

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 2003 Proceedings

Americas Conference on Information Systems
(AMCIS)

December 2003

Public Expectations and Public Scrutiny: An Agenda for Research in the Context of E- Government

Abhijit Jain
Temple University

Ravi Patnayakuni
Temple University

Follow this and additional works at: <http://aisel.aisnet.org/amcis2003>

Recommended Citation

Jain, Abhijit and Patnayakuni, Ravi, "Public Expectations and Public Scrutiny: An Agenda for Research in the Context of E-Government" (2003). *AMCIS 2003 Proceedings*. 101.
<http://aisel.aisnet.org/amcis2003/101>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2003 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

PUBLIC EXPECTATIONS AND PUBLIC SCRUTINY: AN AGENDA FOR RESEARCH IN THE CONTEXT OF E-GOVERNMENT

Abhijit Jain
Temple University

Ravi Patnayakuni
Temple University

Abstract

There has been a veritable 'boom' in the number of new E-Government projects and initiatives in recent years. Not very long ago, the world witnessed a 'Dotcom boom' that later turned out to be 'bubble' predicated on deceptive information, faulty speculation and 'irrational exuberance.' A large number of E-Commerce offerings were made available that people simply had no use for, or that otherwise failed to meet expectations. In light of that experience, in order to avoid the costly mistakes of the past, it may be timely to examine the phenomenon of the 'E-Government boom' and investigate how the E-Government agenda is being driven. This paper posits that E-Government's most legitimate stakeholder, i.e. the user public, is being largely left out of the loop during the conceptualization, development and implementation of E-Government programs. This paper calls for research in order to 1) comprehensively understand and measure public expectations from E-Government systems 2) determine whether current E-Government initiatives deliver in accordance with public expectations from such initiatives; and 3) determine how E-Government systems may be developed such that they conform to public expectations from them. Additionally, a strategy for measuring 'public expectations' from E-Government is offered.

Surveys show that greater government accountability is the single most important outcome that citizens desire from E-Government. However, contemporary research in E-Government has not adequately addressed the issue of whether and how E-Government systems improve the potential for 'public scrutiny' over government functioning. This paper calls for research in order to 1) determine how E-Government initiatives impact public scrutiny of government functioning and 2) determine how E-Government systems may be designed, developed and implemented such that they do increase public scrutiny over government functioning. Additionally, a strategy for measuring the potential for 'public scrutiny' of E-Government projects is outlined.

Keywords: E-government, public expectations, public scrutiny, government accountability

Introduction

Over the past decade the Internet has profoundly changed the way our society communicates, works, learns and conducts commerce. The Internet is redefining several different aspects of our daily lives and the way in which we relate to other individuals, communities and institutions. It is now widely expected that using Internet technologies, governments will fundamentally recast their interaction with citizens. This concept, i.e. the use of Internet technologies by governments to deliver information and services has been widely labeled 'electronic government' or E-Government (e.g. UNPAN 2002).

As described in detail in the next section, there has been a veritable 'boom' in the number of new E-Government projects and initiatives in recent years. Not very long ago (in the late 1990s), the world witnessed a 'Dotcom boom' that later turned out to be 'bubble' predicated on deceptive information, faulty speculation and "irrational exuberance" (Greenspan 1996). A large number of E-Commerce offerings were made available that people simply had no use for, or that otherwise failed to meet expectations. In light of that experience, it may be judicious to view any new Internet-fueled 'boom' with skepticism or at least stoicism. Thus, it may be timely to examine the phenomenon of the 'Dotgov boom' (E-Government websites typically retain a .gov URL), and investigate how E-Government agenda is being driven.

Although there is considerable pressure to implement E-Government in various forms, it is not clear how the expectations from E-Government are being framed – for instance whether these expectations are being framed by information technology vendors, or by government officials or by the public. It is not even clear whether demand for certain E-Government initiatives truly exists, or whether it is all self-serving propaganda initiated by information technology vendors and political campaigns (Pardo 2000). This paper posits that E-Government's most legitimate stakeholder, i.e. the user public, is being largely left out of the loop during the conceptualization, development and implementation of E-Government programs. Thus, research has not sufficiently examined how public expectations from E-Government projects can be appropriately measured and how these expectations can be met via appropriate design, development and implementation of E-Government systems.

Surveys have shown (e.g. CEG 2001) that the most important outcome that citizens desire from E-Government is greater government accountability and transparency. This paper posits that contemporary E-Government research has not adequately engaged the issue of how to measure the impact of E-Government systems on 'public scrutiny' of government functioning; nor, this paper posits, has contemporary E-Government examined how E-Government systems may be designed, developed and implemented such that they do increase public scrutiny of government functioning.

In an effort to address these issues, this paper offers a strategy for measuring 'public expectations' from E-Government and another strategy for quantifying the potential for 'public scrutiny' of E-Government projects.

