

E-Government: The URBIS Cities Revisited*

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Abstract

In 1975 and 1988 the National Science Foundation funded \$1.9 million for studies of information technology in 42 US cities (URBIS I and II). These are the most studied cities in regards to IT or computer use and were intended to offer us a view of where cities would be moving in the future. But that future has become the past. Moreover, something has changed IT in the last fifteen years that represents an IT revolution in itself with broad ramifications for government and governance, which is the Internet. This chapter returns to the URBIS cities and explores their use of e-government with contrasts with several other data sets: Government Technology magazine's Best of the Web 2001 and 2002 city winners, ICMA's 2002 city/county survey, Brown University's Taubman Center's 2002 municipal survey, and Scavo's 2002 survey of city/county websites in each state. Focus is put on how up to date the websites are, common features across websites, number of clicks on home page, and online transaction features.

Introduction

The most studied US cities in terms of information technology are the URBIS cities. URBIS was the name given to a \$1.9 million dollar set of grants from the National Science Foundation to study information technology in US local government in 1975 and 1988. Forty-two cities were selected for the large 1975-78 study that included site visits, interviews with about 40 elected officials and municipal personnel in each city, and 50-100 questionnaires for computer users in each city. In 1988 surveys of city employees were again done in those cities. Based on these data, numerous books and articles were written that informed our knowledge of computer use and relevant management issues across a wide array of information tasks and departments into the 1990s. (A small sample of the writings would include Kraemer, Dutton, & Northrop, 1981; Danziger, Dutton, Kling, & Kraemer, 1982; Northrop, Dutton, & Kraemer, 1982; Danziger, J.N. & Kraemer 1986; Northrop, Kraemer, Dunkle, and King, 1990). But since those studies IT has seen another IT revolution, this time via the Internet, that has also either changed or has the potential of changing the quality and efficiency of public sector work for both the employees and the citizens.

E-government is the fastest growing application of information technology in the public sector. It is also very new for local governments. Two-thirds of city websites are less than 5 years old (Moon, 2002). Hence, our knowledge about e-government is in its infant state. Actually, e-government can refer to government's use of information technology in all forms and not just the Web. But in the case of this chapter e-government will refer just to utilizing the Internet and the World Wide Web for delivering government information and services, a definition recognized by the American Society for Public Administration and the United Nations (UN and ASPA, 2001).

In this chapter we revisit the URBIS cities and explore their use of e-government by analyzing the cities' home Web pages. The chapter consistently contrasts the Web pages of the URBIS

cities with the Best of the Web 2001 and 2002 city winners. When possible those two data sets are also contrasted with three other national studies of e-government.

The Data Sets

The data sets are not perfectly comparable. URBIS and the Best of the Web both focus on cities. ICMA and Scavo include counties as well as cities. Taubman deals with cities but not just the main Web page; department and agency level Web pages are also explored and equally so. Each data set has its own strengths and weaknesses, and none could be argued to represent perfectly e-government in US local government today nor were they all intended to do so. Still, each adds another piece to the e-government story, both present and future, so it was felt the comparison of data sets was useful whenever possible.

It should also be emphasized that this chapter's interest is not simply to describe the current state of e-government in cities but rather to possibly get a feel for where US cities in the future will be going; hence, its emphasis is on the URBIS cities as well as the Best of the Web winners. Another reason not to focus on the other three data sets is that e-government in those data sets are explored in depth in other professional publications (West, 2001; Scavo, 2003; Moon, ?)¹ unlike the URBIS cities and the Best of the Web winners. Moreover, some topics are systematically raised only in the current chapter and thus analyses of ICMA, Taubman, and Scavo data do not enlighten us.

Finally, all the data sets are within a year or two of each other, which is important for a study of such a changing IT field.

URBIS

The research purpose behind the city selection was to prescribe policies for "future cities," rather than simply to describe policy impacts in US cities in the mid 1970s. The study wanted to answer what would happen if cities did X (where X is a policy to decentralize computing, or to automate more, and so forth).

Two conventional approaches to deriving such answers were not chosen. The most conventional approach is an experimental design that was not possible in the governmental setting. The second conventional approach is to sample cities randomly. Such a design was also inadequate because resources limited the sample size to 42 cities² and many policies of interest are rare and

¹At the time of this writing analysis of the ICMA data have been presented in convention papers that are not for quotation. Given the time lag of publication, the analyses will have come out by the time this book is published. Look for articles by Donald F. Norris and M. Jae Moon.

