

## **Government Programs Involving Citizen Access to Internet Services**

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Propelled in part by a vigorous community of contractors and Vice President Gore's National Performance Review, government at the federal, state, and local levels has moved aggressively to take advantage of the service improvements and cost savings promised by Internet technologies. Executive Order 13011, issued July 16 of 1996, explicitly directs federal agencies to be aggressive with their public service Internet strategies. More than a matter of finding new ways to expedite traditional chores, government has used Internet development as a chance to expand its range of services.

Government's efforts to migrate services online raise immediate questions for online access. While the nation may be prepared to tolerate different levels of access to commercial goods and services – differences perpetuated in other arenas by cost and other factors – government services carry the burden of presumptively universal access. The prospect of a digitally-driven "blue ribbon" clientele breezing through taxes, contract opportunities and environmental hazard databases while a paper-bound proletariat waits in line is anathema to democratic culture. Curiously, few of government's online efforts – with the



notable exception of the universal service support features of the Telecommunications Act of 1996 – feature a concomitant effort to expand 'net access. Some programs dedicate kiosks to the data and processing needs of users, but most simply create content and/or interaction without directly attempting to expand the online population (e.g., coupling a new information system with new public access locations in libraries or post offices).

Such questions are sharpest in the areas of government services that stand to be used heavily by the very population groups least likely to enjoy easy access to the Internet – the urban and rural poor, seniors, and the less educated. Online information about public housing, notices of changes in the operation of public assistance offices, job databases and other services will do little good for much of their intended public if that public is not online.

Other online services, however, are tilted toward better- heeled, institutional audiences. Information about economic development and contracting opportunities, small business programs, and construction- oriented geographic information systems (GIS) are more likely to appeal to audiences with resources. Even here, however, access questions are important, particularly if access is defined to include the knowledge to use software and hardware. Small businesses may find it particularly difficult to attract and retain staff who can interact effectively with some of the more complex government information and service systems.

This paper will review government services in the following categories, listed in order of increasing ambition: provision of information online, point- to- point delivery of forms, and transactions with government agencies ranging from the very simple to the very complex. We will focus on Web- based projects because they are both the most widely available. Under each category will address issues basic to all online interactions with governance as they concern universal access to the Internet: privacy, security, standardization, and the use of kiosks as an alternative or a supplement to distributed Internet services.

Each category will be illustrated by one or more projects presently in development or operation at the local, state, or federal level of government.



There are hundreds of such projects, the full range of which cannot be summarized here. The projects we have highlighted have been chosen to provide a sense of the range of activity currently undertaken by government. In addition to the examples included in this narrative, please see the appended list of federal, state, and local projects.

We will not cover the many government efforts to improve government service internally by more efficient exchange of internal agency information, integrating inter- agency databases, moving messaging to groupware platforms, etc. These are important improvements in government's ability to function, and they have access implications in the broad sense that their continued development will a) make online government services more attractive, and b) require ever- increasing levels of online sophistication for effective use. They are not, however, direct public interface functions of the government and are therefore best omitted from this analysis.

## **Provision of Information**

The least ambitious – though not infrequently, the most effective – online efforts of government hinge around provision of information. There are innumerable examples. The EEOC Website provides extensive information on workplace discrimination, including recent developments in relevant case law.<sup>1</sup> The Texas Department of Protective and Regulatory Services introduced an Internet- accessible database that allows searches of licensed and registered childcare facilities in the state.<sup>2</sup> Chesterfield County, Virginia, has created a Website that provides access to information on pending construction plans.<sup>3</sup> The City of Seattle, King County, and the Washington State Department of

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<sup>1</sup> <http://www.eeoc.gov>

<sup>2</sup> National Technology Snapshot (February 1998). *Government Technology*, 11,2, p. 60

<sup>3</sup> National Technology Snapshot (April 1998). *Government Technology* 11, 12, p. 14



Transportation collaborate on a Website that provides travelers with information about the weather and road conditions.<sup>4</sup>

The comparative simplicity of such sites often belies the complexity of the information they contain. In the case of the EEOC, for example, much of the site would be very difficult for a non-lawyer to follow. A legally unsophisticated Internet user would have to know how to identify the less professionally oriented areas of the site. On the other hand, EEOC's site requires little in the way of purely technical sophistication. Many commercial sites – Nickelodeon, for example – require the addition of browser plug-ins to access many site features. Very few government information sites contain critical information of this sort. If they do (e.g., greetings from the Secretary), the information is usually represented elsewhere in less taxing form.