This paper is organized in the following way. First, an outline of major E-Government developments and initiatives is presented. In the next section, an overview of E-Government related research is imparted. In the subsequent section, the paper offers a discussion of why it is posited that 'public expectations' and 'public scrutiny' are not being adequately engaged in E-Government research and practice. In the next section, the paper suggests a strategy for measuring 'public expectations' from E-Government. In the penultimate section, a strategy for measuring the potential for 'public scrutiny' of E-Government programs is proposed. In the final section, conclusions and limitations of this paper outlined.

The Emergence of E-Government

Broadly, E-Government refers to the use of information and communications technologies to fundamentally change and improve the functioning of government. Some other descriptions that have been used for E-Government are:

“utilizing the internet and the world-wide-web for delivering government information and services to citizens” (UNPAN 2002).

“the federal government's use of information technologies... to exchange information and services with citizens, businesses, and other arms of government” (White House, OMB, Fiscal Budget 2003 Glossary)

“the use of internet technologies to bring constituents, information, suppliers, public sector employees and governmental agencies together” (City of Fullerton CA Website)

“the use of digital technologies to transform government operations in order to improve effectiveness, efficiency, and service delivery” (Chief Financial Officers Council, US Govt 2001)

Between 1993 and 2001, the US federal government launched 1300 independent initiatives related to E-Government (UNPAN 2002). In a July 2002 memo titled “Presidential Memo on the Importance of E-Government,” to heads of executive departments and agencies of the federal government, President George W. Bush wrote that “expanded use of the internet and computer resources to provide Government services (Electronic-Government or E-Government)” was one of “the five Government-wide reform goals outlined in [his] Administration's Management Agenda” (Bush 2002). The U.S. federal government has instituted a web portal (website: www.FirstGov.gov) that provides a single-window, consolidated interface to the federal government's E-Government initiatives. Among the E-Government services currently provided by the US federal government are a facility for citizens and corporations to file their federal tax returns online, the availability of all government forms online, a facility to file for patents and copyrights online, the availability of all government statutes and laws online, a facility to apply for various federal government permits online and an ongoing program to make the national archives available online.

A survey of local governments in USA by the International City / County Management Association found that approximately 75% of all local governments had at least a website and that approximately 60% of those that did not have one, intended to have one

within a year's time (ICMA 2002). Governments of all fifty states in the USA have a web presence and provide various services through the Internet (West 2001).

In many countries around the world such as Canada, Australia, the UK, Norway, the Netherlands, France and Singapore, E-Government initiatives are at an advanced stage, comparable to initiatives in the USA (UNPAN 2002).

A recent worldwide survey indicated that 30 percent of people surveyed had accessed government services online in 2002, compared to 26 percent the previous year (Taylor Nelson Sofres 2002). The same survey indicated that countries that leading the usage of E-Government services by their citizens were Sweden where 57% of the population had accessed government information or services through the Internet, followed by Norway (56%) and Singapore and Denmark (53% each). In the US, 43% of those surveyed had accessed government information or services online in 2002, compared with 34% the previous year. The United Nations Public Administration Network, an agency within the UN Organization, has ranked the United States first in the world, followed by Australia, New Zealand and Singapore in terms of 'Government Internet Presence' (UNPAN 2002). The agency found that while North America, Western Europe, Australia and some developed countries in Asia had made significant overall progress in providing E-Government services, the rest of the world had made less progress.

However, although they lag the developed world in terms of absolute progress in E-Government, underdeveloped and developing countries have put E-Government to some highly creative uses. Specifically, many of these countries are using E-Government initiatives to fight corruption, to increase efficiency in government procurement and to empower oppressed groups of people. In the context of fighting corruption, the government of India offers a website containing a large amount of information related to corruption and government officials under investigation for corruption (Bhatnagar 2001a). In Argentina, the Cristal project is an attempt to disseminate online, all information concerning the use of public funds (Radics 2001). In the Phillipines, the Customs Bureau has developed an on-line system to reduce opportunities for fraud and corruption (Bhatnagar 2001b). With the intention of making government procurement processes more efficient, Chile's government has introduced an electronic procurement system that has increased transparency and generated significant savings (Orrego et al. 2000). Similarly, an E-Procurement program implemented by the government of the Phillipines has resulted in lower costs for the government and has increased transparency of transactions (Granados and Masilungan 2001). E-Government is also being used to empower marginalized and oppressed groups of people. In India, for instance, the 'Gyandoot' project provides community owned Internet kiosks to marginalized tribal citizens and is intended to give them low-cost access to a number of government services (Bhatnagar and Vyas 2001) while the Kothmale radio Internet project in Sri Lanka is intended to provide Internet access and tools for rural development through the Internet to marginalized communities in rural areas.

