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# **State and Federal E-Government**

# in the United States, 2005

by

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## **Executive Summary**

This report presents the sixth annual update on the features that are available online through American state and federal government websites. Using a detailed analysis of 1,620 state and federal government sites, we measure what is online, what variations exist across the country, and what differences appear between state and national government. We compare the 2005 results to 2000, 2001, 2002, 2003, and 2004.

Among the more important findings of the research are the following:

- 1) 44 percent of federal sites and 40 percent of state sites meet the World Wide Web Consortium (W3C) disability guideline, up slightly from last year.
- 2) A growing number of websites offer online services. Seventy-three percent of state and federal sites have services that are fully executable online, compared to 56 percent last year.
- 3) One percent of government sites are accessible through personal digital assistants, pagers, or mobile phones, the same as last year.
- 4) A growing number of sites offer privacy and security policy statements. This year, 69 percent have some form of privacy policy on their site, up from 63 percent in 2004. Fifty-four percent now have a visible security policy, up from 46 percent last year.
- 5) federal government websites have a number of quality control issues, such as broken links, missing titles, missing keywords, and warnings and redirects to new pages.
- 6) 18 percent of sites offered some type of foreign language translation, compared to 21 percent last year.
- 7) 67 percent of government websites are written at the 12th grade reading level, which is much higher than that of the average American.
- 8) The highest ranking states include Utah, Maine, New Jersey, North Carolina, Michigan, Tennessee, Delaware, and Massachusetts. The most poorly performing e-government state is Wyoming.
- 9) Top-rated federal websites include the White House, the Department of State, Department of Treasury, Department of Agriculture, the Environmental Protection Administration, Social Security Administration, the Department of Housing and Urban Development, and the Federal Communications Commission. At the low end of the ratings are the various circuit courts of appeals.

## A Note on Methodology

This project is based on a comprehensive analysis of 1,620 government websites (1,559 state government websites, 48 federal government legislative and executive sites, and 13 federal court sites). The list of web addresses for the 50 states can be found at www.InsidePolitics.org/states.html, while the federal government sites are located through the national portal, FirstGov.gov.

Among the sites analyzed are portal or gateway sites as well as those developed by court offices, legislatures, elected officials, major departments, and state and federal agencies serving crucial functions of government, such as health, human services, taxation, education, corrections, economic development, administration, natural resources, transportation, elections, and agriculture. An average of 31 websites is studied for each individual state so we could get a full picture of what is available to the general public, plus all the major federal government sites. Tabulation for this project was completed at Brown University in Providence, Rhode Island by Ethan Burton and Jeff Tiell during June and July, 2005.

Websites are evaluated for the presence of a number of different features, such as online publications, online databases, audio clips, video clips, foreign language or language translation, advertisements, premium fees, user payments or fees, disability access, several measures of privacy policy, multiple indicators of security policy, presence of online services, the number of

online services, digital signatures, credit card payments, email addresses, comment forms, automatic email updates, website personalization, PDA accessibility, and readability level.

#### Online Information

In looking at the availability of basic information at American government websites, we find that access to publications and databases are excellent. Ninety-eight percent of sites provide access to publications (the same as last year), while 67 percent have databases (down from 87 percent in 2004).

Similar to the patterns found in previous years, most websites do not incorporate audio clips or video clips into their sites. Twelve percent provide audio clips, while 18 percent have video clips.

Percentage of Websites Offering Publications and Databases

	2000	2001	2002	2003	2004	2005
Phone Contact Info.	91%	94%	96%			
Address Info	88	93	95			
Links to Other Sites	80	69	71			
Publications	74	93	93	98	98	98
Databases	42	54	57	80	87	67
Audio Clips	5	6	6	8	17	12
Video Clips	4	9	8	10	21	18

#### **Electronic Services**

Fully executable, online service delivery benefits both government and its constituents. In the long run, such services offer the potential for lower cost of service delivery and it makes services more widely accessible to the general public, who no longer have to visit, write, or call an agency in order to execute a specific service.

Of the web sites examined this year, 73 percent offer services that are fully executable online, up from 56 percent last year. Of the sites this year, 27 percent have no services, 11 percent offer one service, 8 percent have two services, and 54 percent have three or more services. Clearly, both state and federal governments are making significant progress at placing fully executable services online.

Percentage of Government Sites Offering Online Services

	2000	2001	2002	2003	2004	2005
No Services	78%	75%	77%	56%	44%	27%
One Service	16	15	12	15	18	11
Two Services	3	4	4	8	11	8
Three or More Services	2	6	7	21	27	54

One area where government sites are making progress is in offering the ability to make credit card purchases online. Of the government websites analyzed, 59 percent accept credit cards, nearly double the 25 percent found last year. With the increase in online services, more and more sites have created a means for credit card payments. However, only one percent are set up for digital signatures, the same as last year.

## **Novel Services**

Numerous state tourism sites feature online planner options that allow users to map out a trip complete with accommodations, attractions, and dining. When using this option, businesses throughout the state are suggested to the user while a trip is mapped out within the state. This helps travelers know what food, lodging, and service options are available in different areas.

State portals also call attention to the ability to register for many types of different state licenses online. While the ability to apply for and purchase boating, hunting and fishing licenses, register for "Do Not Call" lists, renew motor vehicle registrations and driver's licenses, and submit online job applications were the most common services, there were some more unusual licenses that could be obtained online as well. From Liquor licenses in Pennsylvania to plumbing licenses in Oregon, many states have a range of licenses to choose from.