² Albany, NY; Atlanta, GA; Baltimore, MD; Brockton, MA; Burbank, CA; Chesapeake, VA; Cleveland, OH; Costa Mesa, CA; Evansville, In; Fort Lauderdale, Fl; Florissant, MO; Grand Rapids, MI; Hampton, VA; Kansas City, MO; Lancaster, PA; Las Vegas, NV; Lincoln, NB; Little Rock, AK; Long Beach, CA; Louisville, KY; Miami Beach, Fl; Milwaukee, WI; Montgomery, AL; New Orleans, LA; New Rochelle, NY; Newton, MA; Oshkosh, WI; Paterson, NJ; Philadelphia, PA; Portsmouth, VA; Quincy, MA; Riverside, CA; Sacramento, CA; San Francisco, CA; San Jose, CA; Seattle, WA; Spokane, WA; St. Louis, MO; Stockton, CA; Tampa, Fl Tulsa, OK; Warren, MI.

would be underrepresented in a random sample. The adopted sample design represented an innovative fusion of designs. By drawing a highly stratified random sample of 42 cities (stratifying simultaneously on six policy variables), the adopted design ensured adequate variation on important policies and substantial statistical independence among these polices (Kraemer, et. al, 1976).

The URBIS cities are biased toward medium to large cities (see Table 1). In fact, no city under 50,000 in population was originally included. Analysis of the websites was done in late April 2003.

TABLE 1. Population of US Cities and the URBIS Cities

	US	URBIS
Over 1,000,000	1%	3%
500,000- 1,000,000	3	12
250,000-499,000	6	32
100,000-249,999	28	34
50,000-99,999	62	20

Best of the Web

Seven cities won the award in either 2001 or 2002. They were New York, Conyers, GA., Chicago, Tampa, Honolulu, Dallas, and Indianapolis (Best of the Web, 2001 and 2002).

A panel representing the Center for Digital Government and Government Technology magazine and other appointed experts chose the cities. There were also county and state winners which were omitted from this study due to their lack of comparability. The websites were judged on innovation and use of web-based online technology to deliver services, efficiency or time saved, economy or money saved, and ease of use and improved citizen access. Each of these judgmental criteria would seem to be rational standards or goals for e-government. Analysis of the websites was done in late April 2003.

ICMA

In 2002 the International City/County Management Association (ICMA) surveyed cities and counties with populations over 2,500 on electronic government. 3,700 cities and 423 counties responded, which reflects a 53 percent response rate. The data from this survey were available on the association's website (ICMA, 2002).

Taubman Center

In 2001 the Taubman Center at Brown University conducted an e-government survey in the 70 largest metropolitan areas in the US. The sample of 1,506 websites reflects a 21.5 web site average per city, which means department level websites were studied versus just the central

Web page for the city. An executive summary of this survey was available on the Taubman Center's Web page (West, 2001).

Scavo

Carmin Scavo of East Carolina University surveyed 145 municipal and county government websites in 1998 and repeated the survey in 2002 (Scavo, 2003). The websites were chosen based on a one-fifth stratified sample of local governments in each state with 114 cities and 31 counties making up the final national sample.

Do US cities have a website and how up to date is it?

According to the ICMA 2002 survey, 74.2 percent of local governments do have a website. All but one or 98 percent of the URBIS cities have city websites.³ It is likely that the lower ICMA percent with a website is due to the fact that the study included cities and counties with very small populations, minimally 2500, whereas URBIS's minimum is 50,000 (Brudney & Selden, 1995). The other three data sets offer us no insight here because they only deal with cities/counties with websites.

Not surprisingly, city websites have become standard for US cities. At first size of city and its slack resources seemed to dictate adoption (Brudney & Selden, 1995; Streib & Willoughby, 2002), but time has dampened this. It has gotten easier and cheaper to set up a Web page because there are a number of publications that tell local governments how to do so as well as help can be found easily on the Web itself (Stark, 2000; Center for Technology in Government, 2001; ICMA InfoPak, 2001.) Thus, we can conclude with fair confidence that whether to have a city website is no longer a meaningful or that complicated a question.