Security of citizen-generated information at such sites is a relatively low priority. Citizen users submit little, if indeed any information about themselves; they come for the material posted to the server.

Privacy is another matter, principally with respect to the possibility of surveillance while information from these (or any other) sources is accessed at public or workplace sites. Anyone seeking information in a library is unlikely to be able to hide that search from a curious neighbor. While this may not be troubling for generally available government information, it is easy to imagine some reluctance on the part of a worker to bring up the EEOC Website on a work-based computer during a period in which he or she is experiencing friction with a supervisor. Still, these are comparatively small concerns in an environment where personal information is unlikely to be displayed onscreen, and the available information is by definition in the public domain.

Government information provision has yet to settle on many standards. Different sites employ different search engines, organizational patterns, graphic

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<sup>4</sup> The site can be found at <http://www.metrokc.gov/govlink/>. It is described in Taking Winter by Storm (January 11, 1999). *Access America Online Magazine*, 1, 13, <http://www.accessamerica.gov>



densities, and page layouts. The Government Information Locator System (GILS) promises some relief, but GILS has yet to be widely implemented throughout even the federal government, much less state and local agencies.<sup>5</sup> Top-level locators such as Fedworld or the grant and contracting resources at FEDIX/ MOLIS can be very complicated to use. Though not an access barrier per se, this is a very real usage barrier that militates particularly against those with limited exposure to the Internet. The requirement always to learn a new interface for each government service makes efficient use of government sites, particularly occasional users, virtually impossible.

Kiosks provide a useful way to browse information, but the requirement to travel to one of what is typically a limited number of kiosks considerably erodes the value of the online information in the first place. Kiosks can be a very useful means of relieving the pressure on desk staff at a government agency and reducing citizens' time spent waiting in lines. Their present level of dissemination cannot, however, replicate the volume of access points found at open Internet terminals in libraries and schools. In cases where breadth of access can be traded for concentration of services (e.g., credit, debit or smart card reading, printing, biometric identification, etc.), kiosks can be a good solution. In the case of simple provision of publicly accessible information, there are no compensatory advantages to a kiosk model.

## **Point- to- Point Delivery of Forms**

Many government organizations are attempting to stem the resources invested in reproducing and delivering forms by making those forms available online. Some of these forms, such as the voter registration forms available from the New York City Board of Elections, are simple HTML documents that can be downloaded and used by anyone with a connection, a browser, and a printer. Others, such as the IRS's documents encoded in Adobe's Acrobat Format, require a very recent version of one of the two major browsers or permissions

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<sup>5</sup> OMB Watch (August 1998) *Launch and Forget? An OMB Watch Report on US Federal GILS*, <http://www.ombwatch.org/ombw/info/gilsreport3.pdf>



to upgrade earlier versions of the browsers with plug-ins and the knowledge to do so.

A wide range of governments has looked to the Web to distribute forms. At the state level, Pennsylvania's government is providing tax information and automotive forms online.<sup>6</sup> At the local level, the government of Somerset County, New Jersey has a Website that allows residents to print out forms such as voter registration, absentee ballots, and land development applications.<sup>7</sup> In addition to the IRS, federal forms-providers include the Schools and Libraries Corporation and the Small Business Administration.

Though undeniably convenient, provision of forms online is not a particularly rich or interactive use of Internet capabilities. In all of the cases mentioned above, these are electronic documents that must be printed out at a workstation and then filled out and mailed in. The completed forms cannot be submitted online, meaning that while citizens using the service receive their forms more quickly, all of the agency-side post-completion routines, as well as the citizen's paper-based efforts, remain the same.

As is the case for publicly available information, citizen security is not much at issue. Because the forms are completed and submitted offline, no sensitive information is exchanged over the Internet. Some of the same problems remain, particularly for workplace downloads – an employee working in a company with regulations barring moonlighting is unlikely to feel comfortable downloading Schedule C at the office – but the forms themselves contain no sensitive data.