Among the other novel services that we found this year included the following: Live online help desk in the form of a chat room-

- (KS) state portal page
- (KY) state portal page
- (ME) state portal page
- (NE) state portal page
- (OH) state portal page
- (OK) state portal page
- (UT) state portal page
- (VA) state portal page

Amber Alert either through PDA alert or a ticker at the top of the users computer screen-

- (AL) department of public safety
- (AR) state portal page
- (AZ) department of public safety
- (CA) state portal page
- (CO) state patrol
- (CT) department of public safety
- (FL) department of corrections
- (IL) state patrol
- (IN) state patrol
- (IA) state portal page
- (ME) state portal page
- (MO) department of public safety
- (NE) state patrol
- (NM) department of public safety
- (NV) department of homeland security
- (NE) state patrol
- (SD) state portal page
- (WA) state portal page

#### Link to Correctional Industries Service-

- (CO) department of corrections
- (CT) department of corrections
- (FL) department of corrections
- (GA) department of corrections

- (ID) department of corrections
- (IL) department of corrections
- (IN) department of corrections
- (IA) department of corrections
- (KS) department of corrections
- (KY) department of corrections
- (MI) department of corrections
- (MN) department of corrections
- (MO) department of corrections
- (MT) department of corrections
- (NC) department of corrections
- (NE) department of corrections
- (NH) department of corrections
- (NM) department of corrections
- (PA) department of corrections
- (SC) department of corrections
- (TX) department of corrections
- (VA) department of corrections

Service that provides the option of reserving a campsite online-

- (CA) state portal page
- (CO) state portal page
- (CT) state portal page
- (DE) state portal page
- (GA) Georgia state parks
- (IN) state portal page
- (KY) department of parks
- (ME) department of parks
- (MD) department of natural resources
- (MA) department of conservation and recreation
- (MI) department of natural resources
- (MN) department of tourism
- (MO) department of natural resources
- (MT) department of tourism
- (NE) state portal page
- (NH) state portal page
- (OH) department of natural resources
- (TN) state portal page
- (VT) state portal page
- (WA) state portal page

Provide an online auction block for surplus goods owned by the state government

- (CO) state portal page
- (KY) state portal page
- (MI) state portal page
- (OK) department of central services
- (SC) state portal page
- (UT) department of administrative services

• (US) firstgov.gov

Register and Purchase a concealed handgun license

• (TX) department of public safety

Pay tuition for multiple state universities (Eastern Oregon State, Portland State University, and Southern Oregon University)

• (OR) state university system

#### Live Beach Cam

• (AL) state portal page

#### Vacation Kit

- (AR) state portal page
- (MT) state portal page
- (NE) state portal page

#### State Avalanche Alerts

• (CO) state portal page

# E-Alert Traffic and Rail Updates

• (CT) Department of Transportation

#### **EZ-PASS**

- (DE) state portal page
- (MD) state portal page
- (NH) state portal page
- (NJ) EZ-Pass site

## Ask a Librarian Live

- (CO) state portal page
- (DE) state portal page
- (NE) state portal page
- (NH) state portal page
- (OR) state portal page

## Condominium Registration

• (HI) state portal page

# Idaho Potato Merchandise

• (ID) Potato Commission

#### State Parks Gift Card

• (KY) department of parks

# State Fair Tickets

- (KY) state portal page
- (MO) state portal page

# Prescription Drug Price Finder

- (MD) state portal page
- (NH) state portal page

# Report a Pothole

- (MA) state portal page
- (NJ) department of transportation

#### Submit Your Good Ideas

• (MT) state portal page

# Find Cheapest Gas Prices

• (US) firstgov.gov

#### **Privacy and Security**

A growing number of sites offer privacy and security statements. In 2005, 69 percent have some form of privacy policy on their site, up from 63 percent in 2004. Fifty-four percent now have a visible security policy, up from 46 percent last year.

	2000	2001	2002	2003	2004	2005
Privacy Policies	7%	28%	43%	54%	63%	69%
Security Policies	5	18	34	37	46	54

In order to assess particular aspects of privacy and security, we evaluate the content of these publicly posted statements. For privacy policies, we look at several features: whether the privacy statement prohibits commercial marketing of visitor information; use of cookies or individual profiles of visitors; disclosure of personal information without the prior consent of the visitor, or disclosure of visitor information with law enforcement agents.

In this analysis, we found that 64 percent of government websites prohibited the commercial marketing of visitor information. Twenty-one percent prohibited the use of cookies or individual profiles. Sixty-five percent say they do not share personal information, and 62 percent indicate they can disclose visitor information to law enforcement agents. Forty-six percent indicate they use computer software to monitor website traffic.

**Assessment of E-government Privacy and Security Statements** 

	2001	2002	2003	2004	2005
Prohibit Commercial Marketing	12%	39%	32%	40%	64%
Prohibit Cookies	10	6	10	16	21
Prohibit Sharing Personal Information	13	36	31	36	65
Share Information with Law Enforcement		35	35	39	62
Use Computer Software to Monitor Traffic	8	37	24	28	46

#### **Broken Links and Anchors**

With government websites regularly being changed and updated, it is no surprise that most pages have quality and usability issues. Web links often get broken when the site is redesigned or updated, and usability problems also can emerge when different sections of a portal are upgraded. However, these problems make it difficult for visitors to effectively navigate a

site. When there are broken links, broken anchors, slow loading pages, or other navigational difficulties, people get frustrated, and will often abandon the site. In addition, the perception of an organization is often influenced by the experience it delivers online. To serve as an effective channel and to further encourage online adoption, the user experience and online content must be continuously monitored, measured and improved.

To examine these problems, we used the Quality module of Watchfire's WebXM to analyze each of the 71 federal government agency websites. WebXM is an enterprise solution that automates the scanning, analysis and reporting of online security, privacy, quality accessibility and compliance issues across websites. For this project, WebXM was used to scan and identify quality issues that can affect the user experience, such as broken links and anchors, broken links, missing titles, missing keywords, missing descriptions, warnings and redirects and poor search functionality.

Among many other online issues, WebXM identifies the number of broken links and broken anchors on each site. Broken links refer to URL's that are literally broken and do not connect properly, thereby preventing the visitor from being able to see the page that is listed. Anchors benefit site visitors by providing simple navigation through hypertext links between documents or parts of the same document. Broken anchors are a special type of broken link and present navigation difficulties going back and forth across pages.

The analysis drew a random sample of 5,000 pages publicly accessible through each of the federal agency websites. During the months of June and July, 2005, WebXM was used to analyze the number of broken links and anchors in each site employing this random sample. For agency sites with fewer than 5,000 pages, we pro-rated their errors based on an N of 5,000 pages so that the number of sites evaluated would be comparable.