It is believed that E-Government has the potential to reduce the size of government, reduce the cost of government, save citizens time and inconvenience in dealing with government, empower citizens to take greater control of governmental legislative and administrative affairs and make government more accountable, responsive and customer focused (CEG 2001); and preliminary evidence indicates that government agencies have saved money and increased accuracy of data by offering forms online (Schwarz 2003).

Review of Research on E-Government

This section provides examples of E-Government related research efforts from peer-reviewed outlets. Existing research on the subject of E-Government can be classified into a few broad categories on the basis of the issues that have been investigated. These categories are 1) IT implementation and adoption in the context of the government organizations, 2) Local Government use of Geographical Information Systems, 3) Making government organizations more customer-oriented via E-Government, 4) Defining and Measuring E-Government Success and 5) Enabling Democracy via E-Government. Examples from each of these categories are illustrated below:

It Implementation and Adoption in the Context of the Government Organizations

In one of the early papers on this theme, Danzger (1977) examined the reasons why top government managers became frustrated when Electronic Data Processing systems were used in the context of governmental operations. The author found that such systems had failed to increase the amount of useful information and had failed to increase operational efficiencies. More recently, Coopersmith (1996) examined the utilization of fax machines in organizing and conducting legislative politics. The study concluded that the use of the fax had speeded up the pace of political organizing and had allowed small groups to become

powerful players in terms of getting their voice heard. Bretschneider and Wittmer (1993) studied the environmental factors that affect the adoption of microcomputers in the government sector. Gefen et al (2002) looked at adoption from the user's perspective and examined the factors influencing citizens' adoption of E-Government services. According to them the most important predictors for citizens' adoption of E-Government are trust, social influence and website ease of use. They also found that citizen trust could be managed through institutional mechanisms (such as third party certification and institutional guarantees of outcomes), users' experience with the system and perceived social characteristics of the government agency. Gant and Gant (2001) evaluated features and content of web portals of state governments using the four dimensions of openness, customization, usability and transparency and found most portals to be in early stages of development. Khan et al (2001) examined the process of development and implementation of a workflow engine in the context of a government information system and found that process was more complex than that in the case of private organizations. Stevens et al. (1991) identified environmental, organizational and technological factors that impact the adoption and utilization of information systems in state agency offices. To conclude, this stream of research has found that IT implementation and adoption processes in the public sector can be more complex than in the private sector. This happens because of the differences in organizational, regulatory and financial structures between government and private sector organizations.

Local Government Use of Geographical Information Systems

Walsham and Sahay (1999) studied the development of a geographical information system (GIS) to aid district level administration in India. They found that in this case, the interests of key actors were not aligned and concluded that there was a need for higher-level interventions in such areas as educational processes and administrative structures. Robey and Sahay (1996) examined the implementation of a geographical information system (GIS) in the local governments of two neighboring counties, and compared the two implementations using a social interpretation of technology approach. Hall et al. (2001) measured the cost effectiveness of an implementation of a GIS in the Illinois Department of Transportation, and found that the investment paid off a high rate of return.

Making Government Organizations More Customer-Oriented via E-Government

Burn and Robbins (2001) examined how multiple service organizations (government organizations) along a customer value chain can form a virtual organization to serve citizens more holistically. Fernandes et al. (2001) offer a framework for designing E-Government systems that can provide one-stop provision of government services.

Defining and Measuring E-Government Success

Success is often defined in terms of cost savings and the range of services offered through E-Government. Rupp (2002) discusses "best practices" in an Austrian portal that offers E-Government services among other services. Poon (2002) examines how lessons learned from E-Commerce can be used to make E-Government cost effective and efficient. Lagroue (2002) proposes a methodology to examine whether E-Government projects provide expected benefits such as improvements in customer services and reduced costs.

Enabling Democracy via E-Government

Elgarah and Courtney (2002) propose the implementation of an open dialogue system wherein all citizens will have a forum to voice their opinions about any and all public matters of import to them. Chen and Chang (2001) propose the creation of a virtual city whose affairs are managed by Internet participants acting as citizens. They suggest that data collected from this experimental project can be used to understand the participative processes that citizens use to set agendas and to resolve public issues.

The E-Government Research Imperative

This section provides a discussion of why it may be reasonable to consider that contemporary E-Government efforts are not necessarily driven by 'public expectations' or by the desire to enhance 'public scrutiny' of government functioning.

First of all, the question may be asked, ‘Why should public be consulted at all?’. Cogan et al. (1986) have identified five benefits of citizen participation in governmental planning processes. These are:

- Information and ideas on public issues
- Public support for planning decisions
- Avoidance of protracted conflict and costly delays
- Reservoir of good will which can carry over to future decisions; an
- Spirit of cooperation and trust between the agency and the public.

Various researchers and practitioners have commented on the likelihood that contemporary E-Government projects may be getting rushed along the way, without governments expending adequate effort to consult the public on its expectations from E-Government.