There are a number of access issues, however, in the area of print resources and plug-ins. A citizen without a computer or a printer in the home trying to access the IRS in a public library may well run into trouble with page printing limits or the per-page cost of printing. Many libraries limit patrons to a fixed

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<sup>6</sup> S. Towns (October 1998). *Government Technology: Government Internet Guide 11*, 10, pp. 38-39

<sup>7</sup> National Technology Snapshot (April 1998). *Government Technology*, 11, 4, p. 70



number of pages, often ten or fewer. This would not be sufficient to print all of the explanatory material for Form 1040, much less a more complicated return requiring additional documentation. Further, because some public facilities are not equipped with the Acrobat reader, users may find it impossible to get submission-ready copies of the forms no matter how many pages they are able to print. The IRS page and many other government pages take pains to link to Adobe's Website to facilitate downloads of the reader software, but if users do not have permission to install software on a public machine – few publicly available machines are configured to allow this kind of customization – the lucidity of the links will be irrelevant.

Standardization remains an issue on the form provider side, principally along the lines mentioned in the last section. The wide use of Adobe's Acrobat product is a bright spot in standardization, with very little in the way of competing, non-HTML document formats that do not also feature an Acrobat option.<sup>8</sup> Finding forms on a site still requires, in many cases, a good deal of perseverance and some knowledge on the part of the users.

Standardization on the browsing end is more problematic. The different printing arrangements and browser plug-ins available at some points of online access may seriously compromise an individual user's ability to make full use of downloadable government forms. Resolving these problems will be difficult for large public institutions (e.g., schools and libraries) given the challenges of frequent network reconfiguration, staying abreast of the latest software, and allocating access times among users.

Kiosks that are set up to print forms can serve as an attractive alternative to library and school access when those facilities are otherwise restricted. Unlike seeking information alone online, downloading forms require a way to reproduce the paper at a fairly high level of quality. Kiosks, though less convenient as points of access, might be worth the trip if they allow activities that available elements of the distributed system do not.

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<sup>8</sup> The many government Websites that continue to offer forms and other information in WordPerfect or Lotus 1-2-3 format are exceptions to this rule.



## Transactions with Government Agencies

Opportunities for online transactions with government agencies range from simple requests for personalized information to highly complex interactions with advanced databases. State and local governments look to transactional systems to provide not only services to citizens, but to make themselves more attractive to potential investors. Unlike federal agencies, where institutional differentiation is accomplished largely by function, state and local governments have a strong incentive to differentiate themselves from one another at the service level, making it easier for businesses to locate employees, building sites, and key regional economic information.

The federal government has made increasing commitments to providing personally identifiable information online. Intense press and congressional scrutiny of the most public proposals have however, slowed the process. For example, the Social Security Administration (SSA) ventured an experiment in providing Personal Earnings Benefits Estimates Statements (PEBES) online in the summer of 1997. Fearful of security breaches, Congress insisted that the agency pull the system and review its security practices. In the interim, SSA posted an interactive form allowing a citizen to *request*, but not to *receive* a PEBES online.<sup>9</sup>

On some systems, information can also be obtained about ongoing transactions with the government. Clackamas County, Oregon, is developing a system that allows Oregon residents to access GIS data concerning zoning, property records, and utility easements together with school district information. Complaints about the system can be logged and checked online.<sup>10</sup> The San Diego County Department of Housing and Community Development makes it

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<sup>9</sup> Franklin S. Reeder (July 1997). Ideas for better service worth the risk. *Government Executive.com*, <http://govexec.com/tech/articles/0797tech.htm>. PEBES can be ordered from <http://www.ssa.gov>.

