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# Validating a Normative Framework for Federal eGovernment: Preliminary Results

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# Validating a Normative Framework
# for Federal E-Government: Preliminary Results

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## ABSTRACT

E-government has been identified as the next major application of information systems to fundamentally alter how U.S. federal agencies interact with the public. Through a strategy published by the Office of Management and Budget, federal agencies are formulating and executing plans to realize the many expected benefits from e-government. It is not clear, though, whether there is either a normative or empirical framework of e-government underpinning the strategy. Based on a normative framework of federal e-government created through this research, this paper presents a case study of an initiative in the federal e-government strategy, examining whether it conforms to the normative framework of federal e-government. This paper finds that there was not a consistent underlying e-government framework providing a foundation for this federal initiative. This finding raises questions about whether other federal e-government initiatives suffer a similar problem, calling into question the ultimate success of the U.S. federal e-government strategy.

## Keywords

Federal, e-government, case study, e-commerce, Small Business Administration

## INTRODUCTION

In 1997, the National Science Foundation (NSF) initiated the digital government program in an effort to support research projects and move the American government toward transformed public service (Dawes, Bloniarz, Kelly and Fletcher, 1998). For most business trade journals and federal agency executives, however, the term "digital government" has evolved over time and been replaced by the term "electronic government." Electronic government (hereafter referred to as e-government) has been identified by some U.S. federal agencies and information technology (IT) trade journals as the next major management and technology phenomenon to fundamentally alter the way federal agencies interact with and serve the public. Perhaps much of the interest from U.S. federal agencies originates from the expectation that they will experience similar positive outcomes from e-government that private industry firms experience from electronic commerce or e-commerce, as it is commonly referred. However, one possible problem is that federal agencies may be embarking upon e-government initiatives without a guiding, normative framework.

West (2000) indicates that unlike traditional service delivery and e-commerce, which have been widely studied, there have been relatively few empirical studies of e-government. This lack of empirical analysis should be considered alarming in light of the attention and resources being funneled toward e-government at the federal level. The government IT market research firm, Input, projects that federal spending on e-government will grow 38 percent, from slightly more than $4 billion in fiscal year (FY) 2004 to nearly $6 billion by FY 2009 (Input, 2005). The essential reason, however, to study e-government rests in the impact it will have upon U.S. federal agencies and ultimately the American public. The manner in which citizens interact with and are served by U.S. federal agencies in the future will be influenced, in large part, by knowledge, experience and revelations gleaned today. This paper sets out to bring some focus to the lack of an agreed-upon normative framework for federal e-government. E-government is arguably the most promising opportunity in the last 20 years for U.S. federal agencies to revolutionize how they serve constituents. At its core, e-government represents relationships and the culmination of years of effort by government to be more responsive and less bureaucratic; more efficient and less wasteful; more like private sector and less inflexible; more proactive and less reactive. Given this potential, and the level of spending on federal e-government, how it is possible to evaluate these efforts with no normative framework?

After reviewing the literature of federal e-government, this study proposes a normative framework of federal e-government. In the first step of validating this framework, the paper presents a case study of one of the 24 e-government initiatives in the

strategic plan for federal e-government.  The discussion section compares the results of the case study with the proposed normative framework and then the conclusion discussions the implications for the consistency of the empirical evidence from the case to the normative framework.

## LITERATURE REVIEW

This literature review serves several purposes.  First, it provides the definition for e-government used for the purposes of this paper.  Second, it reviews some of the extant studies of federal e-government.  In part, this review helps to outline potential sources of a framework to guide federal e-government implementation, including selected research and materials on technology, management and policy.  Finally, it also serves to provide context for the proposed normative framework for federal e-government.

