On June 24, 2000, U.S. President Bill Clinton made the first Internet address to the nation. At that time he announced a bold initiative for the U.S. federal government; the deployment of firstgov.gov, a government-wide portal to be operational in “90 days or less.” This portal aims to be a single, trusted point-of-service for U.S. citizens and businesses to gain entry to federal services and information resources. If successful, this portal will provide a seamless entry to the estimated 50-100 million federal agency web pages currently on the Internet. It will centralize the procurement process for doing business with the federal government. It will centralize the federal grant application and grant award process. Firstgov.gov is another step in the U.S. government’s move towards a paperless environment for service delivery, information transfer, and commerce.

The policy, which enables such a delivery mechanism, harks back to the early days of the U.S. government, when access to information created or collected by the government was seen as a right for every citizen. The Federal Register Act of 1789 mandated that the deliberations of Congress be made public and accessible. A host of similar legislation followed, enabling the access to information collected, created and kept by federal agencies, the president, and the courts. Law also stipulates exemptions to access, with a focus on protecting the privacy of the individual about whom the government may maintain personal information. More recently, a number of key laws and presidential orders have been passed, creating a more strategic management of government information, top-level oversight of federal agency information and information systems, and accountability for assuring both access to and privacy of this information. The creation of the National Partnership for Reinventing Government in 1993 was instrumental in promulgating the use of information technology to connect government services, information, and business to the public. Reauthorization of the Paperwork Reduction Act and OMB Circular A-130 stipulated that information resources must be tied to the federal agency missions and included in strategic plans at the highest level. The Clinger-Cohen Act of 1996 and Executive Order 13011 Federal Information Technology reaffirmed this top-level support and accountability for agency information resources. The creation of
federal agency Chief Information Officers, who would directly report to the agency director, was a bold step in mandating an organizational structure that put the management of information resources at the decision table. Finally, the Government Paperwork Elimination Act (GPEA) of 1998 stipulated that no later than 2003 the federal executive agencies had to provide direct electronic access to their information and services. GPEA is a clear bellwether that the federal government is rapidly moving to an electronic commerce environment in its transactions with the public.

A number of recent reports have been issued which attest to the need for an electronic government. The June release of “Digital Economy 2000” by the U.S. Department of Commerce (2000) was significant in that it highlighted the finding that we are no longer in an emerging digital economy; the economy has become digital. The Progressive Policy Institute (Atkinson & Ulevich, 2000) issued an analysis of the federal government’s efforts to become electronic. Major impediments were still recognized to the success of this venture. In the same vein, the Government Accounting Office released testimony (GAO-AIMD/GGD-00-179) that stated the federal agencies are evolving towards electronic service and information delivery but there are significant challenges to be faced. Security of information systems and privacy protection for information about individuals were stressed as in both reports as issues necessitating the utmost attention before any system is launched. Lack of adequate funding for these new initiatives was also stressed as a major stumbling block in the creation of an electronic government.

Two other reports indicate the public need and readiness for electronic delivery of government information and services. “Some Assembly Required” (Dawes et al., 1999) laid out a blueprint for an electronic government available 24 hours a day, seven days a week, accessible to all, regardless of rural, urban, suburban, young, old, rich, poor. The need for appropriate organizational structures and enabling legislation, as well as adequate funding were delineated as challenges to the success of any electronic government project. In “Benchmarking the e-government revolution” (2000), three critical metrics are proposed for e-gov: (1) application and service relevance; (2) public trust; and (3) citizen and business satisfaction. A finding of this report was that the public wanted more electronic government services, more “business-like” government services, and electronic services that are closer to home for them, i.e., state and local capabilities.

It should be mentioned that this move to an electronic government is not limited to the United States. Worldwide we are seeing governments taking advantage of Internet technology to improve their delivery of services and information. Canada set its goal of having all government services online by 2000; Australia by 2001; and the United Kingdom by 2008. In The Netherlands a portal has been created (www.overheid.nl) to enhance accessibility to government information. Turkey, which began its use of the Internet in 1993, has over 30 municipal websites active as of March, 1999. Trends such as these are expected to accelerate in the coming years.

All these examples, reports and data are but the tip of the iceberg in the study of electronic government. New service delivery vehicles are being tested, research projects funded, laws being proposed almost on a daily basis. In the U.S., the National Science Foundation has a Digital Government grants program to support academic and research partnerships for development of electronic service deliv-
ery and information access applications. This is all well and good. But an important component of this move to an electronic government has not yet been considered—measurement of the effectiveness of electronic information and service delivery models. It is one thing to propose legislation enabling electronic government. It is another to create and maintain an electronic government that meets public needs in a manner that is superior to the traditional interactions of citizen to government and business to government. While the exciting part may be in innovation and creation of new models of government, the proof of these models is in the evaluation. There is a need to develop metrics to measure the results of electronic government applications to determine if they meet the agency missions and goals, and satisfy the agency customers. There are additional measures needed to insure that the systems are trusted and secure, conforming to privacy and data security legislation. Research questions abound. Some of the more pressing ones include:

- Do electronic applications provide faster, cheaper, more effective customer service?
- What defines customer service and customer satisfaction in a public arena?
- Do electronic applications disenfranchise any population group?
- What are the characteristics of effective electronic government applications?
- What are the critical success factors that lead to effective electronic government applications development and use?
- What are the relevant legal, policy and management requirements that influence electronic government information and services?
- Are these mandates being met?
- What makes an effective public-private partnership in the development and provision of electronic government service and information?
- What is the appropriate level of security for the various government databases and is it being achieved?
- What characteristics and assurances are necessary for the public to trust electronic government?

These are but a few of the questions that need investigation. We are already in the process of creating a dramatic transformation of what government is and what government does. Electronic government on a global scale is the next phase in the transformation to a digital society and a digital economy. It holds the promise of creating government that is closer to the public, responsive to public need and demand for excellent service, and to transform the realm of governance.

**References**


Electronic government: Federal indicatives are evolving but they face significant challenges. GAO/T-AIMD/GGD-00-179.