BIENNIAL REPORT TO CONGRESS ON THE STATUS OF GPO Access



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EXECUTIVE SUMMARY

In the past two years, *GPO Access* has remained one of the leading online sources of free, official Government information and the only such system mandated by law. Its publicly available resources, covering all three branches of Government, have grown to encompass more than 1,300 databases through over 80 applications, including the popular *Congressional Record, Federal Register*, and *Code of Federal Regulations*. As of November 1999, the Web site provided access to more than 104,000 titles on Government Printing Office (GPO) servers and over 62,000 additional titles through links to other Federal agency Web sites. Due to its efficiency, the cost of the entire *GPO Access* operation has been much lower than originally estimated.

GPO's success in disseminating electronic Government information can be measured in part by the number of document retrievals made by satisfied users. Recent statistics indicate that *GPO Access* fulfills approximately 21 million document retrievals per month—with a total of more than 228 million retrievals during fiscal year 1999 alone. Complementing these figures is the praise extended for the level of service and scope of information on *GPO Access*. GPO's Web site has been applauded by Vice President Al Gore, U.S. Representative Steny Hoyer, the Center for Democracy and Technology, OMB Watch, and *Government Executive* magazine. Among the formal commendations it has received are the American Association of Law Libraries' first annual Public Access to Government Information Award in 1999 and the Hammer Award on behalf of Vice President Gore and the National Partnership for Reinventing Government, also in 1999.

GPO's constant efforts to improve and refine its online products and services have yielded abundant accomplishments. To further the mandates of Public Law 103-40, GPO has redesigned and reorganized *GPO Access*, developed a plan for permanent public access, added new applications and publications, improved document searches and retrievals, facilitated its indexing by Internet search engines and directories, and introduced the Online Bookstore, a site-search capability, a privacy and security notice, kids' pages, a help page, and exit pages. It has also made system enhancements to handle Web site traffic more quickly and efficiently.

In order to achieve its mission and the broader goals of Government, GPO has established partnerships with other Federal agencies and educational institutions to save time, money, and resources. These partnerships provide effective, inexpensive methods of disseminating information, while eliminating duplicative efforts. Internet-related services that GPO performs on a reimbursable basis include hosting 15 agency Web sites and over 30 agencies' databases of Government Information Locator Service records. A partnership with the Department of Energy has been one of the most productive agreements, resulting in the provision of two new scientific information applications.

EXECUTIVE SUMMARY

The user community is also an integral part of *GPO Access*. GPO educates users about the products and services offered on *GPO Access* through three primary means: training classes, demonstrations at conferences and trade shows, and the *GPO Access* User Support Team. In FY 1999, GPO staff conducted approximately 30 hands-on classes and demonstrations for Federal depository librarians, members of Congress, professional organizations, various other groups, and the public, both in Washington, D.C., and across the country. The User Support Team responded to an average of 6,500 inquiries per month, including approximately 4,350 phone calls and 2,150 e-mail messages.

Many of the improvements that have been made to *GPO Access* are in response to feedback GPO has received through various channels. On a daily basis, GPO monitors users' feedback about *GPO Access* from telephone calls, e-mail messages, faxes, and letters, which are directed primarily to the User Support Team. GPO also uses more formal means of soliciting comments and evaluations, such as user surveys and focus groups. Preliminary results from the most recent online user survey show that 35% of respondents use *GPO Access* at least once a week, 58% consider it to be "very easy" or "easy" to find information on the Web site, and well over three-quarters rate the timeliness of information, online user aids, and Web site organization "excellent" or "good."

GPO is continually enhancing *GPO Access*. Included in its future outlook are plans for standardizing all of the site's Web pages, integrating the sales applications, supplementing training efforts with an interactive CD-ROM and an on-site learning facility, activating a new order processing and inventory management application, and transitioning to SGML and Open Text software for certain applications. GPO's innovations and expertise in electronic information dissemination will ensure that *GPO Access* continues to be a leader of and model for Government information services.

OVERVIEW OF GPO Access

Public access to Government information has been transformed by an innovative information technology service called *GPO Access*. Established by Public Law 103-40, the Government Printing Office Electronic Information Access Enhancement Act of 1993, *GPO Access* offers free electronic access to information from all three branches of the Federal Government.

GPO Access allows people worldwide to access Government information products electronically and to use those products without restriction, unless otherwise noted. It provides access to more than 1,300 databases through over 80 applications, such as the Federal Register and the Congressional Record. More than 104,000 titles are housed on GPO Access servers, and links are provided to over 62,000 additional titles from other agency Web sites. Many electronic documents appear on the day of publication, exactly as they appear in print, and are the official published version. The immediacy of electronic publishing allows for pre-print updates to existing databases and the provision of products that lack a print equivalent.

GPO Access has been carefully designed, developed, and implemented so that it is easy to access and use. Numerous search tools locate Government information products by topic, title, agency, or keyword within one database or across multiple databases. Links direct users to related databases in order to facilitate their searches and to highlight connections among information products. An electronic ordering mechanism allows for the secure online purchase of print and electronic products. GPO constantly monitors user feedback and responds by making improvements to its services, developing more user-friendly interfaces and features to assist users in accessing the electronic products they desire.

GPO uses *GPO Access* to make online Government information products available to Federal depository libraries and the public with the goal of widespread and equitable information dissemination. Its efforts include providing *GPO Access* training and user support for Federal depository librarians, Federal agencies, and the general public to increase awareness of the service and promote its usage; identifying and providing links to official Government information on other Federal agency Internet sites; making the information on its servers available to other institutions and organizations; and providing electronic information dissemination services for other Federal agencies.

To service a large base of users with varying technological capabilities, *GPO Access* supports a wide range of information dissemination technologies, from the latest Internet applications to dial-up modem access (SWAIS). Methods compatible with technologies to assist users covered by the Americans With Disabilities Act are available. In order to accommodate people without computers, more than 1,300 Federal depository libraries throughout the country provide access to *GPO Access* through public-access workstations.