But how up to date the website is an issue. As one can see in Table 2, there is great variability in how current a city keeps its website. The more current the website is, the more useful the site is to citizens or tourists (Streib & Willoughby, 2002). For example, websites that list events that have passed discourage use. But websites that don't list weekly events so that the site does not get out of date are also less useful and will be used less by the citizenry or visitors because they provide no changing information to make more frequent website visits of interest. Why explore a site to get out of date and useless information or to get the same old information that has no relation to what to do this weekend or what meeting topics are on the public agenda? "Older" sites also do not reflect well on the professionalism of the city's administration

Consider that all Best of the Web winners who listed when they update their sites do it daily. But one wouldn't expect less of such winners. Perhaps more interesting, only 48 percent of URBIS cities update daily with 32 percent letting over a month pass between updates; this is among those sites that list such information (39 percent of the URBIS sites don't give a clue to how current they are). Scavo comments that some of his 145 sites seemed over 2 years old, which is the only other data set to touch on this issue at all.

³Little Rock does not have a city website but is part of a metropolitan area website that covers two cities and several towns. Because of this, only forty-one cities are used to study the URBIS websites.

TABLE 2. Up to Datedness of City Websites↓

URBIS Cities (25) Best of the Web Cities (5)

Updated daily	48%	100%
Within last week	16	
More than 1 week	4	
Over a month ago	32	

↓ 16 or 39 percent of URBIS cities' sites and 2 or 29 percent of Best of the Web cities' sites gave no indication of how current the site was.

One conclusion that can be made based on these data is that while cities agree that a website is a no-brainer, the importance they attach to the currency of that website still varies greatly. The opportunities for e-government that come with slack resources and skilled staff (Streib & Willoughby, 2002) may no longer be key to having a website but rather now may apply to the content and currency of the site (Bacher, 2002). Knowledgeable leadership also is said to play an important role in the development of e-government applications (Streib & Willoughby, 2002).

What is on the website?

To answer the above question in regard to URBIS and the Best of the Web cities, each website's homepage was reviewed, looking for key words or features, such as "calendar" or "government" or photo that appeared from city to city site. Table 3 shows the thirty-three most common key words or features that appear on at least five of the URBIS cities' homepages. (Five was chosen as the cutoff because anything less would represent fewer than 10 percent of the cities and thus truly be uncommon.) What is interesting initially is how many clickable features appear on a page with an average of 36 and a median of 33 for the URBIS cities, which is really similar to the Best of the Web cities (see Table 3).

What is also initially striking is that there is no absolutely common feature for a city Web page.⁴ No feature is found on every city's Web page or even nearly every city's (see Table 3). "News" (71 percent), "search" (71 percent), "government" (68 percent) "mayor" (68 percent), and "business" (68 percent) are the most common on the URBIS cities' sites, using two-thirds as the cutoff percent. By the same two-thirds standard the most common features on the Best of the Web city sites are "government" (85 percent), "business" (71 percent), "job/employment" (71 percent), "recreation and parks," (71 percent), and "privacy policy" (71 percent). So we venture to say that the number of reasonable features to put on a city's web page is in the low 30s, but what those features are aside from say "government" and "business" is highly variable.

Taking a different look at Table 3, what do the two groups of cities disagree the most about in terms of what should be featured? The Best of the Web cities highly tout "privacy" (71 percent) and "communities" (57 percent) whereas the URBIS cities do not, 37 percent and 20 percent respectively. These are over 30 percent gaps. If we lower the differences to a 25 percent gap, we find the Best of the Web cities emphasizing "recreation and parks" (71 percent) and "taxes" (43 percent) in contrast to URBIS cities (44 percent and 17 percent). We also see that the URBIS cities emphasize news (71 percent) and "contact us" (56 percent) whereas the Best of the Web do not (43 percent and 29 percent).

⁴ For an inventory of local government uses of the Internet in 2000 see ICMA, 2000.

Given one of the criteria for Best of the Web sites was online services, it is to be expected that they emphasized privacy because this would be of concern for users of such services (Edmiston, 2003; West, 2004). The emphasis on taxes may also be in this vein as well as “recreation and parks” because the latter listing can allow for class schedules and checking whether a person is registered or not in a class. We will discuss this issue more in the next section of this chapter that specifically focuses on online services.

But here it may be enough to suggest that there are so far two operating models of city websites. One is oriented to providing information to citizens, aside from listing “government” and ‘business’ information it also provides news and contact information for citizens. The URBIS cities represent this model (see Table 3). Scavo (2003) also describes most US cities as fitting this model today. The other model is more the business or business end of government model.

