibit H]**

VIII. Improving Public Access to Government Information Through *GPO Access*

Easy access and user friendliness are two of the driving forces behind GPO's continual improvements to the *GPO Access* service. Two applications exemplify these efforts at creating improved access: *CBDNet* and *GILS*.

1. Case Study: *CBDNet*

The project to revolutionize the *Commerce Business Daily (CBD)* began with the

transfer of responsibility for the *CBD* from one program area to another within the Department of Commerce (Commerce). This new program area, the Office of Acquisition Management, developed a vision for a new *CBD* that worked better, cost less, and expanded the availability of the procurement information that *CBD* contains. The vision focused on utilizing new information technology and the Internet to accomplish their goals.

A call went out for proposals to satisfy the new vision for *CBD*. Proposals designed to fulfill the vision were received from 14 private sector and two Government organizations. Commerce carefully analyzed the proposals and built a business case for choosing the optimal organization. This analysis revealed that the proposal from GPO was superior in all areas.

The GPO proposal provided for improvements in every phase of the *CBD* process [EXHIBIT I]. It accomplished this while lowering the cost for an agency to place a notice in *CBD* from \$18 to \$5, a savings of over 70%, as well as making official notices freely available on the Internet in real time.

Commerce and GPO entered into a strategic alliance to implement the GPO proposal on August 27, 1996. Work on this collaborative effort began in earnest and the new system, known as *CBDNet*, officially went live in January 1997. *CBDNet* was an immediate success and use of the new capabilities it provides has grown steadily. In October 1997 nearly 600,000 notices were downloaded by the public.

Through *CBDNet* agency contracting offices are able to submit notices electronically to the *CBD*. These contracting offices receive immediate, electronic feedback on the status of their notice; whether it is accepted or rejected. If rejected, any errors are highlighted for correction and re-submission. If accepted, the submitter receives a submission acceptance number including the date and time of acceptance, along with the text of the submitted notice. That submission acceptance number can then be used to search the *CBD* database for that particular notice.

Two *CBD* databases are maintained at GPO. The first database is the Active *CBD* database, which contains the most current *CBD* notices available for searching and browsing. Notices remain in this database for 15 business days, then are migrated to a second database, the Archived *CBD* database. Notices will remain in the Archived *CBD* database indefinitely from December 2, 1996 forward. Users have the option to search either or both of these databases.

Notices submitted electronically are available sometimes as quickly as within two minutes of being accepted, but always within an hour. However, these notices will not appear in the print version for approximately two business days. *CBDNet* also allows users of the *CBD* to either search the database or browse a list of active *CBD* notices according to classification code.

These processes are fully supported by the *GPO Access* User Support Team, which is available to assist users; from submitting a notice, to searching or browsing the database. The Team is reachable via a toll-free phone number, e-mail or fax. Online submission and searching instructions are also available in a variety of formats.

Until *CBDNet* was created, the only official access to this information was through a paid subscription to the printed version of *CBD*, or through free reference use of the printed copies distributed to Federal depository libraries. There was no official electronic access to *CBD*, although many private vendors purchased *CBD* data and created value-added products, which they made available for a fee.

The official online *CBD* database through *GPO Access* allows timely electronic access without charge for all users. It can be accessed through the Web, by using a WAIS client, or through a modem with dial-up capability. Access is even available to users who do not have a computer or Internet connectivity, through public access workstations at Federal depository libraries.

Improved Service

Because notices appear in the *CBD* database as soon as they have been validated by the system, the business community and the public have real-time access to procurement opportunities being advertised by Federal agencies. Once validated, a notice will generally appear in the printed issue dated two days after it has appeared in the database. Add in the time that a printed copy would spend in the mail and it is easy to see that the online database shortens the time between when an agency posts an opportunity and when a business begins work on a bid. Consequently, Commerce and the Office of Management and Budget (OMB) are considering shortening the mandatory advertisement time for a notice from 15 to 5 days, which will shorten the Government procurement process.

CBDNet has even afforded improvements for private sector companies who purchase *CBD* data and create value-added *CBD* products. The new system provides these data subscribers with the daily issue datafeed much faster than before, in an enhanced format, and at a 20% reduction in cost.

Service and system improvements are apparent throughout *CBDNet*. They are measurable through financial savings, improved and more timely access to information, the increased usage of electronic submissions and an increase in database document retrievals. The financial savings through *CBDNet* are most obvious when considering the reduced cost for the electronic submission of notices. Between the months of December 1996 and July 1997 a projected \$829,010 will be saved based on reduced submission costs.