Based on this analysis, the federal agency with the largest number of broken links was the House of Representatives (1,877 broken links), followed by the Small Business Administration (1,870), National Science Foundation (1,651), the 5<sup>th</sup> Circuit Court of Appeals (1,641), and the Department of the Interior (1,618).

The federal agency with the largest number of broken anchors was the Department of Agriculture with 2,552, followed by the Federal Communications Commission (with 1,832 broken anchors), Environmental Protection Agency (1,726), White House (1,618), and National Science Foundation (1,213). The Appendix lists the number of broken links and anchors for each of the federal sites.

#### **Search Problems**

User expectations are high, and they're quick to reject websites that don't measure up. In addition to being accessible to as wide an audience as possible, website content also needs to be optimized for search engines to help visitors quickly and easily find the information they need. Government websites have grown more extensive and more complex, and it has become even more important to be able to search a website efficiently and effectively. WebXM also provides an analysis of critical search and navigation problems that make it difficult to search websites: the number of missing titles, missing keywords, and missing descriptions and missing Alt Text descriptions.

Using the random sample of 5,000 pages from each federal agency, the jurisdiction with the largest number of missing titles was the 6<sup>th</sup> Circuit Court of Appeals (2,710), followed by the 2<sup>nd</sup> Circuit Court of Appeals (2,023), 9<sup>th</sup> Circuit Court of Appeals (1,472), the 11<sup>th</sup> Circuit Court of Appeals (1,418), and the 4<sup>th</sup> Circuit Court of Appeals (1,375). The agency with the largest number of missing keywords was the National Labor Relations Board (5,003), followed by the 9<sup>th</sup> Circuit Court of Appeals (5,001), and the 1<sup>st</sup> Circuit Court of Appeals, Equal Employment Opportunity Commission, Homeland Security, and NASA (each with 5,000). The area with the largest number of missing descriptions was the 9<sup>th</sup> Circuit Court of Appeals and Federal Reserve

Bank (both with 5,001), followed by 1<sup>st</sup> Circuit Court of Appeals, Congressional Budget Office, Internal Revenue Service, and Supreme Court (each with 5,000). The agency with the largest number of Missing Alt Texts was the 10<sup>th</sup> Circuit Court of Appeals (4,998), followed by the Senate (4,971), Department of State (4,752), Department of Labor (4,649), and General Accounting Office (4,346). The Appendix lists the number of search problems for each agency.

## **Design Problems**

Design problems still plague some government websites. Among many other issues, WebXM identifies the number of page warnings and redirections on a website that redirect visitors to sites that have changed or no longer exist in addition to providing information about any links on the website that point to files on a local server. There may be URLs that point to files on your local server that users outside your network cannot access. These will appear as broken links to users. Redirects can also slow down the performance of a website since the web server must do more work to process these requests from the browser. Using the random sample of 5,000 pages from each federal agency, the site having the highest number of warnings and redirections was FirstGov (7,986), followed by the Office of Management and Budget (4,976), Library of Congress (3,680), Housing and Urban Development (3,480), and General Services Administration (2,928). The agency with the largest number of links to local files was the House of Representatives (81), followed by the Department of Interior (69), National Parks Service (50), Department of Agriculture (40), and Department of Transportation (35). The Appendix lists the number of these kinds of design problems for each federal agency.

# Readability

Literacy is the ability to read and understand written information. According to national statistics, about half of the American population reads at the eighth grade level or lower. A number of writers have evaluated text from health warning labels to government documents to see if they are written at a level that can be understood by citizens. The fear, of course, is that too many government documents and information sources are written at too high of a level for citizens to comprehend.

To see how government websites fare, we use a test of the grade-level readability of the front page of each state and federal government website that we studied. Our procedure is to employ the Flesch-Kincaid standard to judge each site's readability level. The Flesch-Kincaid test is a standard reading tool evaluator and is the one used by the United States Department of Defense. It is computed by dividing the average sentence length (number of words divided by number of sentences) by the average number of syllables per word (number of syllables divided by the number of words).

As shown below, the average grade readability level of American state and federal websites is at the 11.0th grade, up from the 10.8<sup>th</sup> grade last year. Both numbers are well above the comprehension of the typical American. Sixty-seven percent of sites read at the 12th grade level. Only 10 percent fell at the eighth grade level or below, which is the reading level of half the American public.

	Percentage Falling within Each Grade Level
Fourth Grade or Less	2%
Fifth Grade	1
Sixth Grade	1
Seventh Grade	2
Eighth Grade	4

Ninth Grade	6
Tenth Grade	7
Eleventh Grade	10
Twelve Grade	67
Mean Grade Level	10.8

## **Disability Access**

There has been some progress in disability access on government websites. We tested accessibility using automated software provided by Watchfire, Inc. Its Accessibility module scans online properties for over 170 comprehensive checks such as appropriate text and background color contrast and the presence of text equivalent "alt" tags on images. The scan results automatically formulate user-friendly dashboards and reports, affording visibility into the issues that may be affecting the accessibility of the site and driving potential users away

In our analysis, we used this software to judge whether sites are in compliance with the Priority Level One standards recommended by the World Wide Web Consortium (W3C). Sites are judged to be either in compliance or not in compliance based on the results of this test. In this year's study, 40 percent of state sites (up from 37 percent) satisfy the W3C standard of accessibility. Forty-four percent of federal sites meet the W3C standard, up from 42 percent last year.

Percentage of State and Federal Sites Meeting W3C Disability Accessibility						
2003 2004 2005						
Federal	47%	42%	44%			
State	33	37	40			

## **Foreign Language Access**

This year, 18 percent of government sites provided foreign language accessibility. This is down slightly from the 21 percent that did so last year. By foreign language feature, we mean any accommodation to the non-English speaker, from a text translation into a different language to translating software available for free on the site to translate pages into a language other than English.

	2000	2001	2002	2003	2004	2005
Foreign Language	4%	6%	7%	13%	21%	18%
Access						

## **Ads, User Fees, and Premium Fees**

Three percent of sites have commercial advertisements on their sites, meaning non-governmental corporate and group sponsorships, compared to one percent last year. When defining an advertisement, we eliminate computer software available for free download (such as Adobe Acrobat Reader, Netscape Navigator, and Microsoft Internet Explorer) since they are necessary for viewing or accessing particular products or publications. Links to commercial products or services available for a fee are included as advertisements as are banner, pop-up, and fly-by advertisements.