This type of website is focused on saving citizens time by providing online service payments and must be concerned with privacy issues as appears to be the case with the Best of the Web cities (see Table 3). While the rare business of government model may be celebrated in the Best of the Web cities, it may more clearly reflect the future of e-government because the public demand for e-government is as yet not very great (Holden, 2002). Even in 2000 only 36 percent of a random sample of Americans had even visited a local or state site (West, 2004).

Scavo (2003) found that local government websites were getting more sophisticated and doing so at a fairly rapid pace even though the websites were not as sophisticated as they could be. But getting more sophisticated meant adding more bulletin board items and just barely beginning getting into online service delivery and the ability for citizens to send messages to government personnel. West (2004) found state websites as changing incrementally with few with online features but more than cities. What has apparently occurred is that cities have adopted websites per se at a very fast pace. They have moved from no site to almost all having a site and from a few bulletin board features to an increasing number within the last five years. A few cities have also considered or are currently offering a little interaction on the site, such as searching records, applying for a permit and requesting a service.

Marchionini (2003) talked of three categories of e-government services: 1. access to information apparently like the URBIS cities, 2. transaction services apparently like the Best of the Web cities, and 3. citizen participation perhaps more a future dream than any even outpost reality as yet. Moon (2002) takes the progression to five steps, referring to a first step like Marchionini’s as information dissemination, then a second step as two-way communication. The URBIS cities seem to fit making it to the second step. Moon goes on to list a third step which is service and financial transaction which looks like maybe the Best of the Web cities (see Tables 3 and 4). Scavo (2003) provides some evidence that there is a correlation between these steps. Moon’s fourth and fifth future steps of e-government are vertical and horizontal integration and political participation.

TABLE 3 Common Items on City Webpages

Frequency Rating	Item	URBIS (41)	Best of the Web (7)
1	News	71%	43%
1	Search	71	57
2	Government	68	86
2	Mayor	68	57
2	Business	68	71
3	Services	63	43
4	Department	61	43
5	Job/Employment	59	71
6	Contact Us	56	29
7	Visitors	46	29
8	Map	44	43
8	Recreation and Parks	44	71
9	Events	41	43
9	Calendar	41	29
10	City Directory	37	43
10	Privacy Policy	37	71
11	Police Department	27	29
12	Public Library	24	14
12	Weather	24	14
13	Fire Department	22	29
13	Arts and Entertainment	22	29
14	Public Meetings	20	29
14	Communities	20	57
14	Neighborhood	20	29
15	Tourism	17	0
15	Link to another website	17	29
15	Taxes	17	43
16	FAQ	15	29
16	Resident Information	15	14
16	E-government	15	14
16	Traffic	15	29
17	Photo	12	14
17	On line service	12	29

Mean number of clicks 36 33
Median number of clicks 33 30

These last hypothesized political participation steps are speculative and involve an assumption that each successive step is a higher one and an effective, positive and meaningful goal. Yet, IT's impacts and progressions have been full of surprises. For example, in 1984 the Internet was a somewhat haphazard connection of university computers. Who would have thought the Internet would become a source of individual and business information and a buying and selling outlet? Could anyone have imagined that the Internet would take over the travel industry, cutting out travel agents? So it may really be hard if not impossible to predict where e-government will take us in the future.

At the same time it is assumed that the Internet is a source of political information that will transform turnout and the way citizens participate in a positive way (Szilagyi, 1991; London, 1994; Edwards, 1995; Sardar, 1996; Pew Research Center, 2000; Moon, 2002; Kakabadse, Kakabadse, & Kouzmin, 2003; Marchionini, 2003). But early analyses in the late 1990s and 2000 show only an effect on turnout on the presidential level and not in midterm elections and who knows on local elections (Tolbert & McNeal, 2003). Also there is some suggestion that the Internet may actually dampen one's political information and have a negative effect on political engagement and democratic community (Putnam, 2000; Sunstein, 2001; Kakabadse, Kakabadse, & Kouzmin, 2003). For instance, unlike reading a major newspaper or watching major network television news, a person who gets the majority of his or her political information from the Internet via chat-rooms and websites may be getting a more biased, less tolerant and more narrow political view.