For example, Rethmeyer (2002, page 3) states, “So far, it appears that state-level information “sharing” initiatives (i.e., those intended to deliver information and services to citizens, corporations, etc. over the Internet) are often driven by the imperatives of the agency and its management team, with some input from key stakeholders in the policy network. The degree of citizen input at the state level often seems to be minimal at best. The amount of input from service providers and specific stakeholder groups is greater, but is also subsumed to the organizational imperative to “get digital,” irrespective of whether the agencies have a clear understanding of what they wish to achieve. In essence, there is growing institutional pressure to deploy Internet-based services” Decisions on which services to deploy and when are often personality-driven. “Technology champions” at the top level of agencies or on technical staffs drive initiatives that fulfill personal and professional agendas as much as (or more than) the agency’s agenda.” Similarly, Olavi Kongas, Chief Information Officer at the Public Management Department, Ministry of Finance, Finland warns that “Governments should make sure that the e-services they are working so hard to provide are actually the ones they need” (Sibley 2002).

The U.S. Federal Government’s General Services Administration reports (GSA 2000, page 3), “While some governments have taken into consideration some real results based on input from citizens, other governments have not.” Further, it notes, “Citizen expectations will have an overwhelming affect on the success of electronic government. For example, if a survey or other method found that the majority of the citizens only wanted to interact with the government for certain types of transactions, governments could focus limited resources in those areas.”

Several researchers have warned against the tendency to ‘idolize’ technology, and thus missing out the human element involved. For example, Li (2003, page 61) notes that “The danger is that organizations could be tempted to adopt the ‘idolized’ approach to the use of ICTs (information and communications technologies) to achieve organizational transformation. This approach sees ICTs as providing simple answers to what are complex organizational and cultural issues.” Similarly, Dearstyne (2001, page 1) observes “Many analysts trumpet the transformational potential of digital information, often reducing it simplistically to the concept of information technology (IT)” and asserts that “More information is not better information.” Boudourides, calling for a holistic approach to E-Government development, suggests (2001, page 3), “Public policies on ICTs (Information and Communication Technologies) should be based on a mapping, comparison and evaluation of uses in policy consultation and public involvement at local, national, transnational and global levels and an assessment of developments and risks in political and public technology-mediated applications.”

Cook (2000) has reported on such efforts to map public expectations to E-Government initiatives and concludes that since “the movement to e-government, at its heart, is about changing the way people and businesses interact with government. It only makes sense to find out what they want, expect, don't want, and worry about.” The report describes various citizen outreach efforts and suggests that formal research can reveal considerable clues to what the public thinks and wants.

However, a review of actual E-Government efforts and strategies reveals that little, if any, heed is being paid to public expectations from E-Government programs. Four such illustrations are presented.

In a memo to heads of executive departments and agencies of the U.S. Federal Government, President Bill Clinton (Clinton 1999) instructs them to “promote access to Government information organized not by agency, but by the type of service or information that people may be seeking; the data should be identified and organized in a way that makes it easier for the public to find the information it seeks” and “make a broad range of benefits and services available though private and secure electronic use of the Internet.” In the memo, he gives several suggestions and directives on how these agencies should go about building E-Government. However, nowhere does he advise them to also consult the public that they aim to serve.

In a policy brief, the OECD (2003) offers member countries “guiding principles for successful e-government implementation.” It offers a wide range of answers to questions such as “What needs to be done for successful e-government implementation?” and “What are future opportunities and next steps?” Among the answers it offers are “Managers need e-government skills,” “E-government requires leadership,” “Implementing e-government can be risky, expensive and difficult,” “Monitoring and evaluation are essential to effective e-government,” and “New technologies are forcing governments to be particularly attentive to time.” However, nowhere does it suggest that governments may benefit from consulting the public about their expectations *prior* to building E-Government.

The White House’s strategy document on E-Government (OMB 2003, page 3) states that “A key goal is for citizens to be able to access government services and information within three “clicks,” when using the Internet.” And one of its guiding principles is that E-Government should be “Citizen-centered, not bureaucracy or agency-centered,” and offer “Integration of citizen one-stop service delivery.” The document addresses a large number of issues including an agency E-Government performance monitoring process and also recommends that agencies should obtain productivity improvements by “implementing customer relationship management, supply chain management, enterprise resource management, or knowledge management.” However, the document does not suggest anywhere that agencies should seek citizen input *before* embarking on their E-Government projects.

In our final illustration, a report on the state of E-Government in Virginia (Dillehay 2002) discusses issues such as the “Creation of the Nation’s First Cabinet-Level Secretary of Technology,” “Establishment of the Governor’s Commission on Information Technology,” and initiatives to provide “anywhere, anyplace, any time”, “Horizontally and vertically integrated,” “agile and innovative,” “Customer and citizen-centric” E-Government services. However, it does not offer any evidence that citizens are consulted or will be consulted in determining such goals.