The speed at which notices are available in the database is another obvious service

improvement. Previously, *CBD* subscribers had to wait for the print product to arrive to take advantage of procurement opportunities. Now they can access the information immediately rather than wait for the printed issue to arrive in the mail. This more timely access shortens the time required by an agency to procure important products and services and allows businesses to begin work on an opportunity when it is released by the issuing agency.

The popularity of *CBDNet* is most apparent through the heavy use of the database and in the increasing number of electronic notice submissions. Just two months after *CBDNet* went live, approximately 220,000 notices were retrieved. Two months later that number jumped to almost 500,000. *CBDNet* now stands as one of the most popular of the more than 70 databases available through *GPO Access*, just behind the *Federal Register* and the *Code of Federal Regulations*.

More and more agencies are realizing the financial advantage of directly submitting notices electronically and are abandoning the traditional manuscript method. In its first month *CBDNet* received 82% of notice submissions electronically. By April 1997 that percentage rose to over 93%. As more agencies gain access to the Internet and realize the cost savings of online transactions, the number of electronic submissions is expected to increase even more.

Current Technology

GPO took advantage of the increased versatility of the Internet and the Web as well as its own experience with typesetting and composition to develop *CBDNet*. From the creation of a notice by an agency contracting office, to the creation of a database and the file used to create the printed copy of the *CBD*, to billing agencies for notice submissions; all stages are handled programmatically through GPO systems.

Internet technology allowed for the electronic submission of notices, both via e-mail and the Web, as well as for the electronic validation of the notice. Many features on the *CBDNet* Web site utilize the newest Web technology. Script programs allow for the secure submission of notices by only qualified Government contracting officials. The notices are validated without human intervention and feedback is automatically provided electronically to the submitter.

Web technology allows users to select from a variety of options to locate and retrieve notices available in hypertext mark-up language (HTML) format which contain links to related Web sites and e-mail links to the contracting official. Creating these links is accomplished using the data submitted by the contracting officials themselves. Programs and systems utilize this data to facilitate all facets of the *CBD* process. This includes submission, validation, inclusion in the database, typesetting and composition, printing, datafeeds to subscribing value-added providers, and billing. Because the same files are used to create the paper *CBD* issue, the online *CBD* via

GPO Access is considered the official and legal equivalent to the paper copy.

The creation of *CBDNet* was a lesson in cooperation not only between two agencies, but also within GPO itself. Many departments came together, using their expertise to create this innovative, automated system. Along with other examples of similar service, the success of *CBDNet* is used as a case study to promote the broad scope of skills and services that GPO has to offer agencies in helping them reinvent their processes and programs.

2. Case Study: GILS

Following standards set forth in OMB Bulletin 95-01 and the National Archives and Records Administration (NARA), in January 1996 the Government Printing Office implemented its Government Information Locator Service (GILS) online via *GPO Access*. Not only did GPO build its own GILS application, but also assisted other Federal agencies in fulfilling their GILS requirements by hosting their GILS records on *GPO Access*. In fact, the Small Agency Council on GILS recommended that its members take advantage of *GPO Access* to make their GILS records available to the public.

As mandated by OMB, Federal agencies are required to create electronic records, or GILS records, to identify public information resources within the Federal Government, describe the information available in these resources, and assist the public in obtaining the information. Thus, GILS is a decentralized collection of agency-based information locators using network technology and international standards to direct users to relevant information resources within the Federal Government.

Because this collection is decentralized, GPO is attempting to provide a point of access, or link to, all U.S. Federal GILS databases. In developing its GILS application, GPO laid the groundwork for assisting other agencies in fulfilling their GILS responsibilities. Nearly 30 Federal agencies have mounted their GILS records on the *GPO Access* server. These agencies are listed individually in the scroll box located on the GILS search page. **[Exhibit J]**

GPO created a series of GILS records, called Pathway Records, describing the information of cabinet-level and major independent Federal agencies. Pathway records are designed to assist depository libraries and their users in locating and accessing Federal information. Agencies that have mounted their GILS records on a server other than *GPO Access* have been asked to provide a GILS Pointer Record, describing their GILS holdings and containing links to those holdings.