### Defining E-government

Banks, Darwyn, Oxman, Judith, Rodgers, Sid and Irish and Philip (2002) point out that a definition of e-government is the foundational architectural layer upon which multiple agencies can build and realize cross-organizational implementation strategies, operational plans and measures of effectiveness. "A common definition of e-government will afford government agencies at all levels a common frame of reference by which to measure the effectiveness of their e-government implementations" (Banks et al 2002, p. 4).  On the whole, contemporary definitions of e-government are insufficient for field research.  Depending upon the source, the term "e-government" it *assumes* a myriad of definitions making it an even more nebulous and difficult topic to study and discern. Arguably, before federal agency managers will be able to successfully lead their agencies to an e-government platform and capitalize on its expected efficiencies, a normative framework that also defines e-government is required.  For purposes of this paper our definition of e-government is as follows, "Electronic government is the ability to provide a variety of audiences 24/7 access to secure, electronic and reliable services."

Beyond the issue of an e-government definition, though, there is the issue of whether there is a framework to guide federal agency action.  "The literature of e-government offers few approaches, which have been found useful in selective evaluation" (Gupta, Jana, 2003 p.368).  In the absence of any agreed-upon e-government framework for federal agencies to draw on, there are other materials that may well be influencing the development and implementation of federal e-government initiatives.  The character and content of these materials vary, though, from policy, to management.

### Empirical Studies of Federal E-government

Several studies have provided the beginnings of an empirical foundation for federal e-government.  Stowers (2001) describes how federal agencies have used e-commerce technologies and models to capture benefits private sector organizations have realized.  She cites the move to "decentralizing" computing in government as one of the origins of electronic government at the federal level.  However, as Stowers points out the slower pace of migration towards e-government has been due to limitations of recruiting and retaining key IT specialists in the federal government.  Private entities generally have less oversight from government institutions, such as Congress and the Office of Management and Budget (OMB), giving them more flexibility and resources not typically available to federal agencies.   Stowers' findings reinforced Allison's  (1979) evaluation of the differences between operations and management of private and public sector organizations. For this study, though, most significantly, the Stowers report draws a parallel between e-commerce and e-government interactions.   Table 1 shows the typical parallels between e-commerce and e-government transactions types, recognizing that other studies draw somewhat different comparisons.

| E-Commerce Transactions | E-Government Transactions |
|---|---|
| Business to Consumer (B2C) | Government to Citizen (B2C) |
| Business to Business (B2B) | Government to Business (G2B) |
| Business to Employee (B2E) | Government to Government (G2G) |

**Table 1. Typical E-Government and E-Commerce Transaction Types**

There are other studies that examine federal e-government, but they typically do not discuss the issue of a guiding framework.  For instance, Holden (2004) discusses electronic signatures and authentication in the IRS e-file program with possible implications for other federal agencies.  West (2004) has published a series of annual studies outlining that status of federal e-government offerings.  Stowers (2002) also did a study examining federal agency web sites as a platform for service

delivery and assessed the usability (or lack thereof) of federal web sites. Mahler and Regan (2002) evaluated a set of federal government intranet sites and discovered that federal agencies were using intranets as "thin portals" to communicate a variety of information. Everything from news and policy changes to updated information about existing programs and procedures could be found on these intranet sites. This study highlights that not all e-government efforts are outwardly focused information exchanges or transactions with the public. Beyond just G2E, these Intranets took on broader significance promoting internal efficiency and effectiveness.

## Frameworks in Federal Policy

The primary *policy*-based framework in the federal government is the President's Management Agenda (PMA). President George W. Bush has placed emphasis on the use of information technology in U.S. federal agencies. The PMA, which also includes four other facets besides e-government, makes the expansion of e-government a priority and focuses the government more on citizens and results. This level of attention to e-government goes beyond even that required by the major piece of federal legislation focused on e-government, the Government Paperwork Elimination Act (Fletcher, 2002). As in indication of the strategic importance of the five facets of the PMA and e-government in particular, OMB evaluates all cabinet-level agencies quarterly against the goals of the PMA and assesses the agencies' progress with a color-coded scorecard that is made available to the public and the press (Office of Management and Budget, 2004). For e-government, the published goal is

> …ensuring that the Federal Government's $60 billion annual investment in information technology (IT) significantly improves the government's ability to serve citizens, and that IT systems are secure, and delivered on time and on budget…

Just as importantly, the PMA has spawned the publication of a strategic plan for federal e-government. After a lengthy review of possible e-government initiatives by a task force organized by OMB, 24 projects emerged as the first formal portfolio of projects to make up the federal strategy for e-government. The strategy organized the portfolio by four major transaction types similar to those shown in Table 1 and included one cross-cutting initiative, e-authentication (Office of Management and Budget, 2002). Figure 1 shows the projects that make up the federal e-government strategy.