There is little or no evidence to suggest that the vast majority of E-Government initiatives are driven on the basis of a comprehensive understanding of public expectations from such initiatives. In the absence of such evidence, and in the absence of availability of substantial research into public expectations from E-Government, it would be reasonable to conclude that in the current scenario, the design, development and implementation of E-Government systems is primarily being driven by other factors such as expert opinion and experiences from the private sector.

Indeed, there is in existence a large, influential body of opinion and thought that weighs in on issues such as how E-Government should evolve, what technologies it should use and what ends it should achieve. This body of opinion originates primarily from information technology professionals and researchers, government technocrats and independent think tanks (e.g. CEG 2001; UNPAN 2002). While these opinions are valuable in their own right, it should be understood that they are only opinions, and are not necessarily derived from a formal understanding of public expectations from E-Government. When information technology professional and researchers, government technocrats or independent think tanks propagate their vision for E-Government, and claim that their vision conforms to public expectations from E-Government, it should be understood that their vision only conforms to *their conception* of public expectations from E-Government, and not necessarily to actual public expectations from E-Government. Indeed, in many cases, it is quite possible that these different entities are propagating a vision of E-Government that conforms to an underlying agenda and not necessarily to public expectations from E-Government. For instance, a libertarian think tank may propagate a vision of E-Government that seeks to reduce the size of the government. On the other hand a government technocrat may propagate a vision of E-Government that seeks to increase the size of the technocrat’s own technology budget. Conversely, information technology vendors, eager for business, may be fueling the ‘boom’.

In the event that E-Government policy is being shaped by ‘experts’ and not by the public, it is possible that considerable gaps exist between public expectations from such initiatives and what is delivered to them. These gaps can occur due to two reasons. Firstly, it is possible that ‘experts’ do not really understand the public very well. Secondly, experts’ judgments about public expectations from E-Government may be influenced by factors other than actual public expectations, such as the experts’ own underlying agendas. In such a scenario, large-scale failure is a real possibility, potentially even bringing about a repeat of the ‘Dotcom collapse.’ Therefore, this paper calls for research in order to 1) comprehensively understand and measure public expectations from E-Government systems 2) determine whether current E-Government initiatives deliver in accordance with public expectations from such initiatives; and 3) determine how E-Government systems should be designed, developed and implemented such that they conform to public expectations from them.

Citizens have a tendency to be disillusioned by their governments (Krueger 1990) and increasingly, citizens feel left out of government decision-making processes and feel alienated from their governments (Harwood 1996; Quarzo[a] 2000). The trend in favor of E-Government offers an opportunity to ameliorate this situation. Some earlier examples noted how E-Government initiatives are being used to fight corruption and bolster transparency. However, it should be noted that these initiatives were

specifically designed for the sole purpose of reducing corruption and achieving greater transparency. The review of research covered earlier seems to indicate that, the question of how E-Government systems impact the potential for 'public scrutiny' of government functioning, is not currently on the radar screen of E-Government researchers. Given that greater government accountability and transparency is the single most important outcome that citizens desire from E-Government (CEG 2001), research must focus on how all E-Government initiatives impact accountability and transparency and serve to increase public scrutiny of government functioning. Therefore, this paper calls for research in order to 1) determine how any and all E-Government initiatives impact the potential for public scrutiny of government functioning and 2) determine how E-Government systems may be designed, developed and implemented such that they do increase the potential for public scrutiny of government functioning.

Unless these issues are addressed and researched in an appropriate fashion, E-Government projects may fall victim to large-scale failure due to non-acceptance by the public, as happened during the Dotcom collapse.

A Strategy for Measuring Public Expectations

Research into determining public expectations from E-Government, and into determining whether current or proposed E-Government systems deliver according to the public expectations from them, may borrow from and progress along the lines of the ServQual model (Parasuraman, Zeithaml and Berry 1985; Zeithaml, Parasuraman and Berry 1990). This model uses gap analysis to identify and measure five different types of gaps that may exist between customers' expectations and perceptions of service. By considering E-Government to be the 'service', the public to be the 'customers' of the service and drivers of the E-Government vision (such as information technology professionals, researchers, government technocrats and independent think tanks) to be the 'management', the five gaps may be framed in the following manner:

- The Service Quality gap is the gap between public expectations from the service (i.e. E-Government) and the perception of service delivered.
- The Understanding gap is the gap between public expectations and management perceptions of what these public expectations are.
- The Design gap is the gap between management's understanding of public expectations and the design and specification of service quality.
- The Delivery gap is gap between the specification of service quality and the actual quality of the service delivered.
- The Communications gap is the gap between what is actually delivered and what is promised.

This approach is capable of providing both an assessment of how the public views current E-Government initiatives, and also an assessment of public expectations from E-Government initiatives.

