

Chapter XIII

World Wide Web Site Design and Use in Public Management

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ABSTRACT

The World Wide Web (Web) has been widely adopted by local governments as a way to interact with local residents. The promise and reality of Web applications are explored in this chapter. Four types of Web utilizations are analyzed—bulletin board applications; promotion applications; service delivery applications; and citizen input applications. A survey of 145 municipal and county government websites originally conducted in 1998 was replicated in 2002. These data are used to examine how local governments are actually using the Web and to examine the evolution of Web usage over the four years between the first and second survey. The chapter concludes that local governments have made progress in incorporating many of the features of the Web but that they have a long way to go in realizing its full promise.

INTRODUCTION

Not long ago, a group of “netizens”—permanent residents of cyberspace—posed a question for themselves: Technology, Yea or Nay? In a self-congratulating tone, one of them responded, “Technology is wonderfully

liberating. I don't need my stockbroker or travel agent anymore. I may choose to use them for a variety of reasons, but I don't NEED them anymore. Multiply that by millions of people and you have an entire industry that could be irrelevant in the Information Age. . . . Take this even further—maybe technology at some point will make government irrelevant” (Technology, yea or nay, 1998).

Late last fall, Detective Chris Hsiung of the Mountain View, California, police department began investigating a suspicious pattern of surveillance against Silicon Valley computers. From the Middle East and South Asia, unknown browsers were exploring the digital systems used to manage Bay Area utilities and government offices. . . . Working with experts at the Lawrence Livermore National Laboratory, the FBI traced trails of a broader reconnaissance. A forensic summary of the investigation . . . said the bureau found “multiple casings of sites” nationwide. Routed through telecommunications switches in Saudi Arabia, Indonesia, and Pakistan, the visitors studied emergency telephone systems, electrical generation and transmission, water storage and distribution, nuclear power plants and gas facilities. Some of the probes suggested planning for a conventional attack . . . But others homed in on a class of digital devices that allowed remote control of services such as fire dispatch and of equipment such as pipelines. More information about those devices—and how to program them—turned up on al Qaeda computers seized this year . . . (Gellman, 2002).

We used the first anecdote to open the original version of this chapter. It illustrated the vision that some had about what the World Wide Web could do and perhaps what they hoped that it would do—reduce the costs of doing business in such spheres as travel, stock brokerage, or government. Coupled with this comes the capacity for making institutions more transparent and accessible—posting governmental information on websites so that citizens can use that information to make more informed policy choices, interact more closely with policy makers, and become more empowered.

The second anecdote illustrates some of the concerns associated with the post-September 11 use of the Web by government. Posting more information on the Web and using the Web to conduct internal and external business increases the possibility that government services can be disrupted through denial of service, Trojan horse-, virus-, or worm-type attacks (Lo, 2000, 2002; CERT/CC, 1997). Before the terrorist attacks of September 11, such disruptions were often considered almost innocent intrusions by hackers exercising their skills with nefarious but not malicious intentions. Attacks were often viewed as temporary disruptions to the normal conduct of website business—annoying but not deadly. After September 11, however, the

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