OVERVIEW OF GPO Access

The system's capability to expand to meet the public's needs and to store information indefinitely supports GPO's commitment to providing permanent public access to electronic Government information products. Recent statistics indicate that *GPO Access* fulfills approximately 21 million document retrievals per month, while helping Congress, Federal agencies, and the courts disseminate official Government information quickly, efficiently, and inexpensively. The convenience, timeliness, versatility, and simplicity of *GPO Access* have rapidly made it an invaluable public resource.

GPO Access Legislation

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

Electronic Directory, Online Access & Storage Facility

The Superintendent of Documents 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 other appropriate publications, as determined by the Superintendent of Documents; and (3) operate an electronic storage facility for Federal electronic information. Collectively, these elements constitute *GPO Access*.²

Departmental Requests

To the extent practicable, the Superintendent of Documents shall accommodate requests by department and agency heads to disseminate their information through *GPO Access*. In these cases, the publishing agencies will fund the initial publishing costs from their appropriations, as they do with current electronic information products.³

Consultation

The Superintendent of Documents shall consult with *GPO Access* users and other providers of similar information services to assess the quality and value of its system, in light of users' needs.

Fees

The Superintendent of Documents may charge reasonable fees for the use of *GPO Access*, except to Federal depository libraries, which shall have access at no charge.⁴ If fees are charged, they must be set so as to recover the incremental cost of dissemination.⁵

Status & Biennial Reports

By June 30, 1994, the Public Printer shall submit to Congress a report on the status of *GPO Access*. Beginning in 1995, the Public Printer must submit to Congress a biennial report on the status of *GPO Access* by December 31 of each odd-numbered year. This report shall include a description of the functions of the service, including a statement of cost savings in comparison with traditional forms of information distribution.

Operational Deadline

GPO Access shall be operational by June 8, 1994.

¹ The successful implementation of this law requires the combined resources of many components of GPO.

² Senate Report 103-27 incorporated the Federal Bulletin Board, which existed prior to Public Law 103-40, into *GPO Access*. The bulletin board was given a Web interface in October 1994.

³ This latter statement is cited from Senate Report 103-27.

⁴The cost of depository library access is to be paid from the Federal Depository Library Program appropriation.

⁵ To meet strong public expectations for free access to taxpayer-supported information online, *GPO Access* has been available without charge to users since December 1995.

MEASURES OF SUCCESS

GPO measures its online success in numbers and words—Web site usage statistics and verbal and written praise of *GPO Access* from award committees, Government officials, and general users.

Increasing Web Site Usage

Of the metrics available for gauging Web site usage, GPO has selected document retrievals as the most accurate measure of service to the *GPO Access* user community, because they represent units of actual content delivered to users. Unlike hit counts, which record the number of times any type of file outside of a database is accessed, document retrievals indicate the number of downloads of both documents within databases and files outside of databases that have been identified as containing Government information content. The majority of the information content on *GPO Access* resides in databases that are accessed through CGI scripts.

GPO recorded more than 228 million document retrievals in FY 1999 at an average of 19 million retrievals per month. This figure reflects more than a 66% increase over the total number of document retrievals for FY 1998. Even more striking is that the total number of retrievals for FY 1999 is 109% of the cumulative number of retrievals made between August 1994 and September 1998. Document retrievals continue to increase at a steady pace; recent statistics indicate that *GPO Access* fulfills approximately 21 million document retrievals per month. With the size of each retrieved document averaging 44,000 bytes, approximately 924 terabytes of information are downloaded from *GPO Access* every month.

Awards & Commendations

The enthusiastic reception of *GPO Access*, indicated by usage statistics and direct feedback, is complemented by commendations it has received from organizations, publications, other Web sites, and satisfied users. In the comments that follow, the success of *GPO Access* in providing and promoting public access to official Federal Government information speaks for itself.

In June 1999, GPO was named the recipient of the American Association of Law Libraries' (AALL) first annual Public Access to Government Information Award, which was established to "honor the achievements of those who have championed public access." In a press release, AALL commended the role of *GPO Access* in making "significant contributions to protect and promote greater public access to government information." A month later, Representative Steny Hoyer publicly praised *GPO Access* to the U.S. House of Representatives.⁷

⁶ Before February 1999, retrievals of files outside of databases were not recorded. However, prior to then, this type of file did not comprise as much Government information content as it currently does.

⁷ "Government Printing Office Hailed as Leader in Electronic Information Technology." *Congressional Record* 145:99 (13 July 1999) p. H5441.

MEASURES OF SUCCESS

Lauding *GPO Access*' "leading role in electronic information dissemination," he mentioned a number of "prestigious awards and other accolades" earned by the Web site in the past two years.

The prestigious Hammer Award was presented to GPO and the Department of Energy's Office of Scientific and Technical Information in 1999 on behalf of Vice President Al Gore and the National Partnership for Reinventing Government; it recognized the role of the DOE Information Bridge in contributing to a government that works better and costs less. The praise expressed by Vice President Gore in a letter to GPO in 1998 carried a similar message: "Your organization continues to serve as an excellent model for other Federal agencies on how to provide an interesting and easy-to-use web site, providing consumers hassle-free access to government services. Your innovative website [sic] encourages consumers to contact your agency and to take advantage of the many services which you provide. . . . Your web site is an excellent example of why I believe that we can achieve 'America @ Our Best.'"

In August 1999, *GPO Access* was featured on a "list of five of the most impressive federal World Wide Web sites" that "provide models and examples of the innovative methods the Internet offers to promote public access to information." In this list, the Center for Democracy and Technology and OMB Watch paid GPO the following compliment: "When we were not sure if particular information was online, this was the first place that we looked. . . . *GPO Access* may be the best-kept secret on the Web—the government should do more to inform the public that it exists."