It should be noted that it is not being suggested here that the ServQual approach can be used directly, without modification, in determining public expectations from E-Government. Instead, the ServQual approach is merely being offered as a strategy or a template. The ServQual approach is considered useful in this regard because it is designed to estimate customers' expectations from a service, which is an issue that is structurally quite similar to the issue of estimation of public expectations from E-Government initiatives. While the ServQual approach may provide a general strategy, researchers will still need to develop specifics to apply the strategy in the context of E-Government.

A Strategy for Measuring the Potential for Public Scrutiny

Public scrutiny refers to mechanisms of oversight and accountability with regard to an organization's actions (Rainey et al. 1976). Most government organizations are subject to public scrutiny through a variety of ways, for example through elected representatives of the public, i.e. Senators and House Representatives, and through various freedom of information related laws that ensure that the press or public agents can access and scrutinize a range of information relating to government organizations.

Government accountability can be a difficult construct to measure because there may be multiple, changing and contradictory criteria to measure it (Romzek and Dubnick 1987; Johnston and Romzek 1999). It is believed that access to information from the government and interaction with the government result in increased empowerment of citizens and increased government accountability (Kahin 1997). However, the impact of information technology on government accountability may not necessarily

be positive. For example, in certain (especially non-democratic) contexts, governments may exploit control of information flows to reduce their own accountability (Welch and Wong 1998).

It is believed that greater transparency in government organizations leads to increased public scrutiny of government functioning (Reichard 1998) and higher government accountability (Welch and Wong 2001). The Cyberspace Policy Research Group (CPRG 2001) has developed a framework to exploit this relationship between transparency and accountability. This framework measures the accountability of government organizations via the openness of the websites of such government organizations. According to this framework, the openness of a government organization's website is a function of transparency and interactivity. Transparency is a measure of the degree to which a website reveals the organization's work and decision processes and procedures. Interactivity is a measure of communication features on the website, such as quality and speed of feedback. According to the CPRG, higher levels of transparency and interactivity are indicative of higher levels of website openness. Further, according to the CPRG, higher levels of website openness are indicative of higher levels of accountability in the website's parent organization.

This CPRG framework provides a useful strategy or template for measuring the impact of E-Government systems on public scrutiny of government functioning. This framework should prove to be a useful starting point and a valuable tool for research efforts directed at exploring the impact of E-Government initiatives on the potential for public scrutiny of government functioning and on government accountability.

Concluding Remarks

This paper calls for research into 'public expectations' and 'public scrutiny' in the context of E-Government. A discussion was provided for why it may be reasonable to conclude that current E-Government initiatives are not addressing 'public expectations' adequately. Additionally this paper finds that contemporary E-Government research has not addressed the question of how E-Government systems impact the potential for public scrutiny over government functioning; even though greater public scrutiny is the most important outcome citizens desire from E-Government. This paper posits that unless these issues are addressed appropriately, E-Government projects may fall victim to large-scale failure due to rejection by the public.

This paper offers strategies for measuring 'public expectations' from E-Government and the potential for 'public scrutiny' over E-Government projects. However, a limitation of this paper is that these strategies have been presented in a highly simplified, abbreviated form. An additional limitation of this paper is that although it calls for research into determining how appropriate E-Government systems should be (so that they address issues of 'public expectations' and 'public scrutiny'), it does not offer any guidelines or strategies for the same.

References

- Bhatnagar, Subhash "Central Vigilance Commission Website: A Bold Anticorruption Experiment," Case Studies of the World Bank, http://www1.worldbank.org/publicsector/egov/cvc_cs.htm, 2001a.
- Bhatnagar, Subhash "Philippine Customs Reform," Case studies of the World Bank, <http://www1.worldbank.org/publicsector/egov/philippinecustomscs.htm>, 2001b.
- Bhatnagar, Subhash and Vyas, Nitesh "Gyandoot: Community-Owned Rural Internet Kiosks," Case studies of the World Bank, <http://www1.worldbank.org/publicsector/egov/gyandoots.htm>, 2001.
- Boudourides, Moses A. "New ICTs Policies", Innovations for an e-Society: Challenges for Technology Assessment, ICITA 2001 Conference, Berlin, Oct 17-20, 2001.
- Bretschneider, Stuart and Wittmer, Dennis "Organizational Adoption of Microcomputer Technology: The Role of Sector," Information Systems Research (4:1), March 1993, pp. 88-108.
- Burn, Janice M. and Robbins, Greg "Strategic Planning For E-Government: A Customer Value Based Model," Americas Conference on Information Systems, 2001.
- Bush, George W. "Presidential Memo on the Importance of E-Government," <http://www.whitehouse.gov/news/releases/2002/07/20020710-6.html>, 10th July 2002.
- CFOC "Meeting Minutes October 23, 2001," Chief Financial Officers Council, US Government, http://www.cfoc.gov/documents/doc_cfo_mins10_23_01.htm, 2001.
- CEG (Council for Excellence in Government) "E-Government: The Next American Revolution," <http://excelgov.org/usermedia/images/uploads/PDFs/bpnt4c.pdf>, 2001.