	Percentage	of Sites	with Ads,	User Fees.	, and Premium	Fees
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	2001	2002	2003	2004	2005
Ads	2%	2%	1%	9%	3%
User Fees	2	2	3	19	2
Premium Fees		1	0.4	4	0

Ads were utilized in several different states. For example, the West Virginia Auditor site had an advertisement from Oracle Technology. Vermont Economic Development featured a business of the month (Darn Tough Socks). The Texas Economic Development page had an ad for Toyota. South Carolina's Economic Development site had commercials for Delta Dental, Holmes Smith Developments, McNair Law Firm, and Nelson Mullins Riley- Attorneys & Counselors at Law. Its Tourism also provided links to a magazine, Golf Digest.

Oklahoma's State Portal had a link to the Oklahoma Redhawks Minor League Baseball Club. The New York Corrections Department had an ad for Corcraft. The New Mexico Economic Development page had an advertisement for Electrolux Swedish Appliances. The North Carolina Tourism site had a link to the U.S. Open Golf Championship held in Pinehurst. The New Hampshire Economic Development page had links to the Manchester Monarchs Hockey Club, Independence Air, Manchester Wolves of the Arena Football League, 102.3 The Hawk: Classis Rock Radio Station, and Citizens Bank. Meanwhile, its Tourism Agency had a commercial for the Mt. Washington Resort and Spa.

Other ads included the North Dakota tourism site, which features commercials for Amtrak, Taxi Service, Auto Rental, and numerous sites related to Lewis and Clark. The Nebraska tourism webpage had ads for numerous motel chains such as Best Western, Holiday Inn Express, Fairfield Inn, Days Inn, and Super 8 Motel. The Mississippi tourism site had links to various golf courses, restaurants, casinos, and other attractions. Massachusetts Tourism had ads for Hertz Rental Car. Louisiana Tourism had links to the Best Western Motel Chain. The Indiana Tourism site had ads for a number of motel chains including Lees Inn, Ramada, Choice Hotels International, Days Inn along with Amish Country, Wineries, and Golf sites. The Colorado Treasurer's webpage had lins to Amazon, AOL Time Warner, Cisco Systems, Ebay, Microsoft, Yahoo, and College Invest. US Airways was the official airline of the Alabama Tourism page.

Two percent of state and federal sites require user fees to access information and services, including archived databases of judicial opinions and up-to-the-minute legislative updates. Only a handful of government websites require premium fees to access portions of the e-government site. By a premium fee, we mean financial charges that are required to access particular areas on the website, such as business services, access to databases, or viewing up-to-the-minute legislation. A charge is classified as a premium fee only if a payment is required in order to enter a general area of the website or access a set of premium services.

#### **Public Outreach**

One of the most promising aspects of e-government is its ability to bring citizens closer to their governments. In our examination of state and federal government websites, we determine whether a visitor to the website can email a person in the particular department other than the Webmaster. In 2005, we found that 92 percent have email addresses, about the same as last year. Other methods that government websites employ to facilitate democratic conversation include areas to post comments (other than through email), the use of message boards, surveys, and chat rooms. This year, we found that 28 percent of websites offer this feature, similar to 2004.

	2000	2001	2002	2003	2004	2005
Email	68%	84%	81%	91%	93%	92%
Search	48	52	43			
Comments	15	5	10	24	29	28
Email Updates	5	9	5	12	24	21
Broadcast	2	7	4			
Personalization	0	1	2	2	3	3
PDA Access				1	1	1

Twenty-one percent of government websites allow citizens to register to receive updates regarding specific issues. With this feature, web visitors can input their email address, street address, or telephone number to receive information about a particular subject as new information becomes available. The information can be in the form of a monthly e-newsletter highlighting an attorney general's recent opinions to alerts notifying citizens whenever a particular portion of the website is updated. Three percent of sites allow for personalization of the site in order to tailor the website information directly to the individual viewer. Some state portal pages are beginning to apply this technology to allow users to customize the site to highlight the information that they indicate is important and useful to them.

#### **State E-Government Ranking**

In order to see how the 50 states rank overall, we created a 0 to 100 point e-government index for each website within that state. Four points are awarded each website for the following features: publications, databases, audio clips, video clips, foreign language access, not having ads, not having user fees, not having premium fees, W3C disability access, having privacy policies, security policies, allowing digital signatures on transactions, an option to pay via credit cards, email contact information, areas to post comments, option for email updates, allowing for personalization of the website, and PDA or handheld device accessibility. These features provide a maximum of 72 points for particular websites.

Each site then qualifies for up to 28 additional points based on the number of online services executable on that site (zero for no services, one point for one service, two points for two services, three points for three services, four points for four services, and so on up to a maximum of 28 points for 28 services or more). The e-government index therefore runs along a scale from zero (having none of these features and no online services) to 100 (having all 18 features plus at least 28 online services). This total for each website is averaged across all of the state's web sites to produce a zero to 100 overall rating for that state. On average, we assess around 31 government websites in each state across the executive, legislative, and judicial branches of government.

The top state in our ranking is Utah. Looking across all of its websites on the dimensions we analyzed, it scores an average of 62.1 percent. It is followed by Maine, New Jersey, North Carolina, Michigan, Tennessee, Delaware, and Massachusetts. The most poorly performing egovernment state is Wyoming.