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### E-Government Initiatives by Category

| Government to individual citizens | Government to business |
|---|---|
| Recreation One-Stop | Online Rulemaking Management |
| GovBenefits/Eligibility Assistance Online | Expanding Electronic Tax Products for Businesses |
| Online Access for Loans | Federal Asset Sales |
| USA Services | International Trade Process Streamlining |
| EZ Tax Filing | One-Stop Business Compliance Information |
| | Consolidated Health Informatics |

#### Cross-cutting initiative: e-Authentication

| Government to government | Internal efficiency & effectiveness |
|---|---|
| Geospatial Information One-Stop | e-Training |
| e-Grants | Recruitment One-Stop |
| Disaster Management | Enterprise HR Integration: Integrated HR & e-Clearance |
| Project SAFECOM | e-Payroll |
| e-Vital | e-Travel |
| | Integrated Acquisition Environment |
| | Electronic Records Management |

**Figure 1 OMB Electronic Government Projects**

The absence of such an empirically based normative framework can, at best, lead to a "shotgun" implementation of e-government across federal government. Even worse, it may lead to a squandering of taxpayer dollars on poorly managed,

defined and misaligned e-government projects, which provide little value to the public or the agencies involved. According to an evaluation conducted by OMB (2002), none of the e-government initiatives led by Executive departments and agencies achieved a satisfactory rating. Seventeen of the initiatives were rated as unsatisfactory and 9 received a "mixed-results" rating. More recently, a report by the General Accounting Office (GAO) in 2004 cited improvements indicating that in most cases OMB and federal agencies have taken positive steps toward implementing provisions of Title I and II of the E-government Act of 2002. However, this same report also found that the E-gov act's requirements have not always been fully addressed. "In several cases, actions taken do not satisfy the requirements of the act or no significant action has been taken" (GAO, 2004)