- Chen, Hsiang and Chang, Shih-Jye "The Virtual City of Direct Democracy," Americas Conference on Information Systems, 2001.
- City of Fullerton CA "Technology Task Force Minutes," http://www.cityoffullerton.com/redev_serv/ttf/minutes022602.html, February 26, 2002.
- Clinton, W.J. "Memorandum to the Heads of Executive Departments and Agencies, Subject: Electronic Government", December 17, 1999," <http://govinfo.library.unt.edu/npr/library/direct/memos/elegovnmnt.html>, 1999.
- Cook, Meghan E. "What Citizens Want from E-Government", Center for Technology in Government, University at Albany, SUNY, http://demo.ctg.albany.edu/publications/reports/what_citizens_want, 2000.
- Coopersmith, Jonathan "Texas Politics and Fax Revolution," Information Systems Research (7:1(March)), 1996, pp. 37-51.
- CPRG (Cyberspace Policy Research Group) <http://www.cyprg.arizona.edu>, 2001.
- Danzgler, James N. "Computers and the Frustrated Chief Executive," MIS Quarterly (1:2(June)), 1977, pp. 43-52.
- Dearstyne, Bruce W. "E-Business, e-Government & Information Proficiency", Information Management Journal (35:4), 2001, pp. 16-21.
- Dillehay, B.H. "E-Government as Virginia's Vision," Spectrum: The Journal of State Government, http://stars.csg.org/spectrum/2002/Winter/wi02spec_24.pdf, 2002.
- Elgarah, Wafa and Courtney, James F. "Enhancing The G2c Relationship Through New Channels Of Communication: Web-Based Citizen Input," Americas Conference on Information Systems, 2002.
- Fernandes, Danny; Gorr, Wilpen and Krishnan, Ramayya "Servicenet: An Agent-Based Framework For One-Stop E-Government Services," Americas Conference on Information Systems, 2001.
- Gant, Jon P. and Gant, Diana Burley "Web Portals And Their Role In E-Government," Americas Conference on Information Systems, 2001.
- Gefen, David; Warkentin, Merrill; Pavlou, Paul A. and Rose, Gregory M. "E-Government Adoption," Americas Conference on Information Systems, 2002.
- Granados, Estanislao C. and Masilungan, Eulogio Martin "Philippines Pilot E-Procurement System," Case studies of the World Bank, http://www1.worldbank.org/publicsector/egov/philippines_eproc.htm, 2001.
- Greenspan, Alan "Francis Boyer Lecture", American Enterprise Institute, Washington D.C., December 5, 1996.
- GSA "Citizens Expectations for Electronic Government Services", Intergovernmental Advisory Board, Federation of Government Information Processing Councils, <http://www.egov.vic.gov.au/pdfs/citizens1.pdf>, September 2000.
- Radics, Axel "Cristal: A Tool for Transparent Government in Argentina", Case Studies of the World Bank, http://www1.worldbank.org/publicsector/egov/cristal_cs.htm, 2001.
- Hall James P.; Kim, Tschangho John and Darter, Michael I. "Cost/Benefit Analysis of Enterprise-Wide Geographic Information System Implementation: Case of The Illinois Department Of Transportation," Americas Conference on Information Systems, 2001.
- Harwood, Richard "The alienated American voter," Brookings Review (14:4(Fall)), 1996, pp. 32-35.
- Huang, Wayne; Ambra, John D. and Bhalla, Vikrant "Key Factors Influencing The Adoption of E-Government in Australian," Americas Conference on Information Systems, 2002.
- ICMA (International City / County Management Association) "Electronic Government 2002," <http://www.icma.org/download/cat15/grp120/sgp224/egov2002web.pdf>, 2002.
- Johnston, Jocelyn and Romzek, Barbara "Contracting and Accountability in State Medicaid Reform: Rhetoric, Theories and Reality," Public Administration Review (59:5), 1999, pp. 383-399.
- Kahin, Brian "The U.S. National Information Infrastructure Initiative: The Market, the Web and the Virtual Project," in National Information Infrastructure Initiatives (Brian Kahin and Ernest Wilson eds.), pp 150-189, MIT Press : Cambridge, Mass, 1997.
- Khan, A. Zulfiqar; Shan, L. Pan and Devadoss; R. Paul "Experiences With Implementing Workflow Engine In The Public Sector: An Exploratory Study," Americas Conference on Information Systems, 2001.
- Krueger, Ann O. "Government failures in development," Journal of Economic Perspectives (4:3(Summer)), 1990, pp. 9-23.
- Lagroue, Harold J., III "The Impact of E-Government Initiatives: Louisiana.S .Express Lane. License and Vehicle Registration System," Americas Conference on Information Systems, 2002.
- Li, F. "Implementing e-Government Strategy in Scotland: Current Situation and Emerging Issues," Journal of Electronic Commerce in Organizations, (1:2 (Apr-Jun)), 2003, pp. 44-65.
- OECD "The e-government imperative: main findings", Organization for Economic Cooperation and Development, <http://webnet1.oecd.org/pdf/M00039000/M00039948.pdf>, 2003.
- OMB "Implementing the President's Management Agenda for E-Government," White House, http://www.whitehouse.gov/omb/egov/2003egov_strat.pdf, 2003.
- Orrego, Claudio; Osorio, Carlos and Mardones, Rodrigo "Chile's Government Procurement E-System," Case studies of the World Bank, http://www1.worldbank.org/publicsector/egov/procurement_chile.htm, 2000.