As an improvement in its services, GPO has recently added a new option for

searching GILS records that brings a more centralized nature to a decentralized system. Users are now able to search all known compliant Federal GILS sites from the *GPO Access* GILS site. All results are returned and listed comprehensively on *GPO Access*. Another recent improvement to the *GPO Access* GILS site is the option to browse GILS records by agency. This allows users to browse a list of agency GILS records housed on *GPO Access*, and access the records directly from the list eliminating the need for a search.

The GILS application online via *GPO Access* is accessible to users with both high and low-end equipment, making the benefits of GILS available to everyone. Future plans for GILS include providing HTML records, where possible, for all agency records housed on *GPO Access*, as well as the option to look at a shorter, more concise GILS record.

GPO has taken GILS far beyond its initial basic requirements to provide user-friendly, comprehensive access for the public. GILS development continues, and GPO is committed to continuing to improve the usefulness of this valuable information resource.

IX. Measures of Effectiveness Through Consultation

Many improvements that have been made to the *GPO Access* service in the past two years are in response to feedback GPO received when assisting users, and from focus group sessions and user surveys. These mechanisms, used together with comments about our service that were sent directly to the *GPO Access* User Support Team, have proven to be very effective methods for monitoring user requirements and gathering information used for improving the *GPO Access* service.

1. Focus Groups

Beginning in 1997, GPO started conducting regular focus group sessions on the *GPO Access* service. Focus groups have been held at several Federal depository library conferences, as well as at GPO. These sessions were in-depth roundtable discussions that examined how customers make use of the *GPO Access* service, as well as the degree of ease or difficulty experienced in finding information. Participants in these sessions included Congressional staff, Federal depository librarians, members of trade and professional organizations, and private sector representatives. These individuals, representing a broad cross-section of the American public, shared candid insights that have proven invaluable in revising the *GPO Access* Web pages and improving the service.

2. User Survey Results

GPO recently conducted two separate *GPO Access* User Surveys. The first survey was directed to all Federal depository libraries. The second survey, which began in November 1997, was made available on the *GPO Access* Web site for all users to complete. Both surveys were used to collect information about several critical areas of the *GPO Access* service, including functionality and user support.

The final results of the first survey of depository libraries suggest that *GPO Access* received its strongest positive ratings for providing users with the information that they were looking for (87%) and the timeliness of that information (98%). Additionally, 81% of respondents stated that they had contacted the *GPO Access* User Support Team. Ratings for *GPO Access* user support, particularly about product knowledge (95%); providing timely/accurate responses (82%); and complaint resolution (81%) were also favorable. The second survey is being conducted as of this report. GPO plans to continue surveys of the *GPO Access* service on a regular basis.

X. ***GPO Access* Training and Demonstrations**

With the transition to the electronic dissemination of information, the need to educate users about the many services offered through *GPO Access* has continued to expand. GPO's Office of Electronic Information Dissemination Services (EIDS) works with Library Programs Service (LPS) to provide that education. Demonstrations of GPO's electronic services are given at national and regional library conferences and hands-on *GPO Access* training classes are conducted nationwide for Federal depository librarians. This summer, "Train-the-Trainer" courses were added to increase the audience reached by utilizing the talents of individuals outside of GPO.

Demonstrations, usually conducted at Government agencies, at GPO and at conferences, provide an overview of the *GPO Access* service while showcasing the major components of the site. Training classes are one-day, 8-hour sessions that cover the background of *GPO Access* and its components, as well as database search strategies. The classes demonstrate the utility, ease, and efficiency of *GPO Access* to depository librarians, to assist them in locating Federal information for their patrons.

Train-the-Trainer classes were introduced in the summer of 1997. These intensive two-day classes involve teaching techniques for conducting *GPO Access* classes. In this way, the training efforts of GPO can be further distributed and reach more people. Students in the Train-the-Trainer class receive a more in-depth training class with additional information on teaching strategies and technical background.

GPO continues to receive many requests for *GPO Access* training from depository libraries and other interested groups. There were approximately 20-25 requests for training and demonstrations last year; this figure is expected to increase in 1998. EIDS averages approximately twelve training trips per year across the nation, often combining multiple classes in different locations during one trip. The aim has been to cover the widest possible geographic area to support comprehensive public access to Federal information.

XI. User Support

The *GPO Access* User Support Team provides technical support and assistance to users. Users can contact the Team via toll-free telephone, fax, or e-mail. Every page on *GPO Access* contains these numbers as well as a direct e-mail link to the Team. Immediate telephone assistance is provided Monday through Friday, 7:00 a.m. to 5:00 p.m. EST, except Federal holidays. E-mail inquiries are answered within 24 business hours of receipt. Team members provide assistance in searching and locating information in *GPO Access* databases, answer inquiries about GPO's electronic products, and offer technical support for these products. With their knowledge of the Government information and products on *GPO Access*, these specialists are also valuable resources to users who may not know where to start a search for particular topics.