In 1998, GPO Access was one of 15 Federal Web sites—and the only Web site from the legislative branch—to be selected for the "Best Feds on the Web" award from Government Executive magazine. The magazine commended GPO Access for "provid[ing] free electronic access to a wealth of important information published by the Government. . . . It doesn't get more convenient than that." A review in Federal Computer Week the same year celebrated the usefulness of GPO Access: "In a Web environment overrun by sites that are the equivalent of a Hollywood movie set, where style takes precedence over substance, the GPO site stands out as an unassuming, information-rich offering. . . . [A]fter repeated visits to the site, it's apparent that GPO has succeeded in truly opening up the raw records of the government"

GPO Access was also spotlighted on a number of other Web sites. For example, GovSpot, a government information portal on the Web, identified CBD*Net* as a "top-notch tool for citizens, students, educators, businesses and government employees" who are interested in Government contracting, while USAToday.com named *GPO Access* a "hot site" for its provision of the *Congressional Directory* of the 106th Congress.

Public access to Government information has continued to be transformed as *GPO Access* provides the public with electronic access to official Federal information. A number of new applications and improvements to this service have been made in order to facilitate continued use of *GPO Access* by the public.

Redesign & Reorganization of Web Site

In April 1999, a new *GPO Access* home page and second-level pages were released to provide users with better access to GPO's online resources. The new home page is available at http://www.access.gpo.gov/su_docs. Features of the new Web pages include an enhanced design, a new *GPO Access* logo, and a restructuring of pages and links to make accessing the Web site's information easier and more intuitive for both new and experienced users.

The Web site's navigation was also improved by the addition of a standard toolbar at the top of each new Web page and buttons on the left of the screen. The toolbar provides users with a quick means of returning to the *GPO Access* home page, getting help on the Web site, and submitting comments, among other options. The buttons link users to other relevant Web pages. In addition, a standard footer provides a link to the GPO home page and allows users to send e-mail to the *GPO Access* User Support Team. In compliance with the Americans With Disabilities Act, the home page provides users access to the Web site through a text-only interface.

Permanent Public Access & the FDLP Electronic Collection

In tandem with other Federal agencies that are moving their publications to an online environment, GPO is transitioning to a more electronic Federal Depository Library Program (FDLP) to provide permanent public access to electronic Government information products. *GPO Access* is a key component of GPO's strategy to achieve this goal. Forty-six percent of the titles added to the FDLP in FY 1999 were provided online.

Title 44 of the *U.S. Code* (44 U.S.C. §1911) stipulates that public access to official Government information products disseminated through the FDLP must be maintained permanently in regional depository libraries and depository libraries not served by a regional depository library. Since online products are not physically distributed to depository libraries for retention, GPO has assumed responsibility for the provision of permanent access to Government information products residing on *GPO Access*. However, ensuring permanent access to the broad range of products in the FDLP Electronic Collection (FDLP/EC) extends GPO's responsibilities beyond *GPO Access* databases.

The FDLP/EC consists of four elements, all of which are covered by the permanent public access initiative:

- Core legislative and regulatory GPO Access products that will reside permanently on GPO's servers
- Other remotely accessible products managed by either GPO or other institutions with which GPO has established formal agreements
- Remotely accessible electronic Government information products that GPO identifies, describes, and links to but that remain under the control of the originating agencies
- Tangible electronic Government information products distributed to Federal depository libraries

GPO has released a collection-development plan, "Managing the FDLP Electronic Collection: A Policy and Planning Document," which further defines these elements and establishes a policy framework on which it will build specific procedures for the development and maintenance of the FDLP/EC. GPO has also hired an electronic collection manager, who is responsible for establishing, reviewing, maintaining, and modifying a comprehensive plan that ensures permanent public access to products in the FDLP/EC.

The FDLP/EC consists of over 166,000 electronic titles, including more than 104,000 titles on *GPO Access* itself and more than 62,000 additional titles on agency Web sites to which GPO links through electronic finding aids. Most of the titles linked from other agency Web sites have been brought under GPO's control through formal agreements that provide for permanent public access. GPO has taken steps to incorporate the remainder of these titles into a prototype digital archive as well in order to ensure that *GPO Access* can provide permanent public access to information provided through external links.

Furthermore, GPO has begun meeting with interested stakeholder organizations to discuss measures that GPO and other agencies are pursuing to advance the goals of the permanent public access initiative. Represented in these discussions are the Library of Congress, National Agricultural Library, National Library of Medicine, National Library of Education, National Archives and Records Administration, National Commission on Libraries and Information Science, Department of Energy's Office of Scientific and Technical Information, Council on Library and Information Resources, and congressional staff from the Joint Committee on Printing and the House Administration Committee.

GPO Access is now recognized as the principal mechanism for incorporating information into the FDLP/EC. It ensures current and permanent public access to official electronic Federal Government information products, whether they have a print equivalent or exist solely in electronic form.

System Enhancements

In March 1999, behind-the-scenes service on *GPO Access* was enhanced through the implementation of an F5 Networks BIG/ip® Controller. Unlike the "roundrobin" system that was in place before March, which distributed requests to the system in a preset order regardless of the load on each server, the BIG/ip® Controller distributes requests by routing them to the server that is carrying the smallest load at the time. The result is a significantly more even distribution of burden across ten servers than the round-robin configuration provided. During the last half of March, before the switch was made, GPO's busiest server handled 39.7% of the overall load, while the least busy one handled 14.3%—a difference of 25.4%. After that time, the discrepancies in server usage dropped dramatically. In September 1999, the difference between the busiest and least busy servers was only 0.2%. By equalizing the server loads, the BIG/ip® Controller helps to ensure that the system functions as quickly and efficiently as possible. Also in March 1999, the system's bandwidth was doubled; the groundwork has been established to double it again in the near future to service more users simultaneously.