- Parasuraman, A., Zeithaml, V.A. and Berry, L.L., "A conceptual model of service quality and its implications for future research," *Journal of Marketing* (49:Fall), 1985, pp. 41-50.
- Pardo, Theresa "Realizing the Promise of Digital Government: It's More than Building a Web Site," Center for Technology in Government, University at Albany/SUNY, http://www.cisp.org/imp/october_2000/10_00pardo.htm, October 2000.
- Poon, Simpson "ESDLife of Hong Kong E-Government Application With An E-Business Spirit," Americas Conference on Information Systems, 2002.
- Quarzo[a], Ann "Plans for Census 2000," *Government Information Quarterly* (17:2), 2000, pp. 97-108.
- Rainey, Hal G.; Backoff, Robert W. and Levine, Charles H. "Comparing Public and Private Organizations," *Public Administration Review* (36:2(March/April)), 1976, pp. 233-246.
- Reichard, Christoph "The Impact of Performance Management on Transparency and Accountability in the Public Sector," in *Ethics and Accountability in a Context of Governance and New Public Management* (Annie Hondeghem, ed.), IOS Press : Netherlands, 1998.
- Rethemeyer, R. Karl "White Paper: Digital Government", Developing a Basic Research Program for Digital Government Workshop, Kennedy School of Government, Harvard University, http://www.ksg.harvard.edu/cbg/dgworkshop/scharf_white.pdf, 2002.
- Robey, Daniel and Sahay, Sundeep "Transforming Work Through Information Technology: A Comparative Case Study of Geographic Information Systems in County Government," *Information Systems Research* (7:1(March)), 1996, pp. 93-110.
- Romzek, Barbara and Dubnick, Melvin "Accountability in the Public Sector: Lessons from the Challenger Tragedy," *Public Administration Review* (47:3), 1997, pp. 227-238.
- Rupp, Christian "Best Practice in eAustria: The Austrian Electronic Economic Chamber Project," Americas Conference on Information Systems, 2002.
- Sibley, Kathleen "The perils of e-government benchmarking", Itbusiness.ca, <http://www.plesman.com/index.asp?theaction=61&lid=1&sid=50246>, October 2002.
- Schwartz, Ari "The Ten Most Wanted Government Documents," The Center For Democracy & Technology, <http://www.cdt.org/righttoknow/10mostwanted/toc.html>, 2003.
- Stevens, John M., Cahill, Anthony G. and Laplante, Josephine M. "The Utilization of Information Systems Technology in State Financial Management: An Empirical Assessment," *Journal of Management Information Systems* (8:1(Summer)), 1991, pp.107-128.
- Taylor Nelson Sofres "E-Government Shows Strong Growth Globally," Press Release, <http://www.tnsfres.com/press/presstory.cfm?storyID=627>, 11th July, 2002.
- UNPAN (United Nations Online Network in Public Administration and Finance) "Benchmarking E-government: A Global Perspective — Assessing the Progress of the UN Member States," <http://www.unpan.org/egovernment2.asp>, 2002.
- Walsham, Geoff and Sahay, Sundeep "GIS for District-Level Administration in India: Problems and Opportunities," *MIS Quarterly* (23:1(March)), 1999, pp. 39-66.
- Welch, Eric and Wong, Wilson "Public Administration in a Global Context: Bridging the Gaps of Theory and Practice between Western and Non-Western Nations," *Public Administration Review* (58:1), 1998, pp. 40-49.
- Welch, Eric and Wong, Wilson "Global Information Technology Pressure and Government Accountability: The Mediating Effect of Domestic Context of Web Openness," *Journal of Public Administration Research and Theory* (11:4), 2001, pp. 509-538.
- West, D.M. "State and Federal E-Government in the United States - 2001," Taubman Center for Public Policy, Brown University, http://www.brown.edu/Departments/Taubman_Center/Pdf/egovt01us.PDF, 2001.
- White House, OMB (Office of Management and Budget), "Fiscal Budget 2003 Glossary," <http://www.whitehouse.gov/omb/budget/fy2003/bud35.html>, 2003.
- Zeithaml, V.A., Parasuraman, A., and Berry, L.L. "Delivering Quality Service", The Free Press : New York, NY, 1990.