The framework presented in this paper began with an analysis of the *selected* definitions of e-government from a variety of studies and sources. By design, this particular study does not include the entire review of the definitions that led to the creation of the framework. Lemon, Holden and Preece (2003) describe this process in greater detail, underscoring the need for a descriptive framework of e-government prior to field study. It is important to note that the analysis of e-government definitions was not considered to be exhaustive at that time. The definitions explored as part of that earlier research represented the available definitions of e-government in 2003. For purposes of context, it is worth noting the e-government definitions used as the basis for the framework derived from a variety of government, academic and private sector documents and are generally still in use today. The definitions from each of these sources formed nascent patterns and through repeated examination and inspection, specific categories began to emerge (Lemon, Holden & Preece, 2003). These categories form what we believe to be the constituent parts of e-government in the federal sector. More than just serving as a frame of reference, the framework is intended to create a set of criteria from which electronic government initiatives can be examined and compared critically. This paper proposes the following normative federal e-government framework at Figure 2 to fill the current void in the e-government literature.
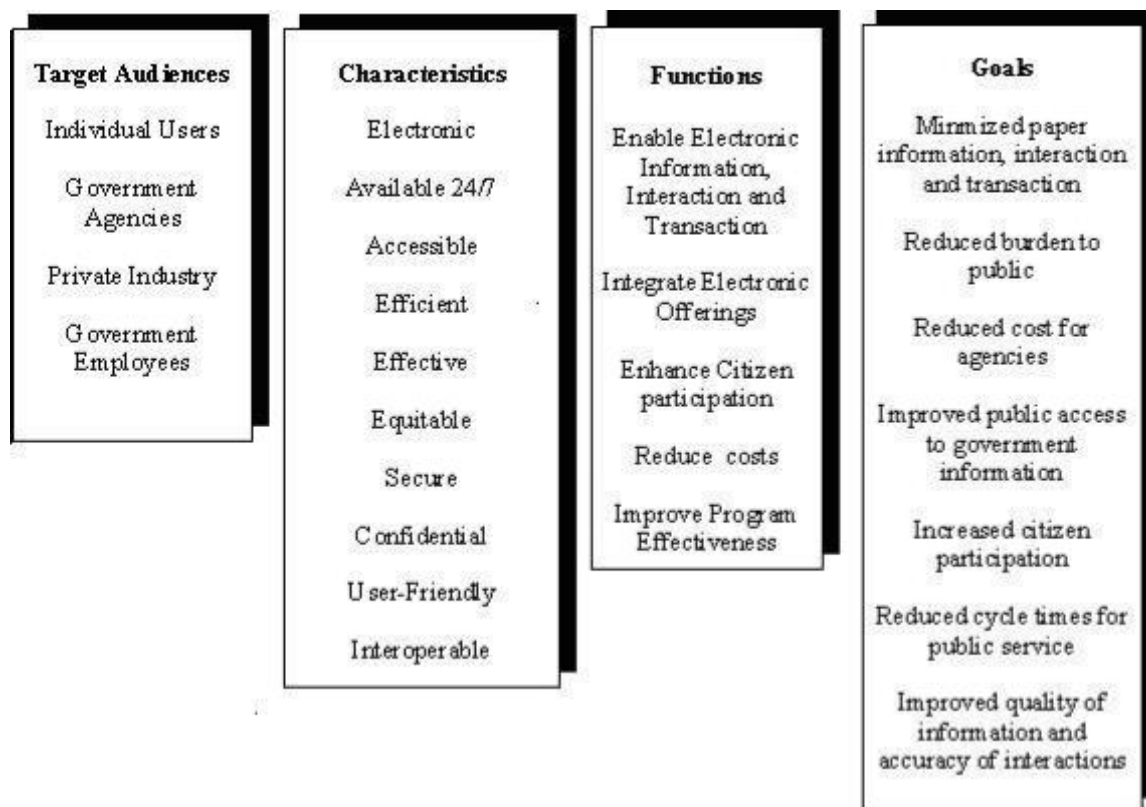


| Target Audiences | Characteristics | Functions | Goals |
|---|---|---|---|
| Individual Users | Electronic | Enable Electronic Information, Interaction and Transaction | Minimized paper information, interaction and transaction |
| Government Agencies | Available 24/7 | Integrate Electronic Offerings | Reduced burden to public |
| Private Industry | Accessible | Enhance Citizen participation | Reduced cost for agencies |
| Government Employees | Efficient | Reduce costs | Improved public access to government information |
| | Effective | Improve Program Effectiveness | Increased citizen participation |
| | Equitable | | Reduced cycle times for public service |
| | Secure | | Improved quality of information and accuracy of interactions |
| | Confidential | | |
| | User-Friendly | | |
| | Interoperable | | |

**Figure 2. A Proposed Normative Framework for Federal E-Government**

## METHODS

Having a proposed framework for federal e-government is helpful to inform theory and practice, but in both cases the utility of the framework depends largely on validation of the framework. This paper presents an early report on efforts to validate

the proposed framework through field research. In particular, this paper presents preliminary findings from a pilot test focusing on the Small Business Administration's e-business portal, which is one of the 24 e-government initiatives in the federal government's strategic plan for e-government.

The primary focus of the larger study, which is also the focus of this paper, is whether federal agencies are operating consistent with the proposed framework for federal e-government presented earlier. Consequently, the overarching research question is:

Are selected federal e-government projects operating by the e-government framework developed as part of this research?

