

## Summary

Government is all about information and service delivery. The World Wide Web, offering virtually unlimited access and almost instant feedback, seems perfectly suited for government work. By transcending time, place, and distance, the Web removes barriers that often hamper effective service. For these reasons, most government organizations are eager to use the Web to deliver services to citizens and to conduct internal business.

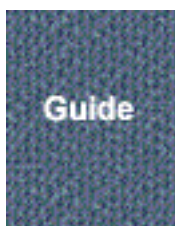
However, the Web abounds with examples of premature, ineffective attempts to take advantage of its power to communicate information. Developing a service delivery strategy that incorporates the World Wide Web is not simple, straightforward, or inexpensive.

Seven state and local agencies participated in a project to develop Web-based services for themselves, and developed a set of practical lessons about the WWW that would assist other public agencies to effectively use this powerful new medium.

The project resulted in a set of key management, technology, and policy lessons; six agency Web sites; and four practical tools available through the CTG Web site.

## Publications & Results

### Practical Guides (3)



#### A Cost Performance Model for Assessing WWW Service Investments

Mon, 01 Jun 1997

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Through a structured process, the reader is guided toward a better understanding of the cost and performance factors involved in creating a Web service, and in maintaining an effective presence on the World Wide Web. The guide addresses many of the factors relevant to conducting an effective effort, including defining service goals, evaluating infrastructure needs, and estimating the human resources required to sustain the effort. By applying the tools to a planned project, the reader should have a new and valuable perspective on the process of developing a useful Web service.

#### Developing & Delivering Government Services on the World Wide Web: Recommended Practices for New York State

Mon, 01 Sep 1996

The anytime, anywhere character of the Internet allows government information and services to be more available to more people. These guidelines present principles to help government agencies in New York State decide how best to design, manage, and market Web services.

The Internet can help government agencies communicate with the public, with businesses, and with one another. The anytime, anywhere character of the Internet allows government information and services to be more available to more people with greater convenience and lower cost to customers. These guidelines were created to help government organizations in New York State achieve these benefits at reasonable cost and effort.

These guidelines focus on one major aspect of the Internet: the World Wide Web (WWW or Web) which has

emerged as an interconnected network of information sources located all around the world. These guidelines present principles to help government agencies in NYS decide how best to design, manage, and market Web services. There are many excellent electronic and print resources that deal with the technologies of the Web. We did not set out to create another one. Instead, we emphasize important topics that are often neglected: setting service objectives and policies, organizing and managing staff and other resources, assessing costs and effectiveness.

### A WWW Starter Kit

Mon, 01 Apr 1996

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Being on the Internet can mean many different things. For most government organizations, it means creating a World Wide Web site, but it might also entail e-mail, gopher servers, news groups and a host of other ways to communicate, share information, and deliver services electronically. This World Wide Web Starter Kit is based on CTG's experiences with a project we call the Internet Services Testbed. By working with seven state and local agencies to develop Web sites for their particular programs and customers, CTG has learned a lot about how to approach this fascinating, powerful, and ever-changing technology. This starter kit won't put you in the WWW business overnight. In fact, it lacks many of the technical tools that you will need to accomplish that goal. Instead, it helps you begin the process without having to reinvent the wheel.

## Reports and Working Papers (3)



### Delivering on the Web: The NYS Internet Services Testbed

Sun, 01 Dec 1996

Government is all about information and service delivery. The Web seems perfectly suited for that work. This report presents a set of practical tools to help government agencies refine and narrow the objectives of the Web services they are developing.

Government is all about information and service delivery. The World Wide Web, offering virtually unlimited access and almost instant feedback, seems perfectly suited for government work. The Internet Services Testbed Project provided the opportunity for seven government agencies in New York to develop prototype Web sites in anticipation of serving constituents better. Agency staff were also stakeholders in providing a platform for internal information exchange and links to central agency databases.

The project report describes the research and practical tools the project generated. The tools include a stakeholder analysis, the strategic framework, an organizational issues questionnaire, the cost & performance model, technology awareness tool, and evaluation instruments.

### A Brief Survey of Internet Policies

Sun, 01 Apr 1996

As more government agencies use the Web, policies that guide Internet use are in their infancy. This paper presents the results of a survey conducted to collect and review government Internet policies between April and July 1996.

Over the past two years, government organizations have increasingly begun to use the Internet to disseminate and gather information and to offer services to the public. As these applications multiply, concerns surrounding appropriate use, management, and value have emerged. In so short a time, states, localities, and federal agencies have only begun to explore the possibilities and understand the complexities of the Internet. As a result,

Internet use policies are only in their infancy. As part of an Internet Services Testbed project, the Center for Technology in Government collected and reviewed existing government policies between April and July 1996. This paper presents the topics that were considered most important and how they were treated in policy documents.

### Internet Security Seminar

Sun, 01 Apr 1996

A day-long seminar on Internet Security was presented on April 2, 1996 by the Center for Technology in Government in conjunction with our corporate and public sector partners. It was the first of a series of annual Internet security days held in New York State. This summary highlights the seminar sessions and results.

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This Internet Security Seminar was the first of a series of annual Internet security days held in New York State. For information on the latest security day, visit [www.nysfirm.org](http://www.nysfirm.org).

### Lessons Learned

The project produced key lessons about defining, developing, and managing Web-based public services.

This is a new kind of service, not just a new technology. The ability to integrate services and information from many organizational units and programs means that WWW services need to be guided by enterprise-level strategies and managed by teams with a broad range of expertise.