Thus, what future cities will put on their Web pages may not be an expanded orientation to or effect on political participation. In fact, I would hazard that the political setting will have more effect on e-government than vice versa. This hunch is supported by earlier studies of computers and their effect on city government (Dutton, W. H. & Kraemer, K.L., 1977; Danziger, Dutton, Kling, & Kraemer, 1982). Those studies found that automation didn't change the political setting but rather reinforced the current political power structure. Other scholars also agree that technology will end up reinforcing the existing social and political structure (Davis, 1999; Margolis & Resnick, 2000; Chadwick, 2001).

Why else would what might appear to be rational expectations about e-government transforming political participation not be an accurate portrayal of the future? Well, for one, political effects, which make rational sense, have been found not to be the case in practice. For example, political scientists assumed that Independent voters were more likely to be the most thoughtful political actors. Yet, it was found that Independent voters are independent not because they are holding off judgment until they research the candidates but because they have so little political knowledge that they can't even tell the difference between Republicans and Democrats (Campbell et al, 1960). Or consider the expected dramatic Democratic benefits and voter turnout increases expected from the Motor Voter law. No Democratic benefit or turnout effect so far (Knack, 1999). Thus, political scientists have experience with what might be very rational predictions not panning out.

A further reason for not endorsing the political participation step as the future of e-government is it assumes that the Web can seriously drive and transform participation versus the citizen

him/herself determining participation. Yet, the citizen has to first come to the Web for political information or online participation and that leaves us with the normal determinants of political participation being initially key: education, income, age, race, and partisanship. Local gadflies might use the Web to keep tabs on and communicate with local government officials, but they are already driven to pay attention and participate. Finally, as of 2001 only 36 percent of a national random sample had even visited a local government website (West, 2004). So first citizens must come in significant numbers and be transformed politically for there to be a chance for a political participation revolution, which so far appears unlikely

To answer the question of what is on the website, we again focused on the URBIS and Best of the Web cities. The ICMA data only covered online features, which is discussed in the next section of this chapter.

The Taubman Center's analysis evaluated the websites using a 28-feature list. Thus rather than letting the websites dictate the common features, Taubman began with a list and this list emphasized online transaction features. Taubman data show that the most common feature is phone contact information with 92 percent of the city government websites (remember the average of 21.5 websites per city) post the number. Links to other sites is common (67 percent). The cities in Table 3 have a much lower percent of links, which can probably be attributable to Table 3 dealing with city main sites and the Taubman data dealing with department sites which would likely contain a link to the more encompassing main city site. Only 14 percent of the Taubman sites list a privacy policy, which is much lower than the URBIS and Best of the Web cities. And only 13 percent have fully online executable services, which is like the URBIS cities. Now we turn to discussing the online executable services discussed in all four data sets and are considered a higher step in local e-government websites than the information focus which seems to be the most common.

Online transaction features

This step in e-government makes sense given the success of e-commerce generally and government's focus on citizens as customers. And the Best of the Web cities' sites suggest that online transactions will become far more common (see Table 4) as does Scavo's research (2003). West's research (2004) on state government also suggests this but again with more of an incremental change expected.

Several caveats need to be made before we discuss Table 4 in detail. In essence, the data in this table can be considered soft and thus should be looked at for grosser patterns only. What makes the data soft is, first, that the ICMA data are based on surveys of chief administrative officers. These officers may not be perfectly knowledgeable about what is on the website. One could either make the case that they would tend to underestimate the online features because they may not be totally up to date on the changing features, or one could make the case that they would tend to overestimate the online features, believing the features are available or "should" be available or at least were planned to be last they knew and probably are online by now. Secondly, even if forms can be downloaded, for example, it may not be obvious to all site visitors nor may the forms be easy to access. If it takes two or more clicks to get to down

loading the right form, not all visitors may find their way or find it in as few clicks. For example, the homepage could say “taxes” on it; then when you click on “taxes,” you get “business license” as a choice. Click on “business license,” and on the next page you see that you can fill out a form. So was submitting a business license online (Table 4 e) obvious on the first Web page of the city’s site? Probably not for most visitors. In essence, what is obvious to one visitor may not be obvious to another. This caveat particularly applies to the Table 4 data on the URBIS and Best of the Web cities. And at the very least raises the issue whether because a city has an online feature, according to the ICMA survey, whether the city really does have it in any practical sense if it is not an obvious and/or easy to access feature. Thirdly, some of the online features are open for interpretation, such as “online requests for services.” This feature is so broad almost anything could fit in it, which might explain why it is the most common feature according to the ICMA data.