The ultimate answer to this research question is beyond the scope of this paper in large part because the data collection and analysis are not complete. However, the data gathered and analyzed to date from the case study provide some preliminary results on the validation of the proposed framework for federal e-government. This study relies on a three-step approach to data collection. Given the potentially boundless sources for data gathering, the data collection process followed a three-step sequence to help narrow and focus that data gathering and bring focus to the subsequent analysis. Table 2 summaries the three-step approach to data gathering and analysis.

| Electronic Government Perspectives | Data Gathering and Analysis Techniques |
|---|---|
| Implementation in federal agencies | Content analysis of federal e-government project websites |
| Federal agency intent | Documentation review of strategic plans, white papers, statements of work using content analysis |
| Organizational context and future goals | Structured interviews of mid-tier and executive level managers |

**Table 2 Three-step data gathering process**

For all three phases of the data gathering, the research relied on content analysis to organize and provide structure to the data for analysis. A set of provisional content analysis codes, as recommended by Miles and Huberman (1994), were used to categorize content in the SBA reports and e-forms website established as part of the e-government initiative. The data analysis also relied on the same set of codes to perform content analysis of the interviews. Segments of the interviews were coded against the normative framework in an effort to affirm the framework's validity in the real world of e-government. The third phase of data gathering for the SBA case, included three interviews. Interviewees included a mid-level SBA manager, a former senior SBA official and an official from the Social Security Agency (SSA) serving as SSA's representative on the SBA interagency workgroup. Upon completion of all three phases of data gathering, the analysis will synthesize the results and compare the results of the case study to the proposed normative framework for federal e-government.

**THE SBA CASE STUDY**

The SBA was selected as the pilot study site for two main reasons. First, the agency interacts with a varied audience of users. As described earlier, the SBA has a user community ranging from other government agencies to individual users. It was reasonable to expect the pilot experience would present at least one, and likely several of the OMB G2C, G2G or G2B categories. This interaction would make for a more interesting and worthwhile pilot study, and efficient use of available resources and time. Second, pre-established professional relationships with key contact points made accessibility to data and interviews feasible.

The SBA has a main website that contains a host of information and links to a variety of other web pages and information. Users are able to customize views that relate specifically to the type of action they are interested in performing – whether it be starting, financing or managing a business. As noted earlier in Figure 1, the SBA One-Stop Business Compliance Information portal is found in the G2B section of the OMB strategy. The SBA e-business portal, as SBA refers to it, is a subset of the main SBA webpage serving as the primary interface for a variety of audiences to access and complete required SBA forms electronically. These forms represent the universe of actions small businesses and others require to conduct business with the federal government. Products and services available on the web site are described more in the following sections of the paper.

**FINDINGS**

The following results represented a synthesis of the data gathered through the three-phases described earlier. As a result, these data summarize data from content analysis of the SBA e-business portal, a review of documents and plans about the e-forms initiatives and the case study interviews with officials working on the project. The results presented are organized primarily around elements of the proposed framework of e-government, but several themes also emerged from interviews in particular that warranted special emphasis in the presentation of the data.

**Target audience**

The target audience for this initiative extends beyond small businesses, including such groups as industry associations, non-profit organizations, trade organizations, other government organizations and even individuals. These users access the portal with varying levels of experience, needs and expectations. For example, an experienced business person might use the portal to access IRS forms to complete tax filing obligations or new entrepreneur might want to locate forms to apply for a small business loan from the federal government to start a business. The legal community would likely be interested in ensuring a particular business has complied with all required governmental regulations to operate, while the legislative branch interests include how many small businesses use the portal and SBA services at large to establish and grow a business. The varied expectations of all these users require the SBA e-business portal to continuously supply additional forms, content and instructions for electronic submission.

**Outcomes Sought**

Small businesses need to report to a variety of federal agencies on a number issues ranging from taxes, employment, and regulatory compliance. There are also federal programs, offering information, services and financial support to small businesses. In both roles, small businesses have to interact with multiple federal agencies, across numerous program areas. The SBA e-business portal seeks to bring simplify small businesses' interactions with the federal government by putting information and services online. Two outcomes of the portal are consistent across the data analyzed. First, SBA sought to provide a single point of access to critical information for users that is easily accessible and easily catalogued. Second, there was a desire to reduce "red tape" or the burden of complying with federal regulatory and paperwork requirements that impose costs on small businesses.

**Services Provided**

The SBA initiative provides both product and service through the portal and e-forms engine. Together, the portal and e-forms engine provide the infrastructure necessary to complete transactions. The portal is a self-described "hub" for federal forms that also includes content and forms for small businesses to comply with many federal regulatory and reporting requirements. In many cases the electronic forms are accompanied with comprehensive instructions, and in other cases only the forms are provided. Finally, a search engine gives users the ability to perform keyword searches on forms, and searches on specific form names, should the user have that information available to him.