A Web site is a dynamic public representation of an agency and its programs. It needs to be developed and managed as a major organization-wide initiative. Clearly defining the business needs that the Web service will support and its relationship to the overall agency mission is key to this effort.

It is easy to underestimate the managerial and technical complexity of Web-based services. Complexity stems from several sources: a high degree of public visibility, rapidly changing technologies, the need for incremental and iterative development processes, and the tightly interwoven threads of policy, management, and technology concerns.

Web-based services can be expensive. Because it is easy to use, people often tend to underestimate the behind the scenes costs of developing an effective WWW service. Even the smallest projects demand substantial human, technical, and financial resources. Personnel and technical infrastructure costs tend to comprise the bulk of expenses.

Managing information content is the most fundamental and often the most difficult aspect of developing and managing a WWW site. This activity entails selecting content that satisfies a clear service objective and making it accessible to a well-defined intended audience. Often, existing information needs to be reformatted or "reengineered" to take advantage of the linkages, search features, and navigation aids that the Web provides. It is also usually necessary to maintain the same information in two or more formats for different audiences.

Effective Web-based services demand appropriate computing and communications infrastructure. The condition of an agency's existing infrastructure, especially on the desktop, can present a significant threshold barrier.

The use of the Web presents new policy issues and casts existing information policies (especially those related to access and intellectual property) in a new light. A clearly stated Internet service policy can help focus agency-wide efforts to create and manage this service. Both statewide and agency-level information policies need to be evaluated and refined in order to fully employ the data sharing and business transaction capabilities of the Web.

Security considerations are important, but manageable. The most common WWW applications (information and referral, downloading documents, e-mail forms, internal searches of a site) have few security risks. Other applications (such as providing public access to internal databases) entail major security concerns. However, rather than shy away from these applications, agencies should educate themselves about both the risks and tools for managing them.

Practically anything an agency needs to know about using the WWW or developing Web services is readily

available on the Web itself. There are other sites, white papers, tutorials, style guides, discussion groups, software, indexes, and search tools that can assist agencies as they plan the development of their Web services.

## **Press Releases & News Stories**

### **Press Releases**

Assessing the Cost of World Wide Web Investments  
Wed, 16 Jul 1997

Government Services Go Virtual  
Wed, 06 Nov 1996

New York on the Web  
Tue, 18 Jun 1996

## **Prototypes**

Six state agency Web site prototypes were created and are being put into production, all on a faster schedule than would otherwise have been possible. Prototyping has allowed the agencies to more easily refine their Web sites and to establish regular procedures for updating their services. The agency Web sites can be found on the WWW at the following addresses:

NYS Division of Housing and Community Renewal

<http://www.dhcr.state.ny.us/>

NYS Office of Real Property Services

<http://www.orps.state.ny.us/>

Empire State Development

<http://www.empire.state.ny.us/>

NYS Division of Military and Naval Affairs

<http://www.dmna.state.ny.us/>

NYS Office of Alcoholism and Substance Abuse Services

<http://www.oasas.state.ny.us/>

Governor's Traffic Safety Committee

<http://www.nysgtsc.state.ny.us/>

## **Partners**

### **Government Partners**

- New York State Archives and Records Administration
- New York State Division of Housing & Community Renewal
- New York State Division of Military & Naval Affairs
- New York State Empire State Development
- New York State Governor's Traffic Safety Committee
- New York State Office of Alcoholism & Substance Abuse Services
- New York State Office of Real Property Services

- Hamilton County and the NYS Performance Measurement, Reporting, and Improvement System Project

### Corporate Partners

- Digital Equipment Corporation, now known as Hewlett-Packard
- Documentation Strategies, Inc.
- EMI Communications Corporation, now known as Intermedia Communications
- Silicon Graphics
- Sun Microsystems
- Unified Technologies

### Academic Partners

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## Original Scope of Work

Government is all about information and service delivery. The World Wide Web, offering virtually unlimited access and almost instant feedback, seems perfectly suited for government work. By transcending time, place, and distance, the Web removes barriers that often hamper effective service. For these reasons, most government organizations are eager to use the Web to deliver services to citizens and to conduct internal business.

However, the Web abounds with examples of premature, ineffective attempts to take advantage of its power to visualize and communicate information. Developing a service delivery strategy that incorporates the World Wide Web is neither simple, nor straightforward, nor inexpensive.

In late 1995, dozens of New York state and local government agencies identified a long list of learning objectives that became the agenda for the Internet Services Testbed Project at CTG. Over the first six months of 1996, the Center worked with seven state and local agencies to assess the feasibility, costs, and benefits of Web-based services. The agencies included:

- Division of Housing & Community Renewal
- Division of Military & Naval Affairs
- Empire State Development
- Governor's Traffic Safety Committee
- Hamilton County
- Office of Alcoholism & Substance Abuse Services
- Office of Real Property Services

The project activities were focused in two areas. First, to develop, test, and evaluate prototype Web sites for each agency and to identify the technology, management, and policy barriers they encountered and the lessons they learned. Second, to develop practical tools based on the project experience that would assist other organizations in their efforts to provide Web-based services.

Six of the seven agencies successfully completed prototype Web sites during the project. Five sites were released on the Web by August of 1996, with the sixth following in January of 1997. The development and evaluation process uncovered a number of obstacles that the agencies worked to overcome. Those barriers and the key lessons learned are the main focus of this project report.

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