All this being said, Table 4 can provide us with information when viewed on a gross level. Our initial observation is that online features are still extremely rare. Taubman Center’s study also found this. In regard to the first five categories of online transactions, the best of the Web cities are more on line than URBIS cities, which are more online than the ICMA sample. Our sense is that this makes sense because the Best of the Web cities can be considered the more cutting edge cities, followed by the URBIS cities, and the ICMA sample may be the most representative of current practice in local government. Still, for now the ability to pay taxes, fines, or utility bills online is extremely rare, as is the ability to complete permits and business licenses.

The online requests for records and their delivery and the online request for services are very vague categories and perhaps the least trustworthy of the data. Let us say that these look like features that will become more common soon given the ICMA and the Best of the Web cities’ experiences or expectations.

Across the three data sets, the most rare online features are voter registration and communication with elected and appointed officials (Table 4 j. and m.). Given that these two features would fit with the hypothesized future e-government step of political participation, the race to that step has really not begun and who knows if more than a handful of cities will enter within the next five years. This might support our earlier doubt about the political participation step.

Table 4 Online transaction features

	ICMA	URBIS Obvious on home page	total 1	Best of the Web Obvious	total1
a. online payment of taxes	4.6%	12.2% 26.8 percent		14.3%	57.1%
b. online payment of utility bills	4.6	2.4	22	14.3	28.6
c. online payment of fines/fees	3.9	7.3	29.3	14.3	42.9
d. online completion and submission of permit apps	9.3	2.4	12.4	42.9	42.9
e. online completion and submission of business licenses	5.1	4.9	7.3	28.6	42.9
f. online requests of local government records	28.6	2.4	4.9	42.9	42.9
g. online delivery of local government records to requestor	18.4	0	0	14.3	14.3
h. online requests for services, such as pothole repairs	30.9	2.4	2.4	42.9	42.9
i. online registration for use of recreational facilities, classes	13.1	0	2.4	0	0
j. online voter registration	2.1	0	0	0	0
k. online property registration, e.g. animal, bicycle	2.5	0	2.4	0	0
l. forms that can be downloaded for manual completion	2.5	14.6	31.7	14.3	42.9
m. online communication with elected and appointed officials	2.7	0	0	0	0

1Total means the sum of the following count: whether the online feature is clearly obvious on city home page plus whether the online feature does not appear until citizen clicks on a topic on home page plus whether it takes two clicks to find online feature which would mean it can be found on second subpage but not obvious on home page nor on first subpage.

Conclusion

This chapter has tried to learn about the state, present and near future, of e-government in US cities by focusing on the 42 URBIS cities, the subject of much study over the last quarter century. The URBIS cities' Web pages were compared with the 2001 and 2002 Best of the Web winners as well as with results where possible of three other national local government studies. Here is what was found.

First, it appears that city websites are now an expected service of city governments except for the smallest cities in terms of population.

Second, many city websites are not updated very often. Among the URBIS cities, about a third waited for more than a month before any changes were made to the site. Close to half did update daily, and one out of eight updated weekly. All the Best of the Web cities updated daily. We believe that websites are more useful if they contain information that needs daily or weekly updating. Cities that provide such information exhibit a higher presumption of citizen/government interaction and create an atmosphere in which it can take place. We expect that most cities, again maybe exempting very small cities, will increasingly find themselves moving to more frequent website updates.

Third, there was no absolutely common feature on a city Web page. But it is common for Web pages to contain many features, such as information about the government, weather, jobs, services, events and traffic. So each city appears to be customizing its Web page for its citizenry and visitors. Yet, if the city has a number of online transaction features, it will most likely have a clear privacy policy feature on its home page. Features that could promote political participation appear to be almost totally absent, such as the ability to register to vote or contact an official on line.

Fourth, online transaction features are still very rare across the board except in the cutting edge Best of the Web cities. But it is likely that the Best of the Web and URBIS cities are indicative of the future trend of city websites. While change may be more incremental than comprehensive in regard to online transactions, it does appear reasonable that the next common step in e-government will be cities offering online transactions in addition to the bulletin features that are the most common today. Budget constraints and privacy concerns are critical to how fast cities can move to this step.

Finally, perhaps an unheralded aid to the progress of e-government may just be getting the word out. City employees need to know about the website and promote it. City publications and tax and utility bills all need to list the Web address. Newspaper stories and public service announcements should frequently focus on the existence and features of the website. Just getting the word out can start a dialogue between citizen and government that moves the e-government ball along the road.

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