Generally, inquiries follow the trend of *GPO Access* user sessions, displaying monthly anomalies and seasonal variations in the number of inquiries the Team receives. For the latter part of 1997, however, a trend regarding phone versus e-mail inquiries is emerging. While the instantaneous assistance provided by a phone call makes phone inquiries more popular than e-mail, we have seen a disproportionate increase in e-mail messages relative to the increase in phone calls for the past several months. For example, between September and October 1997, user sessions for *GPO Access* increased 6.2%. Phone calls increased 9.2%, while e-mail inquiries rose 22.5%. If this trend continues, it could be an indication that users are becoming more experienced with *GPO Access* and require less "urgent" help, choosing rather to send their questions by e-mail.

Since March 1997, the User Support Team has averaged 5,912 inquiries per month, with an average of 4,073 phone calls and 1,839 e-mail messages, as demonstrated in **Exhibit K**.

XII. Future Plans - SGML and OpenText

GPO continues its efforts toward "Phase II" of *GPO Access*. Phase II is an enhanced online interactive service that will use standardized data structures to provide greatly enhanced search and retrieval capabilities.

Standard Generalized Markup Language (SGML) was selected as the appropriate means to accomplish the above stated capabilities. The use of SGML offers a greater potential for savings throughout the Federal sector, than methods presently employed. The SGML structure can begin at the authoring level and remain usable throughout the publishing processes, whether for electronic or traditional print format.

The SGML-based build/search/retrieval software system, purchased from Open Text Corporation, was delivered to GPO on February 5, 1996. The first prototype database expected to be offered using SGML and the Open Text software will be volume one of the permanent (usually referred to as the bound) *Congressional Record* for the 105th Congress. Documents are expected to be made available in four formats: SGML, HTML, PDF, and the KWIC (Key Word in Context). The prototype is expected to be presented for widespread evaluation/comment in March 1998.

In addition to providing a greatly enhanced search and retrieval capability, the SGML database structure will permit:

- ▶ The creation of databases at the authoring stage that are suitable for publication via conventional printing methods, online interactive access and CD-ROMs, without the need for GPO to manipulate the data to produce one product or the other, and with the online CD-ROM versions capable of employing the same user interface. In other words, it allows the same information to be extracted, re-ordered, and merged from structured databases.
- ▶ Incorporation of data from one publication into another with different printed formats (such as Bills into the *Congressional Record* or *Federal Register* documents into the *Code of Federal Regulations*) without manipulation.
- ▶ Publishing customers to submit validated machine-readable data.
- ▶ Automated composition (print on demand) of data extracted from electronically disseminated databases in the same format as the "official" printed publication, or in a variety of format(s) chosen by the user.

XIII. Development Expenditures and Operating Costs

The *GPO Access* system is much more efficient than originally expected, and as a result, has been less costly than originally estimated by the Congressional Budget Office. In 1993, the Congressional Budget Office estimated that creating and operating the on-line computer system that subsequently became *GPO Access* would cost about \$6 million in appropriated funds over the next five years. In addition, it was expected that provisions allowing depository libraries free access to the on-line system could cost between \$2 million and \$10 million per year, assuming appropriation of the necessary amounts.⁴ It was anticipated that starting in FY 1995, GPO would incur costs of \$750,000 annually to keep the directory of publications up to date and to maintain the electronic storage facility.

Capital expenditures for equipment and software for *GPO Access* amounted to \$85,700 in FY 1996 and \$273,900 in FY 1997. The \$273,900 in FY 1997 includes the start-up costs for the *Commerce Business Daily* online, *CBDNet*, which comprised \$101,500 or 37% of the total for the year. The Department of Commerce fully reimbursed GPO for the capital expenditures for *CBDNet*. Operating costs for *GPO Access*, which were recovered from the Salaries and Expenses (S&E) appropriation were \$1,736,328 in FY 1996 and \$2,475,420 in FY 1997.

In addition, GPO provides information through *GPO Access* dissemination services for other agencies on a reimbursable basis. For example, GPO operated *CBDNet* for the Commerce Department which generated revenue of \$761,000 for GPO. GPO, at the request of agencies, develops and maintains Web sites for agency use on *GPO Access*. Costs incurred are fully reimbursed by the ordering agency.