New Applications

At the beginning of each calendar year, new databases are added to existing applications on *GPO Access* for the new year or session of Congress, such as the 1999 *Federal Register* and the *Congressional Directory* for the 106th Congress. Aside from these types of additions, four new major applications have been introduced on *GPO Access* since January 1998:

- The *House Journal* is the official record of the proceedings of each legislative day in the U.S. House of Representatives. *GPO Access* contains the *House Journal* from 1991 to 1994. Sections of the *Journal* may be downloaded directly as Adobe Acrobat Portable Document Format (PDF) files. In addition, users may perform a keyword search of one or more years and then download documents as ASCII text and PDF files.
- The *Green Book* presents background material and statistical data on programs within the jurisdiction of the House Ways and Means Committee, as well as information about major social programs outside of the committee's jurisdiction. *GPO Access* contains the *Green Book* for 1998 (Committee Print 105-7), which is accessible by keyword search. Documents are available as ASCII text and PDF files.
- The *List of CFR Sections Affected* (*LSA*) contains new and amended Federal regulations that have been published in the *Federal Register* since the most recent revision date of a title in the *Code of Federal Regulations*. *GPO Access* contains the *LSA* from January 1997 through the present, which may be accessed from a simple search or a list of monthly issues with links to the relevant information for each *CFR* title. The online *LSA* also contains the *List of CFR Parts Affected Today*, *Current List of CFR Parts Affected*, and *Last Month's List of CFR Parts Affected*. Documents are available as ASCII text and PDF files.

Public Papers of the Presidents of the United States is an official series in which Presidential writings, addresses, and remarks of a public nature are compiled. GPO Access provides two methods of accessing the information in each volume: a traditional simple-search interface and a table of direct links to sections of each volume. The table of contents, as well as various lists, appendices, and indices, are available as HTML files with links to PDF files of the documents. The service was introduced with volume I of President Clinton's 1997 Public Papers, and both volumes of Clinton's 1996 Papers were added a month later; previous and subsequent volumes will be added on an incremental basis.

Notable Publications

Although not part of a database, some publications and reports were of sufficient governmental and public interest to be given special attention on *GPO Access*. They include the following subjects and titles:

- "Investigating the Year 2000 Problem: The 100 Day Report" from the U.S. Senate Special Committee on the Year 2000 Technology Problem
- "Report of the Select Committee on U.S. National Security and Military/ Commercial Concerns with the People's Republic of China," also known as the "Cox Report" (House Report 105-851)
- "Unlocking Our Future: Toward a New National Science Policy" from the U.S. House Committee on Science (Committee Print 105-B)
- "Constantino Brumidi: Artist of the Capitol" (Senate Document 103-27)
- Materials related to the impeachment of President William Jefferson Clinton
- "Findings of Fact" in the antitrust case against Microsoft Corporation
- "Report on the Assessment of Electronic Government Information Products" from the National Commission on Libraries and Information Science

Improvements to Document Searches & Retrievals

GPO not only added to the total number of applications, databases, and publications on *GPO Access*, but also made improvements to the methods users can employ to find and retrieve documents.

■ Electronic catalogs allow users to browse a list of documents available on *GPO Access* and then click on a link to retrieve a document directly as an ASCII text or PDF file. A catalog of congressional bills from the 103rd through the 106th Congress gives users the option of browsing all versions of all bills for each session of Congress or of browsing one type of legislation (e.g., bills, resolutions, joint resolutions) for a given session of Congress. Public laws from the 104th Congress to the present are also organized into catalogs by congressional session.

- Browse tables, like catalogs, allow users to retrieve documents or sections of documents by clicking on direct links to files, rather than performing a traditional search. Using the browse tables for each month's issue of *Economic Indicators*, users can download a section by subject or the entire issue as an ASCII text or PDF file. A browse table for the 1999 *Congressional Record* provides links to the first page of each section and to House and Senate roll call votes; only PDF files are available through this feature.
- Similar to the catalogs and browse tables described above, the table of contents in each issue of the *Federal Register* was converted to an HTML file that provides direct links to ASCII text and PDF files of the documents listed in it. Users can access the table of contents for issues from January 1998 to the present; the table of contents for current day's issue is also available as a PDF file.
- Although it does not have links akin to those in the *Federal Register* table of contents, a browse feature for the *Congressional Record* allows users to view the *Daily Digest* from the previous day's issue. The *Daily Digest* serves as a table of contents for House and Senate actions reported in that issue and for statements published in the Extensions of Remarks. It is available in two formats: ASCII text and PDF.
- Specialized interfaces for the *Federal Register*⁸ and *Congressional Record* allow users to retrieve a single page from these publications as a PDF file simply by entering a year and page number. Whereas a traditional keyword search using a page number as the query retrieves the whole document that contains a given page, this feature enables a much more specific retrieval. Once a page has been retrieved, users can navigate to other single pages with "previous page," "next page," and "go to page" tools at the bottom of the screen.
- Direct links from documents in the 1998 Congressional Record Index to pages in the Congressional Record were established to make the online Index a more helpful tool for accessing the Record. After performing a search in the Index and retrieving a document, users simply click on a hyperlinked page number to open that page in the Record. The technology behind the "get page" function described in the previous bullet point makes this feature possible.
- The option of searching by printed date, which is the date that the text of an electronic notice appeared in the print version of the *Commerce Business Daily*, was added to the fielded search page for CBD*Net*.

⁸ The PDF page-retrieval feature for the Federal Register is available from the specialized search page for the List of CFR Sections Affected.

In response to repeated inquiries to the GPO Access User Support Team, instructions were posted on how to establish HTML links that retrieve documents from GPO Access databases. This type of retrieval, referred to as "get doc," uses a special programming script and a unique document identification number to open a file that otherwise must be accessed through a database search. "Get doc" was created at the request of Congress to retrieve pages from the Congressional Record, but it is available for all GPO Access databases and is a popular means for Federal agencies to put their notices from the Federal Register and CBDNet on their own Web sites.

Online Bookstore

Keeping in step with the worldwide development of e-commerce, sales applications on *GPO Access* were organized into a single point of access, the *GPO Access* Online Bookstore at http://www.access.gpo.gov/su_docs/sale.html. This entrance page for the Online Bookstore presents links to sales applications, including the Sales Product Catalog (SPC), new product announcements, the U.S. Government subscriptions catalog, a list of CD-ROMs for sale, and a list of sales products by topic. It also provides locations of U.S. Government bookstores; a link to the Consumer Information Center's Web site, which sells GPO's products; and information about the U.S. Fax Watch service.