Overall State E-Government Performance, 2005

	······································		
UT	62.1	ME	61.3
NJ	59.5	NC	59.0
MI	53.0	TN	52.2
DE	51.9	MA	51.4
MS	50.7	NV	50.5

AR	50.4	OR	49.2
CO	49.1	NY	49.0
ID	47.8	ND	47.7
NH	46.8	TX	45.8
CT	44.1	IN	44.0
ОН	43.6	PA	43.3
NE	43.2	SD	43.0
WA	41.9	MT	41.5
KS	41.1	AZ	40.9
WI	40.1	MD	39.9
FL	39.7	IA	39.5
GA	38.2	KY	38.1
VA	37.6	WV	37.4
HI	37.2	IL	36.9
RI	36.5	MO	36.5
VT	36.0	MN	35.5
SC	34.9	OK	34.8
NM	34.4	LA	33.8
CA	33.8	AL	31.9
AK	29.2	WY	28.4

# **Federal Agency E-Government Ranking**

Federal sites are rated by the same criteria as the 50 states. An identical e-government index is devised that rated federal websites on contact information, publications, databases, portals, and number of online services (see previous section). The unit of analysis is the individual federal agency.

The top e-government performers are the White House, the Department of State, Department of Treasury, Department of Agriculture, the Environmental Protection Agency, Social Security Administration, the Department of Housing and Urban Development, and the Federal Communications Commission. At the low end of the ratings are the various circuit courts of appeals.

Overall Federal Agency E-Government Performance, 2005

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White House	88.0	Dept. of State	84.0					
Dept of Treasury	84.0	Dept. of Agriculture	81.0					
Environ Protect	80.0	Social Security	80.0					
Agency		Admin.						
Housing/Urban Dev.	73.0	Fed. Comm. Comm	72.0					
Firstgov portal	72.0	Health/Human	72.0					
		Services						
Con. Product Safety	69.0	Dept. of Labor	69.0					
Small Bus Admin	69.0	Dept. of Commerce	68.0					
Dept of Justice	65.0	Fed Reserve	65.0					
Food and Drug	65.0	Homeland Security	65.0					
Admin.								
Dept. of	64.0	Office Man Budget	64.0					
Transportation								
Dept. of Energy	61.0	Dept. of Interior	61.0					

Eq Employ Opp	61.0	Gen Services Admin	60.0
IRS	60.0	Dept of Education	58.0
NASA	58.0	Library of Congress	53.0
Natl Science Found	53.0	Postal Service	52.0
Sec/Exchange Comm	52.0	Fed. Deposit	49.0
Fed. Elect. Comm.	48.0	Dept of Defense	45.0
House of	45.0	Govt Printing Office	44.0
Representatives			
Fed. Trade Comm.	42.0	Cent Intelligence Ag	41.0
Natl Endow Arts	40.0	Natl Transpt Safety	40.0
US Trade Rep	40.0	Natl Labor Relations	38.0
Natl Parks	38.0	Gen Account Office	37.0
Supreme Court	37.0	Cong Budget Office	36.0
4 <sup>th</sup> Circuit Ct Appeals	32.0	5 <sup>th</sup> Circuit Ct Appeal	29.0
Natl Endow Human	29.0	Veterans Affairs	29.0
6 <sup>th</sup> Circuit Ct Appeal	28.0	9 <sup>th</sup> Circuit Ct Appeal	28.0
Senate	28.0	10 <sup>th</sup> Circuit Ct of App	24.0
1 <sup>st</sup> Circuit Ct of App	24.0	2 <sup>nd</sup> Circuit Ct of App	24.0
8 <sup>th</sup> Circuit Ct of App	24.0	Fed Circuit Ct of App	24.0
11 <sup>th</sup> Circuit Ct App	21.0	3 <sup>rd</sup> Circuit Ct of App	20.0
7 <sup>th</sup> Circuit Ct Appeal	20.0		

#### Conclusions

To summarize, considerable progress has been made in placing services and information online. But several areas exist in which states need to improve the quality and ease of use with their websites. Ease of navigation is an issue of importance when constituents are searching for specific services on portal websites. The easiest way to solve the problem is to use a toolbar on the top of each page on the state's website that gives access to all online services at a central location. This also gives a look of uniformity to the site, making users more comfortable while navigating the site and providing a familiar look no matter what page the constituent is using. Constituents can access the services with ease from any point on the site.

Another problem that arises is providing services on sites, but not making the services easily visible or accessible. For example, Washington and New York both offer Amber Alert PDA options from their sites that send messages right to a constituent's cell phone in case of an emergency. However Washington's option is listed clearly on the state portal page as an emergency service, while New York has no mention of the service on the portal page, department of public safety homepage, or online services database.

States could solve this by having a current online services page that consolidates all the department's services onto one database. Some states offer a consolidated service page, but have not updated them with all of services that are available.

Another possibility would be to take advantage of the empty borders along the margins of web pages. Many of the pages have wide margins that are filled with backgrounds of some kind. It would be easy to fill these margins with icons that highlight useful and related services to the department page being viewed. These icons could be linked to the service they were providing. This would improve navigation abilities and make it easy to find relevant services.

A resource that most states did not take advantage of that could greatly simplify their users' experience is the personalization feature. Very few states offered users the chance to customize websites to their particular interests. This option would allow constituents to narrow the large amount of information and services that often feel overwhelming. By using the

personalization service like the Ohio website does, users could find information relevant to them in a more orderly fashion without having to sift through all the other services provided by the state.

A myriad of sites had services. However, few portal sites contained a display that was pleasing to the eye. For example, Michigan's site offers a variety of services and features, however, the font size is too miniscule for the average viewer. Conversely, Maine's portal site is an optimal example of how a multitude of content can be arranged well with a pleasing design.

The effectiveness and comprehensiveness of sites often waned when arriving at lesser known and well funded agencies, such as veteran's affairs, housing, and social services. Tourism sites were practically always well designed and colorful, as were economic development sites. Furthermore, some states had sites uniquely constructed for a cash product of that state, such as the citrus site in Florida, the corn site in Nebraska, and the potato site in Idaho. All three of these sites were well designed and had numerous features and links.

In regard to federal websites, these pages tend to be much more complete and informative than states' sites, perhaps due to more money and know-how being put into them. They also offer a range of unique services. The federal site <a href="http://www.firstgov.gov/">http://www.firstgov.gov/</a> was especially service oriented, from obtaining cheap gas prices in your area and finding your zip code to passport renewal and ordering consumer publications, the site has many options.

