

# The Project

This portal project represented an entirely new venture for the U.S. federal government. It was created to cut across agency and departmental stovepipes, and to centralize the location for retrieval of government information and services. While a number of portal-type applications were developed under the National Performance Review, e.g., [www.students.gov](http://www.students.gov), [www.seniors.gov](http://www.seniors.gov), and [www.workers.gov](http://www.workers.gov), FirstGov.gov represented a project on a much larger scale, with its scope being the entire federal government.

## Institutional Environment (Legal and Policy Framework)

Some critical and important pieces of legislation and policy which paved the way for FirstGov.gov included the Paperwork Reduction Act of 1995 (PRA) (Public Law 104-13); a lengthy and wide-ranging law, first enacted in 1980. It was revised in 1986 with some changes, and then underwent major revisions again in 1995. The PRA was enacted to reduce the paperwork burden on private citizens and businesses that interact with the government. It emphasizes the effective and efficient use of IT to achieve paperwork reduction. Hand-in-hand with the PRA is OMB Circular A-130 (Office of Management and Budget, 1985) which was created to clarify information management, information systems management, and information technology management for the federal agencies affected by the PRA. The Circular has been most recently revised in 2000 to include the implementation guidelines for the Government Paperwork Elimination Act of 1998 (P.L. 105-277, Title XVII).

The U.S. Congress signed the Government Paperwork Elimination Act (GPEA) into law October 1998. The defining features of this piece of legislation included the following:

- SEC. 1702. Authority of OMB to provide for acquisition and use of alternative information technologies by executive agencies;
- SEC. 1703. Procedures for use and acceptance of electronic signatures by executive agencies;
- SEC. 1704. Deadline for implementation by executive agencies of procedures for use and acceptance of electronic signatures;
- SEC. 1705. Electronic storage and filing of employment forms;
- SEC. 1706. Study on use of electronic signatures;
- SEC. 1707. Enforceability and legal effect of electronic records; and
- SEC. 1708. Disclosure of information(5).

In short, GPEA enables citizens to file information electronically with the federal government and receive information electronically as well. By 2003, the federal agencies must provide the alternative for electronic public access to their documents with electronic filing of documents by the public also in place. Thus, GPEA provides the framework for the acceptance of electronic records as legal, valid and enforceable. It encourages federal agencies to promote electronic recordkeeping, filing, maintenance, submission, and archiving. This opens up a wide array of possible types of electronic information interactions including the submission of bids and proposals for government contracts, application for licenses, loans and benefits, order of government records, receipt of benefits such as social security, online procurement, and citizen commentary on legislative issues. GPEA requires that federal agencies must make available by 2003 the capability for online submission and receipt of forms, documents, and data.

Another law that helped set the stage for electronic government and cross-agency partnerships is the Information Technology Management Reform Act of 1996 (later renamed the Clinger-Cohen Act). As introduced by Senator Cohen, the intent of the Act was to be:

A bill to facilitate, encourage, and provide for efficient and effective acquisition and use of modern information technology by executive agencies; to establish the position of Chief Information Officer of the United States in the Office of Management and Budget; to increase the responsibility and public accountability of the heads of the departments and agencies of the Federal Government for achieving substantial improvements in the delivery of services to the public and in other program activities through the use of modern information technology in support of agency missions; and for other purposes. (S.946)

Coincident with the passage of the Clinger-Cohen Act was Executive Order 13011, "Federal Information Technology" of July 16, 1996. This integrates provisions of the Clinger-Cohen Act of 1996, the Paperwork Reduction Act of 1995, and the Government Performance and Results Act of 1993. More importantly, it put the Presidential "seal of approval" on the value and importance of information and its attendant technologies to government. This Executive Order is but one of many information-focused policies created during the Clinton Administration. The creation of the National Performance Review on March 3, 1993 (later renamed the National

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Partnership for Reinventing Government) represented the Administration's visible intent to use information technology to create a more responsive and fast-acting government.<sup>11</sup>