Additionally, it is apparent that SBA also wants the e-business portal to provide "value added" service to the varied user base. This value is intended to extend beyond informational content available on the SBA homepage. The portal's major benefit to small businesses comes from the secure transactional capabilities it provides (e.g.,) submission of forms electronically from a variety of federal agencies a business needs to interface with. Examples of this include the IRS, Department of Agriculture and the Patent and Trademark office. In this way the SBA e-business portal serves as an *extension* of the agency's operating environment and not solely a complement to paper-based alternatives.

**Framework Employed**

Among the data sources, it was not clear there was an agreed-upon e-government framework shaping the SBA e-government initiative. What came up consistently, though, was how the budget justification and progress reporting requirements of OMB (i.e., Exhibit 300 of OMB Circular No. A-11) drove the form and contents of the initiative as much as anything. As pointed out by one interviewee, the OMB Exhibit 300 was the proper framework to follow because it is the primary method federal agencies use to justify their business case for funding agency projects – including some e-government initiatives. The OMB Exhibit 300 "frames" each agency's case for funding and therefore fulfills the role as the framework for the initiative.

**Best Practices Researched**

Responses were inconsistent on the issue of best practices SBA explored to create the small business portal. One respondent reported no investigation of benchmarking while the remaining two participants described two different processes for

benchmarking that aided during the development of the SBA portal. The first example of best practices analysis included a cursory review of other e-government initiatives – including a review of some business models and lessons learned. This review process was only intended to "survey the field" of initiatives from a high level perspective. The second respondent did not provide specifics on actual best practice processes, but identified a "feedback loop" established during business process exercises to provide information that could be used to enhance the initiative through continuous review.

## DISCUSSION

The preliminary results from this first case study indicated that at least this federal e-government initiative is operating consistently with the normative framework presented at Figure 2 in this paper. A review of the project web site, related project documentation and interviews with project personnel (past and present) for the SBA e-business portal confirmed that there was a clear sense of the intended audience. In fact, the SBA portal appeared to be used by all the target audiences identified in the normative framework. Many of the characteristics identified in the framework appeared to apply to the portal too. The primary focus of the SBA project, though, was on providing a user-friendly, 24/7 and efficient means for small businesses and other users access to information, services and transactions. Given the targeted audience of small businesses, there was not much indication that equity was a characteristic of the e-business portal. While there was not explicit discussion of security and confidentiality of the offerings on the portal, given that the site offered the capability to complete some transactions electronically, those capabilities were clearly present.

Most of the functions of the normative framework were present in the e-business portal too, with the notable absence of enhancing citizen participation. This is not surprising since small businesses use the site primarily for its ability to enable electronic interactions and integrate electronic offerings. As a result, the goals are consistent with the needs of the target audience, primary characteristics and functions. The goals of the e-business portal were mostly to minimize paper information exchange and reduce burden on the public, in this case small businesses. Arguably, this provides improved information access to the public and reduced cycle times for service. It is not clear that this improved the quality of the information and accuracy of interactions, but compared to typical paper transactions this is safe to assume.

While the normative framework seems accurate from a descriptive standpoint, it's normative power it not yet clear. This became apparent, during the interviews when the issue of a guiding framework was addressed. Instead of federal employees working on the SBA e-business portal agencies explicitly doing their own research on e-commerce or e-government frameworks to guide their planning and implementation, another driving force for the initiative arose somewhat surprisingly. It seems the budget formulation and reporting requirements of the President's Management Agenda (PMA) may be the primary organizing framework for federal e-government initiatives, at least based on this one case study.

## CONCLUSION AND NEXT STEPS

Because this is one case study as part of a larger research project underway, the implications of the findings presented are in both preliminary and limited. Despite this limitation, given the lack of empirical research on federal e-government, the findings are significant nonetheless. In particular, preliminary results indicated the normative framework for federal e-government might describe agency initiatives quite well. While the framework is descriptive it is still subject to some further data gathering and analysis. As the case studies continue, it will be interesting to see whether agency documentation and interviews continue to confirm the important role of OMB's budget justification and PMA progress reporting processes in shaping agency action.