General improvements that can be made from our analysis of these websites are more reliance on forums or interactive features that allow the constituent to become involved with the site. A number of sites had pages where a viewer could mail a response or query, but many did not have online options further than email and we found this to be a problem easily ameliorated by an interactive form. Furthermore, in our research we often found the notion of privacy and security policy sites to be lacking on some sites, especially sites that are not as popularly visited.

States furthermore need to publicize their sites so citizens know the websites exist. In recent years, states such as Pennsylvania, Indiana, and Florida have provided the state web address on vehicle license plates. This is an effective way to promote electronic government to the average person.

## **Appendix**

Table A-1 Overall State E-Govt Ratings, 2004 and 2005 (2004 ranking in parentheses)

Rank	State	Rating Out of 100 Pts	Rank	State	Rating Out of 100 Pts
1.(3)	Utah	62.1(54.6)	2.(2)	Maine	61.3(55.2)
3.(10)	New Jersey	59.5(41.3)	4.(31)	North Carolina	59.0(34.8)
5.(22)	Michigan	53.0(38.0)	6.(1)	Tennessee	52.2(56.5)
7.(9)	Delaware	51.9(44.2)	8.(6)	Massachusetts	51.4(51.0)
9.(49)	Mississippi	50.7(26.8)	10.(35)	Nevada	50.5(33.7)
11.(16)	Arkansas	50.4(39.2)	12.(19)	Oregon	49.2(38.6)
13.(27)	Colorado	49.1(35.5)	14.(4)	New York	49.0(53.6)
15.(36)	Idaho	47.8(33.7)	16.(30)	North Dakota	47.7(34)
17.(26)	N. Hampshire	46.8(36.0)	18.(8)	Texas	45.8(44.5)
19.(12)	Connecticut	44.1(40.3)	20.(7)	Indiana	44.0(46.0)
21.(20)	Ohio	43.6(38.5)	22.(15)	Pennsylvania	43.3(39.3)
23.(47)	Nebraska	43.2(28.5)	24.(28)	South Dakota	43.0(35.5)

25.(23)	Washington	41.9(37.8)	26.(33)	Montana	41.5(34.1)
27.(14)	Kansas	41.1(39.9)	28.(18)	Arizona	38.8(39.5)
29.(43)	Wisconsin	40.1(30.0)	30.(32)	Maryland	39.9(34.4)
31.(13)	Florida	39.7(39.9)	32.(37)	Iowa	39.5(33.3)
33.(25)	Georgia	38.2(36.9)	34.(17)	Kentucky	39.0(36.8)
35.(24)	Virginia	37.6(37.7)	36.(50)	West Virginia	37.4(26.0)
37.(40)	Hawaii	37.2(32.3)	38.(5)	Illinois	36.9(51.0)
39.(29)	Rhode Island	36.5(35.5)	40.(38)	Missouri	36.5(33.0)
41.(41)	Vermont	36.0(31.3)	42.(34)	Minnesota	35.5(34.0)
43.(42)	South Carolina	34.9(30.6)	44.(45)	Oklahoma	34.8(29.8)
45.(46)	New Mexico	34.4(28.8)	46.(21)	Louisiana	33.8(38.2)
47.(11)	California	33.8(41.2)	48.(44)	Alabama	31.9(29.9)
49.(39)	Alaska	29.2(32.8)	50.(48)	Wyoming	28.4(28.4)

Table A-2 Overall Federal Agency E-Govt Ratings, 2004 and 2005 (2004 ranking in parentheses)

Rank	Site	Rating Out of 100 Pts.	Rank	Site	Rating Out of 100 Pts.
1.(30)	White House	88(45)	2.(26)	Dept. of State	84(45)
3.(15)	Dept of Treasury	84(50)	4.(5)	Dept. of Agriculture	81(56)
5.(33)	Environmental Protection Agency	80(41)	6.(2)	Social Security Admin	80(65)
7.(12)	Housing/Urban Dev.	73(52)	8.(4)	Fed. Comm. Commission	72(60)
9.(1)	Firstgov portal	72(88)	10.(27)	Health/Human services	72(45)
11.(25)	Cons. Product Safety	69(45)	12.(46)	Dept. of Labor	69(33)
13.(29)	Small Bus Admin	69(45)	14.(37)	Dept of Commerce	68(39)
15.(39)	Dept of Justice	65(37)	16.(7)	Federal Reserve	65(54)
17.(31)	Food and Drug Admin	65(42)	18.(32)	Homeland Security	65(42)
19.(14)	Dept. of Transportation	64(51)	20.(42)	Office Man Budget	64(36)
21.(17)	Dept. of Energy	61(49)	22.(16)	Dept. of Interior	61(50)
23.(39)	Equal Employ Opp	61(37)	24.(8)	Gen Services Admin	60(54)

				Dept of	
25.(6)	IRS	60(56)	26.(3)	Education	58(61)
25.(0)		00(20)	20.(3)	Library of	20(01)
27.(13)	NASA	58(52)	28.(19)	Congress	53(49)
29.(28)	Natl Science Foundation	53(45)	30.(9)	Postal Service	52(53)
31.(22)	Sec/Exchange Comm	52(46)	32.(38)	Fed. Deposit	49(39)
33.(47)	Fed. Elect. Comm.	48(33)	34.(11)	Dept. of Defense	45(52)
35.(10)	House of Representatives	45(53)	36.(19)	Govt Printing Office	44(49)
37.(34)	Fed. Trade Comm.	42(41)	38.(24)	Central Intelligence Agency	41(45)
39.(21)	Natl Endow Arts	40(46)	40.(36)	Natl Transpt Safety	40(40)
41.(49)	US Trade Rep	40(32)	42.(44)	Natl Labor Relations	38(35)
43.(NA)	Natl Parks	38(NA)	44.(20)	Gen Account Office	37(48)
45.(48)	Supreme Court	37(33)	46.(35)	Cong Budget Office	36(40)
47.(41)	4 <sup>th</sup> Circuit Ct of Appeal	32(36)	48.(45)	5 <sup>th</sup> Circuit Ct of Appeal	29(33)
49.(51)	Natl Endow Humanities	29(30)	50.(23)	Veterans Affairs	29(46)
51.(60)	6 <sup>th</sup> Circuit Ct of Appeal	28(17)	52.(50)	9 <sup>th</sup> Circuit Ct of Appeals	28(30)
53.(43)	Senate	28(36)	54.(59)	10 <sup>th</sup> Circuit Ct Appeals	24(18)
55.(55)	1 <sup>st</sup> Circuit Ct Appeals	24(21)	56.(56)	2 <sup>nd</sup> Circuit Ct Appeals	24(20)
57.(58)	8 <sup>th</sup> Circuit Ct Appeals	24(20)	58.(52)	Fed. Circuit Ct Appeals	24(26)
59.(53)	11 <sup>th</sup> Circuit Ct Appeals	21(25)	60.(54)	3 <sup>rd</sup> Circuit Ct Appeals	20(24)
61.(51)	7 <sup>th</sup> Circuit Ct Appeals	20(20)			