To provide ongoing direction to the FirstGov.gov effort, the President's Management Council (PMC) established a FirstGov.gov Board of Directors, which consists of eight members from the PMC and three members of the Federal CIO Council. The board is responsible for coordinating FirstGov.gov issues across the executive, legislative, and judicial branches. Daily operations are managed by the General Services Administration (GSA), which has staffed a FirstGov.gov project team to lead the effort. This team, in turn, manages a \$4-million, 2-year contract to operate and maintain the Firstgov.gov web site. The contract does not cover services such as redesigning the web site or changing its hosted location. It also does not cover the electronic search function that (1) collects and indexes information from all government web sites, (2) stores that information in a single large database, and (3) performs searches on the database to fulfill user requests. That search function is being provided to FirstGov.gov free of charge for 3 years by the Federal Search Foundation (Fed-Search), through a memorandum of understanding with GSA on behalf of the PMC and the FirstGov.gov Board. Dr. Eric Brewer, co-founder and chief scientist for Inktomi Corporation, established Fed-Search in June, 2000. Fed-Search has a contractual relationship with Inktomi for the technology and technical support to provide its free service to FirstGov.gov.

## Technological Environment

Figure 1: Typical **FirstGov.gov** Search Process(6)

The development of a government-wide portal on the Internet has been enabled by the dynamic convergence of a range of information technologies. The Internet itself is both a cause and an effect here. As use of the Internet grows, more use will occur—a "network effect."<sup>(7)</sup> As more and more people get online, the value of being online increases to each individual user. More recent developments in wireless networks are a major contributor to the diffusion of the Internet. Intranets and extranets take advantage of Internet technology to create additional communication and commerce tools within and between organizations. Digitalization is leading to new products and information redesign, while the creation of network appliances will connect the more prosaic household accoutrements such as the television, dishwasher, or light switch to the Internet and add information or service value to these appliances. Technology can enable inherently governmental processes such as taxation or voting to be embedded in the tools and rituals of daily life.

The search engine technology for FirstGov.gov was donated by Inktomi. Inktomi was founded in 1996 by Dr. Eric Brewer, an Internet pioneer who created a seminal caching and search technology that today, powers large public Web sites, such as AOL. Inktomi, headquartered in the United States and Europe, is publicly traded on Nasdaq. While the company was initially known for the powerful search engine it markets, Inktomi has diversified and today offers network caching services, content distribution venues, media publishing and broadcasting, and enterprise and Web search technologies. Its search engine, a "back-end" product for portals and user interfaces, enables the end-user to conduct a wide range of searches, including those from a high-volume Web-wide approach, to specially customized site/sector-specific queries. The technology used is a turnkey type, and it enables end-users to search for media and document files. Inktomi customers have two options for using the search technology: the client can run the search engine alone, using Inktomi software, or the client can have Inktomi set up, host and administer the site.

The search engine makes use of natural language processing technology to enable a more conversation-like search for the end-users. They can create searches based on words or word-phrases they wish to find. The advanced features of the search engine also support search parameters such as words located in titles, truncation of words, content limits, and page depth searches. The Inktomi search engine also offers the capability to search using Boolean operators and metawords—features which improve the quality of the search.<sup>(8)</sup>

The FirstGov.gov portal, when initially launched, contained more than 47 million pages of government information, indexed by subject, not by agency. Using the Inktomi search engine, every word of every document in the database is searched in less than a quarter of a second. The portal has a topical index, links to other levels and branches of government, and the ability to conduct online transactions. Today (December, 2001) FirstGov.gov contains information and services from more than 22,000 federal websites containing more than 35 million pages of information, services, and transactions. First Gov.gov also accesses an additional 16 million pages from the Internet portals of all 50 states and the District of Columbia

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(5) Government Paperwork Elimination Act; October 15, 1998. **Congressional Record**—Senate; S12627.

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(6) From Testimony of David McClure, Director Information Technology Management, U.S. General Accounting Office. To the House Subcommittee on Government Management, Information, and Technology. October 2, 2000.

(7) Shapiro, C; and Varian, H. Information Rules: A Strategic Guide to the Network Economy; Harvard Business School Press: Boston, 1998; 184.

(8) Mendelsohn, James. The Inktomi Search Engine and Its Variations. Retrieved from the World Wide Web January, 2002 at <http://dcb.sun.com/practices/profiles/inktomi.jsp>