There is no question that the stakes for federal e-government are high. Literally billions of dollars are being spent with projections of increases in the future. Given the potential transformational benefits of e-government, it seems that research to ensure that these significant resources being spent on federal e-government produce expected benefits is both timely and relevant. This research begins the process of establishing a normative framework for federal e-government, now with limited validation based on field research, which might help to ensure the proper stewardship of these important resources.

## REFERENCES

1. Allison, G.T. (1979) Public and Private Management: Are they fundamentally alike in all unimportant respects? *Proceedings of the Public Management Research Conference,* Nov 19-20, 27-38.

2. Banks, Darwyn, Oxman, Judith, Rodgers, Sid and Irish, Philip. (2002) Missing in Action: An operational definition of E-government, Washington, DC: National Defense University.

3. Dawes, S., Bloniarz, P., Kelly, K. and Fletcher, P.D. (1998) Some Assembly Required: Building a Digital Government for the 21st Century (NSF No. 99-181), University of Albany/SUNY. Center for Technology in Government.

4.  Fletcher, P.D. (2002) The Government Paperwork Elimination Act: Operating Instructions for an Electronic Government. *International Journal of Public Administration*, 25,5, 723-736.

5.  Gupta, M.P. and Jana D. (2003) E-government evaluation:  A framework and case study. *Government Information Quarterly*, 20, 365-387.

6.  Holden, S.H.  (2004) Understanding Electronic Signatures: The Key to E-Government. Washington, DC: The IBM Center for the Business of Government.

7.  INPUT - Federal E-Government Spending To Increase Nearly 40 Percent Over Next Five Years http://www.input.com/external/resources/index_v1_about.cfm?page=/external/resources/include_v1_article_detail&article_ID=997 Retrieved February 16, 2005.

8.  Lemon, W., Holden, S.H. and Preece, J.  (2003) A Descriptive Model for Federal E-government: A Necessary Step Prior to Field Research. In M. Khosrowpour, (Ed.), *Information Technology and Organizations: Trends, Issues, Challenges and Solutions,* Hershey, PA: Idea Publishing, 359-362.

9.  Mahler, J.G. and Regan, P.M. (2002) Federal Intranet Work Sites: An Interim Assessment. Washington, DC.: The IBM Center for the Business of Government.

10. Miles, M.B., and Huberman, A.M., (1994) An Expanded Sourcebook – Qualitative Data Analysis (2nd ed.) . Thousand Oaks, CA: Sage Publications

11. Office of Management and Budget (2002) Implementing the President's Management Agenda for E-Government. Retrieved May 14, 2003, from http://www.whitehouse.gov/omb/inforeg/egovstrategy.pdf.

12. Office of Management and Budget. (2004) *Expanding E-Government: Partnering for a Results-Oriented Government*. Office of Management and Budget. Retrieved February 25, 2005, from the World Wide Web: http://www.whitehouse.gov/omb/budintegration/expanding_egov12-2004.pdf.

13. White House (2004), President's Management Agenda, Retrieved February 28, 2005 from the World Wide Web: http://www.whitehouse.gov/omb/egov/g-8-pma.html.

14. Stowers Genie N. L. (2001) Commerce Comes to Government on the Desktop.  Washington, DC.: The IBM Center for the Business of Government.

15. Stowers, Genie N. L. (2002) The State of Federal Websites: The Pursuit of Excellence.  Washington, DC.: The IBM Center for the Business of Government.

16. West, D. (2000) Assessing E-Government: The Internet, Democracy, and Service Delivery by State and Federal Governments. Retrieved August 7, 2001, from the World Wide Web http://www.insidepolitics.org/egovreport00.html.

17. West, D. (2004) State and Federal E-Government in the United States, 2004, Retrieved February 28, 2005, from the World Wide Web: http://www.insidepolitics.org/egovt04us.pdf.