FCC	1347	1832	534	3388	3407	2011	74	3
Fed Deposit	60	400	8	1170	4988	270	149	2
FEC	338	124	70	4995	3736	2918	2289	7
Fed Res	185	74	0	4993	5001	192	226	1
FTC	1450	77	7	4877	4848	782	2349	24
FirstGov	243	1056	0	4151	4142	7986	186	0
Food Drug	761	492	99	1493	1172	784	879	34
Admin								
Gen Acct	68	223	12	4984	1271	803	4346	0
Office								
Gen Serv	75	990	834	2297	1773	2928	678	0
Admin								
Govt Print	163	103	129	4872	4479	977	280	3
Health/Human	371	344	58	4602	4911	731	168	4
Services								
Homeland	79	0	0	5000	3425	1988	1572	0
Security								
House of Rep	1877	225	37	3587	3783	1670	2180	81
HUD	1425	140	1	4902	4282	3480	164	3
IRS	133	191	1	455	5000	72	4	0
Lib Cong	1091	209	78	966	790	3680	682	16
NASA	557	14	6	5000	4998	510	355	2
Natl Park	1044	111	99	4606	4647	1007	3133	50
Service								
NEA	866	56	4	235	226	223	3072	18
NEH	659	581	4	4988	4980	439	864	0
Natl Labor	1068	42	23	5003	4992	37	165	11
Relations								
NSF	1651	1213	235	831	4978	1201	4316	8
Natl Trans	976	184	113	4724	4226	90	854	2
Safety							1211	
OMB	72	322	37	4134	3545	4976	4211	1
Postal Service	339	69	129	3050	1718	989	23	2
SEC	47	664	4	4511	4517	1306	463	0
Senate	950	4	21	4341	293	368	4971	0
Small Bus	1870	1194	92	3474	3098	2500	2382	33
Admin	1.10	200	1	2702	2020	1-1	270	
Social	142	389	15	2583	3920	474	278	1
Security	1.50	12	227	4200	7000	1204	1.400	
Supreme Ct	158	3	226	4398	5000	1324	1408	0
US Trade Rep	938	0	1	3371	3063	37	2248	4
Veterans	1350	318	27	2162	3165	1205	577	18
White House	12	1618	47	4175	2929	971	2586	0

	Table A-4 Individual State/Fed Profiles for Publications, Databases, Foreign Language, and Services, 2005												
and Servi	Pubs	Data	Audio	Video	For	PDA	Has	User					
	1 1100	2 000	110000	, , , ,	Lang	12.1	Services	Fees					
AK	94%	85%	6%	6%	6%	0%	36%	6%					
AL	97	100	10	23	3	0	52	3					
AR	97	66	10	14	7	0	72	0					
AZ	100	69	3	16	31	0	81	0					
CA	100	69	13	9	28	0	28	0					
CO	100	68	6	10	16	0	90	3					
CT	100	81	4	23	0	0	96	0					
DE	100	68	10	23	74	0	97	0					
FL	100	65	6	13	29	0	84	0					
GA	100	48	13	29	10	0	71	0					
HI	100	68	9	24	0	0	68	3					
IA	100	70	7	10	23	0	67	7					
ID	100	60	10	13	27	0	90	7					
IL	100	59	22	25	31	0	47	9					
IN	100	55	6	42	35	0	90	3					
KS	100	74	19	0	10	0	61	13					
KY	100	48	15	12	9	0	52	6					
LA	100	74	19	32	3	3	55	0					
MA	100	42	6	12	0	0	85	0					
MD	100	61	0	6 3	13	0	74	0					
ME MI	100	59 53	13 7	23	3	0	91 73	0					
MN	100	63	25	13	16	0	56	0					
MO	100	65	16	19	6	3	68	6					
MS	100	42	10	13	6	0	94	3					
MT	100	57	0	0	0	3	90	0					
NC	100	71	13	32	13	0	87	0					
ND	100	58	16	19	10	0	94	0					
NE	97	72	14	17	3	0	72	14					
NH	100	67	13	7	7	0	70	0					
NJ	100	54	25	57	32	0	89	0					
NM	100	77	3	19	32	3	61	0					
NV	97	57	7	7	43	7	87	0					
NY	100	55	10	13	16	0	90	0					
ОН	100	72	9	38	13	0	84	0					
OK	100	67	0	3	7	0	67	0					
OR	100	73	7	3	13	0	100	0					
PA	100	100	6	25	9	0	59	0					
RI	90	63	3	13	30	3	60	0					
SC	94	55	10	19	13	0	77	0					
SD	90	77	23	23	0	3	83	0					
TN	93	60	17	40	83	0	90	0					
TX	94	67	39	33	55	0	67	0					
US	100	95	16	30	51	0	75	0					
UT	97	69	14	14	3	0	91	0					

VA	100	81	7	4	11	0	70	0
VT	94	66	16	6	6	0	72	0
WA	94	69	22	22	31	3	75	6
WI	92	64	19	25	17	0	92	0
WV	83	67	7	7	0	0	87	3
WY	95	49	5	3	0	0	3	0