Multi-line ordering capabilities were enabled in the SPC, allowing GPO's customers to have an online shopping experience akin to what they may find on commercial Web sites. Before multi-line ordering was introduced, customers could click on a product's "order" icon and have the relevant ordering information (i.e., title, stock number, unit price) automatically entered into an electronic form for that item. However, if they wanted to order multiple items on the same order form, they were required to retype the information or "copy and paste" it from individual products' Web pages into the order form for each subsequent item.

Analogous to a shopping cart, the multi-line ordering function eliminates these additional steps; it permits a customer to combine up to 20 different items in a single order simply by clicking on "order" icons for products found in one or more searches of the SPC. The new electronic order form also recalculates the total dollar amount of an order when products are added and quantities of items are changed. Although this feature is currently available only within the SPC and on a few individual products' Web pages, GPO is in the process of expanding it to all sales applications on *GPO Access*.

Further improvement to the sales applications was achieved by incorporating encryption technology into *GPO Access*. Encryption ensures private, secure transactions for customers who submit electronic orders by credit card or Superintendent of Documents deposit account number through the Online Bookstore. This technology is provided by VeriSign, a leading provider of

Internet-based trust services and digital certificate solutions used by Web sites, electronic-commerce service providers, and individuals to conduct trusted and secure electronic commerce and communications over IP networks.⁹

Another change to the Online Bookstore was the opportunity for each U.S. Government bookstore to customize its own Web pages on *GPO Access*. Many bookstores have already tailored their Web pages to local clientele by describing their stores' product specialization, providing detailed maps to their stores' locations, and including pictures of their storefronts or area attractions. More Web pages will be added as feedback is received from the bookstores.

Search Engines & Directories

GPO made strides toward increasing public awareness of *GPO Access* by pursuing measures that get its Web pages indexed in Internet search engines and directories, the primary tools used by the public to locate online resources. Its robot-exclusion protocol, which followed a widely respected standard that prevents the automated indexing of Web sites, was removed in September 1999. It had been in place since 1996 due to the concern that indexing tools—often called "robots" or "spiders"—might overload the system and impair functioning of the Web site for regular users.

In order to achieve high rankings in search-engine results lists and directory entries after the robot-exclusion protocol was removed, more than 100 *GPO Access* Web pages were coded with keyword and description meta tags. Search engines and directories that recognize meta tags use them as a more precise way of matching user inquiries to relevant Web sites than unordered collections of the words on indexed Web pages. For example, the following keyword meta tags appear in the source code for the *GPO Access* home page: Federal information, Government information, Superintendent of Documents, GPO, Government Printing Office, government, legislative, executive, judicial, regulatory, administrative decisions, *GPO Access*. Theoretically, a user who enters a query such as "government information" or "legislative" in a search engine that recognizes meta tags should find a link to *GPO Access* among the top hits.

Once a Web page has been identified as relevant by a search engine or directory, information from its description meta tag, which is usually displayed with the Web site link, should assist the user in deciding whether to open it. For instance, after reading the description meta tag for the *GPO Access* home page—"*GPO Access* provides free public access to full-text, official Federal information; Federal information finding aids; and Federal products for sale."—the user can make an informed decision as to whether GPO's online resources meet his or her needs.

⁹ See http://www.verisign.com.

¹⁰ Not all search engines and directories recognize or make use of meta tags; therefore, the effectiveness of these strategies depends partially on factors outside of GPO's control.

In addition to these indirect efforts, GPO directly publicized its online resources by contacting Webmasters and editors of search engines and directories to improve the ranking of *GPO Access*, when feasible.

Site Search

Responding to numerous requests from its user community, GPO added a service to its Web site that searches HTML documents in selected directories on *GPO Access*. The macro-level search function may be used to find specialized database search pages; Web pages for GPO's other online services, such as the Online Bookstore and finding aids; and documents on *GPO Access* that exist as HTML files. However, it does not search for ASCII text or PDF files within databases, such as the *Code of Federal Regulations* or the SPC. Like other finding aids on *GPO Access*, the site search complements traditional database searches and browse features, offering an alternate method of locating and retrieving documents.

Privacy and Security Notice

A privacy and security notice was posted on *GPO Access* to explain the policies and practices to which GPO adheres in its efforts to ensure user privacy while providing the best service through *GPO Access*. GPO posted its notice in advance of anticipated legislative actions that would require all Federal Web sites to provide such notices.

In short, GPO uses any information it obtains strictly for the purpose of official business. Statistical information is gathered to improve service on the Web site. Personal information, such as name, address, and telephone number, is acquired only when it is supplied by a user or customer, and it is used to answer requests for information and to fulfill orders. Users under the age of 18 are instructed to acquire their parents' or guardians' permission before submitting comments to *GPO Access*. Web site encryption ensures that online sales transactions are secure, and GPO further guarantees that only authorized personnel view creditcard information submitted through the Online Bookstore. In addition, the notice informs users that they are subject to the privacy policies of other Web sites once they leave *GPO Access* and that the information on *GPO Access* is considered to be public domain, unless otherwise noted.

¹¹ Test directories and other directories containing information deemed not of interest to the general public were excluded to improve search results. A separate search was established to access administrative materials for the Federal Depository Library Program at http://www.access.gpo.gov/su_docs/dpos/sisearch.html.

¹² For marketing purposes, an agency may also request from GPO the names and addresses of customers who order the products published by that agency.

Kids' Pages

As part of GPO's mission to disseminate Government information to the public, a special section of *GPO Access* for younger users was created. "Ben's Guide to U.S. Government for Kids" at http://bensguide.gpo.gov enlarges GPO's audience for electronic Federal Government information and supports the agency's commitment to providing online educational resources for students, parents, and teachers. This goal is in line with President Clinton's April 1997 memorandum to the heads of executive departments and agencies on the subject of "expanding access to Internet-based educational resources."

Just as GPO Access provides locator services to U.S. Government Web sites, "Ben's Guide" provides a similar service to U.S. Government sites developed for kids. "Ben's Guide" incorporates resources about how our Government works, the use of the primary source materials on *GPO Access*, and how one can use *GPO Access* to carry out their civic responsibilities.