<sup>10</sup> J. Morrissey (1998) Oregon county clicks with objects-based GIS, *Civic.com*, 2, 1 pp. 20-23, 32.





possible for citizens to go online to check their applications for the County's housing assistance waiting list. Users can correct mistakes, fill in incomplete areas of their forms, and learn about agency decisions.<sup>11</sup> At the federal level, the US Department of Education accepts applications for student aid online.<sup>12</sup> The IRS has adopted secure browser technology of the sort employed at many commercial sites to allow taxpayers to complete, submit, and pay their taxes online.<sup>13</sup>

Much more complicated systems are under development for government contracting and purchasing, a focus of the National Performance Review. In January of this year OMB announced the federal government's commitment to the Public Key Infrastructure, detailing in a sixty-two page report the government's interest in creating secure environments and promoting the PKI solution specifically.<sup>14</sup> The Vice President detailed numerous cases of federal agencies planning to migrate their activities to Internet based systems employing a PKI, including the US Patent Office and the Department of Defense's Information Systems Agency.<sup>15</sup> The OMB's report emphasizes that this level of security is unattainable for many agencies of government in the short term, and undesirable for some kinds of transactions even in the long term. Nonetheless, the outline of the PKI process and the government's strong endorsement of the multi-level planning process required to make it effective is strong evidence that this is a direction in which online transactions concerning secure information will be developed in the near future.<sup>16</sup>

Privacy is an enormously important goal for almost all of these online transaction systems. As for the less involved systems, the inability to obtain

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<sup>11</sup> T. Mayor (1998) San Diego county brings public housing help to the net, *Civic.com*, 2, 12, pp. 10-11.

<sup>12</sup> FAFSA Online at <http://www.ed.gov/offices/OPE/express.html>

<sup>13</sup> K. Hannon (December 14, 1998). IRS begins paperless on-line tax filing trail. *USA Today*, p. B-1

<sup>14</sup> Office of Management and Budget (1999), *Access with trust*

<sup>15</sup> *Access America*, 1998, <http://gits.gov/htm/access.htm>; Alison Maxwell (January 6, 1999) Administration reveals plan for safe digital government, *Government Executive.com*, <http://www.govexec.com/dailyfed/0199/010699a2.htm>

<sup>16</sup> *Access with trust*, p. 29



screen privacy in public access facilities such as schools and libraries is a cause for concern. Such concerns are more critical here, however, given the greater sensitivity of the information exchanged. Even a comparatively simple transaction, such a request of SSA to have a PEBES mailed to a home involves entering a Social Security number. That number is not, in the present implementation of the PEBES system, disguised in any way on-screen; anyone beside or behind the user could see the information. In public and workplace environments alike, systems administrators may find themselves privy to logs of increasingly sensitive, private transactions. Some users and employees may have cause for concern were their employers able to track their efforts to determine the status of their public housing applications or benefits receipt.

The federal government's PKI campaign signals the clear importance of security in a transactional environment. A PKI itself – at least initially – will require a good deal of sophistication and organization on the part of users. We may well face a choice between security and access in some cases, particularly if access is understood to include users' basic familiarity with computing and comfort with disclosure of personal information to the government.

Standardization has yet to be achieved in security, interface design, or system functionality; the complexity of some of the systems suggests that it will be a long time in coming. Nonetheless, efforts to settle on a single set of security protocols and/or interface integrity issues are underway and if successful, will build a greater degree of usability into Internet-based systems. The complexity of all of these systems will be a significant hindrance to broad public utilization. Because some of these systems also require downloading large quantities of data – far more than most public access TEMP directories permit – it may not be possible to access at least some services of this sort without a dedicated computer. Even personally owned computers may not be adequate to the task should the data, graphics or memory requirements be particularly stringent.

Kiosks can be a useful alternative for some complex transactions. Kiosks are already used in California and other states to process traffic tickets, and other fines. In Arizona, kiosks even allow citizens to obtain a divorce. The advantage of these machines is that they are typically set up to process credit cards,



making the process seem much more familiar to a public well- accustomed to using cards in stores and banking at ATMs. Of course, the kiosks would be significantly less convenient than distributed, Internet- based systems.

## **Conclusion**

Government's online programs will make information access easier for those who are able to use:

- 1) A properly configured computer,
- 2) In a reasonably private environment,
- 3) For a length of time commensurate with the complexity of the systems accessed.

Each of the three requirements expresses a range of capacities, and this is particularly true with the third point: while some knowledge and facility can predicate low- level use of some of systems, the benefits will likely increase in nearly direct proportion to a user's preparedness. Education, training, and receptivity all loom large in the evaluation of genuine access to all government programs. It is not enough to count the number of people with an Internet connection to determine the impact of providing government services online.