Capital expenditures for equipment and software for *GPO Access* amounted to \$133,100 in FY 1994 and \$171,500 in FY 1995. In addition, there was a one time expense of \$380,000 in FY 1994 for the Prototype Locator Contract. Total GPO operating expenditures for FY 1994 were \$563,600 and for FY 1995 were \$1,222,700. Publishing agencies incurred additional expenses in developing databases for the online services and participating in the Locator Service.

⁴"Government Printing Office Electronic Information Access Enhancement Act of 1993" (H.R. 103-108), p.2.

XIV. GPO Access Benefits and Savings from Dissemination of Electronic Information

The dissemination of electronic information through *GPO Access* has provided both tangible and intangible benefits, as well as real cost savings for the GPO. While it is not possible to calculate these benefits and savings for all of our products, *CBDNet* presents an example of this trend.

CBDNet has provided cost savings both to the public and throughout the Government. When the *Commerce Business Daily* was distributed only in paper, it cost \$2.2 million a year, and distribution was limited to those individuals who could afford a subscription. Prior to *CBDNet*, agencies paid \$18 per notice submitted to CBD. Now agencies who submit notices electronically are only charged \$5 per notice. It is estimated that this electronic submission option is saving the Government, on average, over \$130,000 per month, or over \$1.5 million per year. These financial savings and the many other benefits mentioned previously have made *CBDNet* a huge success.

GPO Access has created new avenues for timely access to Government information products, and has also expanded public access to a much broader audience of users than was previously available through the distribution of paper documents. As noted earlier, GPO has recurring operating costs associated with providing permanent public access to information through *GPO Access*. However, *GPO Access* information services now include not only products available on internal servers, but also electronic information resources on other Federal agency sites that are linked at no cost. Additionally, GPO has entered into a number of partnerships with other organizations that provide permanent access to Government information products through *GPO Access*, thus reducing direct costs incurred by GPO.

It is expected that in the future, as the Government moves toward the adoption of format standards for electronic information, costs will continue to be minimized. To assess the current situation, GPO recently signed an Interagency Agreement with the National Commission on Libraries and Information Science (NCLIS) to survey Federal agency practices and plans for electronic medium and format standards.

XV. Recognition of GPO Access

GPO Access, as well as several of its databases and services, has been recognized by a number of different organizations over the past two years.

In 1996, *GPO Access* was named Best Government Site by "legal.online", a monthly

newsletter for legal professionals using the Internet. Additionally, The WebCrawler Select Editorial Team chose the *Code of Federal Regulations* available through *GPO Access* as an "Outstanding Web Site." Also in 1996, Harcourt Brace Professional Publishing selected the *GPO Access* GILS site as one of its Top Five Web Sites for the week of October 28 through November 3.

In 1997, *GPO Access* was chosen as a select site by the editors of the Dow Jones Business Directory. The Web site has been included in the National Research Foundation's (NRF) Small Business Innovative Research (SBIR) Internet Resources Catalog. The *Weekly Compilation of Presidential Documents* available on *GPO Access* was recently chosen as a selection for the Scout Report for Social Sciences. GPO received an Affirm Leadership Award for creating a single point of entry or access to all components of the Government Information Locator Service (GILS).

The National Performance Review (NPR), under the leadership of Vice President Al Gore, presented GPO's CBDNet Team with a Hammer Award for its effort in creating CBDNet, and making the *Commerce Business Daily (CBD)* available free of charge to the public via *GPO Access*.

List of Exhibits

Exhibit A: Key Terms and Definitions

Exhibit B: Total *GPO Access* Retrievals--January 1996-October 1997

Exhibit C: *Code of Federal Regulations* Retrievals-- October 1996-October 1997

Exhibit D: Cumulative Listing of Databases Online Via *GPO Access*

Exhibit E: Sample Screens of New *GPO Access* Web Pages

Exhibit F: Federal Agency Web Sites Hosted By *GPO Access*

Exhibit G: *GPO Access* Databases in Owensboro, Kentucky

Exhibit H: Federal Depository Library Gateways

Exhibit I: *CBDNet*: GPO Produces Award-Winning Internet Service For Commerce Department (Press Release, April 7, 1997)

Exhibit J: Individual Agency GILS Records Mounted on *GPO Access* Servers

Exhibit K: *GPO Access* User Support Team Inquiries, March-October 1997

Exhibit L: *GPO Access* Operating System