With Benjamin Franklin as a guide, age-specific kids' pages cover topics such as the U.S. Constitution, how laws are made, the branches of the Federal government, and what it means to be a U.S. citizen. They also include games and links to other U.S. Government Web sites for children. To the extent possible, "Ben's Guide" relies upon official Government information from published print and electronic sources. A prototype of "Ben's Guide" was critiqued at the American Association of School Librarians conference in November 1999, where it received excellent reviews.

Help Page

A help page, which was introduced with the redesign and reorganization of *GPO Access* in April 1999, consolidates GPO's online user-support resources at a single location. In addition to providing contact information for the *GPO Access* User Support Team and the GPO Order Desk, this Web page presents a variety of self-help tools, which give users the alternative of accessing frequently requested files pertaining to common support topics themselves, rather than relying on direct interaction with GPO staff via e-mail, phone, or fax. Included among these self-help resources are the *GPO Access* training booklet, helpful hints for searching databases, instructions for establishing HTML links to documents on *GPO Access*, and tips on using Adobe Acrobat Reader and PDF files.

Exit Pages

GPO Access provides links to more than 62,000 titles on other Government and educational Web sites. Although the new interface helps to distinguish Web pages on GPO Access from those of other online services, it is not always immediately obvious to users that a mouse click has delivered them to a different Web site. To address possible confusion caused by these links, which are concentrated in the "finding aids" section, transitional Web pages are being added to all points from which users can exit GPO Access through links to other Web sites. These Web pages, known as "exit pages," announce to users that, once they leave GPO Access, GPO is not responsible for the content of the Web sites that they enter. After this message has been displayed for five seconds, the user is automatically forwarded to the chosen Web page.

GPO Form 3868

GPO Form 3868, Notification of Intent to Publish, was made available online in October 1999. This form is the primary means by which Federal agencies advise the Superintendent of Documents of new Government publications to be printed. GPO uses the information to consider whether a forthcoming publication should be included in its sales and Federal depository library programs. The form may be completed and submitted online, thus providing a speedy electronic alternative in a process that was previously only paper-based.

PARTNERSHIPS

GPO's partnerships with other Federal agencies save time, money, and resources by providing effective, inexpensive methods of disseminating information, while eliminating duplicative efforts. The benefits of this type of cooperation are farreaching, extending to the public, agencies that are directly involved in the partnerships, and the Federal Government as a whole.

Client Agencies

Internet-related services that GPO performs for other Federal agencies include hosting and maintaining access to agency Web sites, Government Information Locator Service (GILS) records, databases, and other electronic files. *GPO Access* currently hosts 15 Federal agency Web sites and databases of GILS records for over 30 agencies. ¹³ In addition, the Federal Bulletin Board (FBB) allows Federal agencies and organizations to upload files to GPO's servers, giving the public immediate, self-service access to Government information in electronic form. The FBB currently contains over 5,000 files in nearly 150 file libraries from more than 20 agencies and organizations representing all three branches of the Federal Government.

Partnership with the Department of Energy

A partnership between GPO and the Department of Energy's (DOE) Office of Scientific and Technical Information (OSTI) has resulted in two new scientific information applications on *GPO Access*: the DOE Information Bridge and *PubSCIENCE*.

- The **DOE Information Bridge**, a component of EnergyFiles, provides free access to full-text reports and bibliographic records of DOE research and development in areas such as physics, chemistry, materials, biology, environmental science, energy technologies, engineering, computer and information science, and renewable energy. This collection includes over 43,000 reports produced by DOE and the DOE contractor research and development community that have been received and processed by OSTI since January 1995. Users can search for and download information electronically.
- **PubSCIENCE** is a free service that allows users to search across a large compendium of peer-reviewed journal literature with a focus on physical sciences and other disciplines of interest to DOE. Searches return abstracts and citations for relevant articles from more than 20 scientific journal publishers. These abstracts and citations contain links to the publishers' servers, where users may retrieve full-text articles through a journal subscription, on a pay-per-view basis, by special arrangement with a publisher, or through a library or commercial provider. Unrestricted access is granted for the full text of some articles.

¹³ Refer to appendices D and E for lists of Federal agency Web sites and GILS records hosted by GPO Access.

PARTNERSHIPS

Other Partnerships

Similar to its partnership with DOE, GPO has agreements with other Federal agencies and educational institutions to provide online Government information content and services.

- U.S. State Department Foreign Affairs Network (DOSFAN) Electronic Research Collection: Provides permanent public access to archived electronic documents made available through a partnership of the U.S. State Department, the University of Illinois at Chicago, and GPO.
- University of North Texas Research Collections: Provide permanent public access to electronic publications from defunct Federal agencies through a partnership between the University of North Texas and GPO. Currently includes publications from the Advisory Commission on Intergovernmental Relations, the Commission on Structural Alternatives for the Federal Courts of Appeals, the National Civil Aviation Review Commission, and the Department of Transportation's Office of Technology Applications' Highway TechNet.
- Federal Agency Internet Sites: This tool allows users to search or browse a list of Federal agency Internet sites through a partnership between Louisiana State University and GPO.
- Government Internet Sites by Topic: Volunteers from the Federal depository library community maintain subject-oriented bibliographies of Government Web sites with topics drawn from the *Guide to U.S. Government Information*, otherwise known as the *Subject Bibliography Index*.
- Documents Data Miner: Provides an extensive suite of tools for finding information in the *List of Classes of United States Government Publications* and other administrative files through a partnership of Wichita State University, the National Institute for Aviation Research, and GPO.
- Enhanced Shipping List Service: Enables Federal depository libraries to generate check-in records and call-number labels for depository items through a partnership between the University of New York at Buffalo and GPO.

TRAINING & USER SUPPORT

The three primary means by which GPO educates users about the products and services offered on *GPO Access* are training classes, demonstrations at conferences and trade shows, and the *GPO Access* User Support Team.