RI	77	17	20	0	57	53	50		
SC	84	42	23	6	29	48	48		
SD	100	53	17	0	53	93	93		
TN	90	80	80	0	23	93	93		
TX	94	52	36	0	64	91	85		
US	87	25	44	8	44	82	64		
UT	91	37	26	0	31	91	91		
VA	74	26	15	0	26	89	89		
VT	84	38	6	0	19	63	59		
WA	100	72	25	0	28	84	84		
WI	92	67	3	0	50	72	56		
WV	60	63	10	0	0	47	47		
WY	92	31	0	0	26	56	51	<u> </u>	

Table A-6 Best Practices of Top Federal and State Websites, 2005

#### I. Top Five States

# 1) Utah <a href="http://www.utah.gov/">http://www.utah.gov/</a>

The Utah site was our most highly rated in 2005. The site is very easy to navigate with the state's most popular online services front and center on the home page. A toolbar is located at the top of each page and links every department back to the home page. The toolbar also includes links to an online service menu, a list of agency links, and a link to business.utah.gov/. Other features on the state home page include an option to chat live with online support, take a user survey, and look at current news publications, along with weather and traffic updates. At the bottom of the page, the site also offers a Utah Alerts option that gives citizens the option of receiving timely alerts through email or mobile phones about homeland security, AMBER alerts, statewide weather-related emergencies, and more. The home page also has clear links to executive, judicial, and legislative pages as well as a link to a clear privacy policy at the bottom of the page.

#### 2) Maine http://www.state.me.us/

Maine, the number-two ranked site, centers its page on helping the user. Not only does it have an easy online services menu, it also features a Live Help option, where the user can chat online with a help desk assistant. Up-to-date weather reports are also displayed on the portal, as well as answers to frequently asked questions, online postcards, and current news. The site allows the user to personalize their portal, and features a permanent menu with a user survey, search engines, and a privacy and security policy. Furthermore, Maine's site includes an ask librarian feature, as well as enabling the viewer to send a postcard, and read/post historical stories on a Mainer's message board. Maine's site has security and privacy policies, as well. Maine's site was uncluttered, informative, and easy to use.

# 3) New Jersey <a href="http://www.state.nj.us/">http://www.state.nj.us/</a>

New Jersey's site features a drop down tool bar on the portal page which enables citizens to scroll a list of links for every online service. The portal page also offers My New Jersey, giving citizens the option to personalize the content of their New Jersey state home page. The state

portal utilizes a billboard type border that advertises to citizens features offered such as the Governor's Book club, winning NJ lottery numbers, and departure times for the River Line division of the New Jersey Transit. New Jersey's site has a toolbar that remains at the top of each page, providing a link to the state home page, My New Jersey, and a department database. The privacy notice and legal statement is also displayed on each page.

## 4) North Carolina http://www.ncgov.com/

The North Carolina page features color coded tabs at the top of the page marked citizen, business, state employee, My NC, and NC stores. Each tab links users to more personalized information. Featured right on the portal page are quick links for many popular online services including SwatALitterbug, Hurricane Updates, and Job Searches. There is also an option that allows the users to view the site in Spanish. The state portal also featured an email alert option as well as a clear privacy policy at the bottom of the page.

# 5) Michigan <a href="http://www.michigan.gov/">http://www.michigan.gov/</a>

Michigan, the number five ranked site, is a comprehensive service based site. It provides an MI eStore option on the portal site along with an internship link which is relatively unique among other state portals. Upon glancing at the portal site, the viewer feels a democratic involvement unlike many peer portal sites. Up-to-date news information is displayed, along with MI events, online services, and a specific Spotlight tab accessing an important or exciting event. The site also features a security and privacy policy, as well as quick links to various governmental sites. Moreover, Michigan's site emphasizes employment as the portal site has links to register for work and upcoming job fairs. Overall, Michigan's site is concise, yet provides a depth and breadth of services, while being useful and coherent.

#### II. Top Five Federal Agencies

## 1) White House Portal http://www.whitehouse.gov/

The home page for the administration gives users a large quantity of online services to choose from. Transactions range from live video of press briefings, links to updates on many ongoing national issues, as well as a "Talk Back" question and answer forum with different White House officials. Users can choose another option that allows them to listen in on radio address and speeches. The site also offers email updates as well as an option that translates the sites information into Spanish. A tool bar located at the top of the portal accompanies the user on every page throughout the site. A clear privacy policy is located at the bottom of the page.

## 2) Department of the State <a href="http://www.state.gov/">http://www.state.gov/</a>

The Department of the State offers users a wide range of options and services in a refreshingly organized format that is easy to navigate. A tool bar at the top of the page follows users throughout the site and gives the option of viewing an index of services, recent news releases, along with a slew of other options. The tool bar also allows users to retreat back to the portal page from anywhere on the website. The site's many services are highlighted by audio and video news releases, a live chat with a diplomat option, and an application to begin a free subscription to the monthly publication of *State* magazine. The site can also be viewed in Spanish and has copyright information clearly displayed.

## 3) Department of the Treasury <a href="http://www.ustreas.gov/">http://www.ustreas.gov/</a>

This site was impressive in several respects. It is well organized and the layout is easy on the eyes. A Spanish translation option is available, along with a bevy of included press releases and databases. A subscription service is offered for a treasury newsletter and the site also allows easy access to its webcast link. A number of online services are provided as well, including online tax filing. In general, the site is organized so that it makes online information and services easily accessible.

# 4) Department of Agriculture <a href="http://www.usda.gov/wps/portal/usdahome">http://www.usda.gov/wps/portal/usdahome</a>

This site provides a list of different subjects one would want to access. There is considerable information of interest to the public, agricultural constituents, and the press. The Department of Agriculture page also has a list of the online services it provides. There are several recent publications shown in the center of the website, making it easy to find important information. The agency page also provides a Spanish translation along with a clear privacy statement.

# 5) Environmental Protection Agency <a href="http://www.epa.gov/">http://www.epa.gov/</a>

This portal site has a variety of unique features. Among them are a map of the United States with a display of air quality, a environmental page of kids, and a test your "Enviro-Q" trivia question site. There is a subscription site where visitors may sign up for environmental enews, as well as a link to receive free environmental brochures and other publications. A Spanish translation feature along with a web satisfaction survey feature makes this site among the best government sites. A quick finder region at the top of the portal site makes it simple to search based on subject area.