Training Classes & Demonstrations

GPO continues to receive many requests for training classes and demonstrations. During FY 1999, staff from the Office of Electronic Information Dissemination Services (EIDS) conducted approximately 30 hands-on training classes and demonstrations of *GPO Access* for Federal depository librarians, members of Congress, professional organizations, various other groups, and the public, both in Washington, D.C., and across the country. Recent training sessions and demonstrations were conducted in Anaheim, Baltimore, Chicago, Detroit, Indianapolis, Minneapolis, New Orleans, Philadelphia, Pittsburgh, Portland, San Diego, San Francisco, and Seattle.¹⁴

GPO attempted to cover the widest possible geographic area while adhering to budget constraints by combining multiple activities in different locations during the course of one trip. For example, a training class at Tulane University was scheduled to coincide with the American Library Association conference in New Orleans in June 1999. Moreover, GPO encouraged the replication of *GPO Access* training sessions by past training-class participants to supplement its own outreach efforts; upon request, training materials were shipped at no charge to assist instructors in training their co-workers, staff, and patrons.

Two notable changes to GPO's approach to outreach affected some of these training classes and demonstrations. The first was a partnership between GPO and the National Archives and Records Administration. In several training classes during 1999, staff from EIDS and the Office of the Federal Register combined efforts to offer joint regulatory training on *GPO Access* and one of its most popular online applications, the *Federal Register*. The second change was the focus placed on expanding GPO's outreach to new audiences; some conferences and trade shows that helped GPO to meet this goal were the American Bar Association Tech Show, Online World, and the National Online Meeting.

User Support Team

The *GPO Access* User Support Team serves as a constant resource for users who seek assistance with *GPO Access* via e-mail, phone, and fax. It is comprised of a staff of eight individuals, who answer inquiries about GPO's electronic products, provide assistance in searching for and locating Federal information products, and offer technical support for these products. On average, the Team receives 6,500 inquiries per month, including approximately 4,350 phone calls and 2,150 e-mail messages. Internal monitoring standards ensure that all inquiries receive adequate attention within a reasonable period of time.

¹⁴ Refer to appendix F for a full list of training sites and conferences.

TRAINING & USER SUPPORT

Questions and comments regarding *GPO Access* can be directed to the Team as follows:

■ E-mail gpoaccess@gpo.gov

■ Phone 1-888-293-6498 (toll-free)

202-512-1530 (D.C. area)

■ Fax 202-512-1262

The Team's hours of availability are Monday through Friday, 7:00 a.m. to 5:30 p.m., Eastern Standard Time, except Federal holidays. These hours were expanded from 5:00 to 5:30 p.m. at the end of 1998 to meet the demand for support in the evening, primarily from users in the western United States, whose normal business hours extend beyond those on the east coast due to the time difference. The decision to add an extra half-an-hour of support—rather than an hour or more—at the end of the business day was based on a monitoring of trends in inquiry volume, which indicated a high level of user demand until 5:30 p.m. EST, followed by a drastic decline.

USER FEEDBACK

On a daily basis, GPO monitors users' feedback about *GPO Access* from telephone calls, e-mail messages, faxes, and letters. GPO also uses more formal means of soliciting comments about and evaluations of its online products and services, such as user surveys and focus groups. Many of the improvements that have been made to *GPO Access* are in response to feedback GPO staff has received through these channels.

User Survey

In October 1999, GPO invited users to share their comments about *GPO Access* through its online user survey. The survey gathers ratings of *GPO Access* products and services, suggestions for additions and improvements, evaluations of the *GPO Access* User Support Team and another GPO staff, and basic information about users, such as their professional affiliation, usage frequency, type of computer, and connection speed.

The deadline for submissions was December 15, 1999. However, for the purposes of this report, preliminary results were prepared from the 213 responses recorded between the opening date and December 8, 1999. Key findings are summarized below.¹⁵

- 19% use *GPO Access* daily. 16% use the Web site once or twice a week.
- 58% consider it to be either "very easy" (9%) or "easy" (49%) to find the information they are seeking on *GPO Access*. Only 2% find it "impossible" to locate information on the Web site. ¹⁶
- Users also expressed satisfaction with the timeliness of information, online user aids, and Web site organization. 36% rated the timeliness of information as "excellent," and another 58% rated it as "good." Combined "excellent" and "good" ratings were also predominant for the other two aspects: 79% for online user aids and 83% for Web site organization.
- Of nine different finding aids—*Catalog of U.S. Government Publications*, Sales Product Catalog, Government Information Locator Service (GILS), Government information on selected Internet sites, Government information products for sale by topic, electronic Government information products by title, Government Internet sites by topic, Federal agency Internet sites, and "other"—the "Federal agency Internet sites" tool is used by 51% of respondents, the *Catalog of U.S. Government Publications* is used by 50%, and the "Government Internet sites by topic" tool is used by 49%. The only finding aid employed by fewer than 18% is "Government information products for sale by topic" at 11%.

¹⁵ Not all 213 respondents provided an answer to each survey question. To adjust for these varying non-responses, the percentages in this section reflect the percent of respondents to that question who selected a particular answer.

¹⁶ It is not unusual for a small percentage of responses to fall in either extreme in this type of statistical sampling.

USER FEEDBACK

Focus Groups

Focus groups are assembled on a regular basis at Federal depository library conferences, as well as on site at GPO. These sessions consist of in-depth roundtable discussions that examine how people use *GPO Access* and that aim to measure the degree of ease or difficulty users experience in finding information. Focus-group participants include congressional staff, Federal depository librarians, members of trade and professional organizations, private-sector employees, and other public users. These individuals, representing a broad cross-section of the American public, share candid insights with GPO that have proven invaluable in revising *GPO Access* Web pages and improving the service through additional features and enhancements. All participants are uncompensated volunteers.

Costs & Savings

Expenditures & Operating Costs

GPO Access is much more efficient than originally expected and, consequently, has been less costly than the Congressional Budget Office (CBO) estimated in 1993. At that time, CBO estimated that creating and operating the online computer system would cost approximately \$6 million in appropriated funds over the next five years. In addition, the provision of free online access for Federal depository libraries was expected to cost between \$2 million and \$10 million per year, assuming appropriation of the necessary funds. ¹⁷ It was also expected that, beginning in FY 1995, GPO would incur annual costs of \$750,000 to keep the directory of publications up to date and to maintain the electronic storage facility.

The following table presents total *GPO Access* operating costs and capital expenditures for equipment and software by fiscal year. Operating costs include the recurring costs of providing permanent public access to electronic Government information products housed on GPO servers. All of these costs and expenditures—with the exception of those devoted exclusively to CBD*Net*—were recovered from GPO's salaries and expenses appropriation.

Fiscal Year	1994	1995	1996	1997	1998	1999
Operating Costs	\$563,600	\$1,222,700	\$1,736,328	\$2,475,420	\$3,141,803	\$2,998,397
Equipment	\$133,100	\$171,500	\$85,700	\$273,900	\$7,812	\$69,686

Savings & Revenue

It is expected that the provision of permanent public access to the electronic Government information products on *GPO Access* will cost GPO more in the long term than print dissemination and physical storage. However, these costs are outweighed by the substantial benefits of *GPO Access*. The service saves other Federal agencies a considerable amount of time and resources, while reducing duplicative efforts, by allowing them to take advantage of GPO's expertise in Web site development and hosting on a reimbursable basis. Moreover, *GPO Access* enables the Government to reach a wider audience than possible through print dissemination and, in turn, allows that audience to access a wealth of electronic Government information conveniently and without charge.

In addition to affording these types of savings, *GPO Access* generates revenue through some of its services. Major sources of revenue include electronic subscription services for data subscribers to products such as the *Federal Register* and the *Commerce Business Daily*; sales generated by the online Sales Product Catalog and other sales applications, such as the *U.S. Government Subscriptions Catalog* and list of CD-ROMs for sale; and electronic and print submissions to CBD*Net*, the online version of the *Commerce Business Daily*. Sales generated by *GPO Access* sales applications for FY 1999 totaled \$1,125,430. CBD*Net* revenues for electronic data subscriptions and notice submissions were \$744,131 for FY 1998 and \$719,789 for FY 1999.

¹⁷ Government Printing Office Electronic Information Access Enhancement Act of 1993 (H.R. 103-108), p. 2.

FUTURE OUTLOOK

Many new developments are in the works for *GPO Access*. Some plans for Web site improvements and enhanced training efforts are provided below.

Standardization of Web Pages

Although the new *GPO Access* design introduced in April 1999 created a uniform layout and set of navigational tools on the home page, second-level pages, and various other pages, the initial changes did not affect all Web pages on *GPO Access*. With cooperation from partner agencies, such as the National Archives and Records Administration, GPO hopes eventually to extend this consistent appearance and navigation to all of its applications.

Integration of Sales Applications

Since GPO's secure server went live with the introduction of encryption of electronic sales transmissions in April 1999, work on the *GPO Access* sales applications has focused on integrating more technologically advanced Online Bookstore capabilities into some of the less sophisticated sales applications, such as the CD-ROM list and new product announcements. Replacing all single-line order forms with their multi-line successor and incorporating automatic checks for the current price in the Sales Product Catalog should allow customers to add items to their shopping carts with ease—and confidence that the sales information they are accessing is up to date.

Interactive Training CD-ROM

An electronic version of the *GPO Access* training booklet is due to be released in early 2000. While the interactive CD-ROM will cover the same topics as the print version, its distinctive format will allow users to take quizzes after they complete each section and to view screen-captured examples of document searches and retrievals in selected applications. A copy of the CD-ROM will be distributed to each Federal depository library. In addition, segments of the CD-ROM will be converted into short demonstrations that will be accessible online from the *GPO Access* help page. A prototype of the new training mechanism received positive reviews at the American Library Association conference in January 1999.

Learning Center

GPO continues to investigate the creation of an on-site, state-of-the-art training facility. The *GPO Access* Learning Center will aid GPO in providing more widespread training in the use of GPO's online products and services for the Federal depository library community, congressional staff, and other Federal agency personnel who either work in or visit Washington, D.C.

FUTURE OUTLOOK

Integrated Processing System

The Office of Electronic Information Dissemination Services and the Graphic Systems Development Division have completed the necessary changes to the Sales Product Catalog (SPC) in preparation for the implementation of the Integrated Processing System (IPS), the new order processing and inventory management application to be used by the Superintendent of Documents Sales Program. When IPS goes live, *GPO Access* is fully prepared to handle changes to the SPC record structure and the addition of SKU stock numbers to all sales items. Users will notice several new fields in the SPC records, but otherwise their ordering experience will not be affected.

SGML

Standard Generalized Markup Language (SGML) is an integral component of the transition to the next phase of *GPO Access*, an enhanced online service that will use standardized data structures to provide additional search and retrieval capabilities. Because the SGML structure can be used from the authoring level throughout the publishing process for print and electronic products, regardless of hardware or software, GPO anticipates that it will provide more substantial savings in the Federal sector than the methods that are currently used.

In addition to providing new search and retrieval capabilities, the SGML database structure will permit:

- Creation of databases at the authoring stage that are suitable for print, CD-ROM, and online publication, without data manipulation by GPO. 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 publication that has a different printed format without manipulation (e.g., incorporation of congressional bills into the *Congressional Record* or of *Federal Register* documents into the *Code of Federal Regulations*).
- Submission of validated machine-readable data by publishing customers.
- Automated composition—or "printing on demand"—of data that is extracted from electronically disseminated databases in the same format as the "official" print publication or in another format chosen by the user.

Open Text Software

An SGML-based build/search/retrieval software system was purchased from Open Text Corporation and delivered to GPO on February 5, 1996. The first major application on *GPO Access* that will use this software is the Electronic *Code of Federal Regulations* (e-*CFR*), which is expected to be available to the public in the near future.

FUTURE OUTLOOK

The Open Text versions of CFR databases will provide numerous enhancements:

- Daily updates to complement the existing *CFR* WAIS databases, which are updated quarterly as parts of the *CFR* are revised
- More numerous and specific Boolean operators to aid in query construction
- The ability to search multiple specific sections in the body of a document
- Direct links to originating documents in the Federal Register from e-CFR search results