

2003 NASCIO Recognition Awards

Nomination Form

Please complete entire form. All nominations must be postmarked no later than May 18, 2003.

Title of Nomination: Access Delaware Project

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Category for judging (please list only one): Accessibility & Participation

Person Nominating (if different than above): Same as above.

Please return nominations to:
2003 NASCIO Awards
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Lexington, KY 40507
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Access Delaware Project

Executive Summary

One of the primary functions of State government is to provide information and services to citizens. However, states continue to struggle with Internet access issues and ways to bridge the Digital Divide.

The "Access Delaware" Project is an initiative that is focused on providing alternate mechanisms for Delaware agencies to deliver web-based information and services to citizens. The State of Delaware "Voice Portal" -- the public facing component of the Access Delaware Project -- has housed three VoiceXML applications since its inception in September 2002.

- An Internet Access Locator, that allows any Delaware resident to search for locations in their neighborhoods that provide public Internet access.
- A Polling Place Locator, that allows Delaware voters to find their polling places; and,
- A suite of voice-enabled tax services that allows any Delaware taxpayer to check the status of their tax refund, listen to commonly asked tax questions and locate facilities where they can receive free tax preparation assistance.

The Delaware Voice Portal can be accessed by calling 866-276-2353 (toll free) from anywhere in the continental US.

The State has established a VoiceXML infrastructure (in concert with an outside partner) that can be used in the future by any state of Delaware agency to develop and deploy a VoiceXML application for its customers. In addition, the State has deployed a VoiceXML Resource Center (http://www.state.de.us/dti/access_de.htm) to assist agencies in their use of VoiceXML and related technologies.

VoiceXML technology provides benefits to citizens by making an agency's Internet content and applications available through any traditional or cellular telephone. In some cases, VoiceXML content and applications can even be made available through rotary telephones.

This technology will also provide benefits for state agencies by dramatically widening the audience for state web content and/or applications. VoiceXML applications can use the same existing back-end business logic and legacy systems as their visual counterparts, enabling voice solutions to be efficiently introduced to help improve service delivery.

Access Delaware Project

Description of project, including length of time in operation

One of the primary functions of State government is to provide information to citizens. In fact, recent research by the Pew Internet & American Life Project suggests that the primary purpose for citizen use of government web sites is information retrieval. A report by the Project found that "the most popular activities at government Web sites relate to the search for information." ¹ However, states continue to struggle with Internet access issues and ways to bridge the Digital Divide.

In a more recent report, the Project highlights the challenge that still faces government, particularly as it relates to providing internet-based services and information to the disabled:

The disabled have among the lowest levels of Internet access in America. They face unique hurdles going online. 38% of disabled Americans go online, compared to 58% of all Americans. Of the disabled who do go online, a fifth say their disability makes using the Internet difficult. ²

The Access Delaware Project is an initiative that is focused on providing alternate mechanisms for Delaware agencies to deliver web-based information and services to citizens. The State of Delaware "Voice Portal" -- the public facing component of the Access Delaware Project -- has housed three VoiceXML applications since its inception in September 2002.

The Delaware Voice Portal can be accessed by calling 866-276-2353 (toll free) from anywhere in the continental US.

The first (the Internet Access Locator) allows citizens to search for locations in their neighborhoods that provide public Internet access. Users can search by speaking the name of a city or town, speaking a zip code or by entering a zip code using their touch-tone key pad. This application is free to the public and available to any Delaware citizen without home Internet access.

The second application (operational from October 24 -- November 5, 2002) allowed any Delaware citizen to locate their polling place for the 2002 statewide general election. Currently, the Delaware Voice Portal is home to a suite of services aimed at providing voice-based tax services and information to Delaware taxpayers. A brief summary of these tax services is provided below.

¹ The Rise of the E-Citizen: How People Use Government Agencies' Web Sites (<http://www.pewinternet.org/reports/toc.asp?Report=57>).

² The Ever-Shifting Internet Population: A new look at Internet access and the digital divide (<http://www.pewinternet.org/reports/toc.asp?Report=88>).

Access Delaware Project

Significance to the improvement of the operation of government

Through this project, the State has achieved several important goals:

- First, we have validated the concept of using VoiceXML to make highly valuable information (e.g., the location of a public internet site) available through a toll free telephone number, accessible from any ordinary or cellular phone. Most government efforts to address the Digital Divide are focused on improving access to Internet-connected desktop computers -- funding programs that support placement of computers in public access points (community centers), donating used PCs to schools, subsidizing the cost of internet services, etc. And while Delaware's approach to the problem of the Digital Divide includes some of these same approaches, we believe that our efforts will be significantly enhanced by the addition of a solution that utilizes the "voice web." VoiceXML is a technology that makes any telephone (even a rotary phone) an Internet device.
- Second, we have established a VoiceXML infrastructure (in concert with an outside partner) that can be used in the future by any state of Delaware agency to develop and deploy a VoiceXML application for its customers. This is important for our agencies because access to telephones far surpasses Internet-connected computers (statistics from the NTIA suggest telephone penetration rates nationally of about 94 percent). Additionally, using telephones to provide access to web content helps address other basic Internet access issues like computer literacy -- a voice-based interface is much more natural and user friendly to individuals with inadequate computer training.
- Finally, we have validated the concept of leveraging existing web applications with a visual (HTML or XHTML) user interface to create a VoiceXML interface that can be made available to the public through a central Voice Portal with a toll free number. VoiceXML applications can use the same existing back-end business logic and legacy systems as their visual counterparts, enabling voice solutions to be more easily introduced to help improve service delivery.

Benefits realized by service recipients, taxpayers, agency or state

Often, the constituent base that is most in need of government services and information is the one that is least likely to have access to the Internet through a desktop computer. VoiceXML can help address these issues by:

- Making an agency's Internet content and applications available through any traditional or cellular telephone. In some cases, VoiceXML content and applications can even be made available through rotary telephones.

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- Dramatically widening the audience for state web content and/or applications. Research done by the Telecommunications and Information Administration indicates that telephone penetration into households nationally is at about 94 percent -- simply stated, there are a lot more phones than Internet connected computers.
- Helping address some basic computer and Internet acclimation issues that keep people from using the web as a way of learning about an agency's services and information. The degree of telephone literacy among citizens far out paces computer literacy - simply stated, phones are a lot easier to use than computers.
- Helping to address other basic Internet access issues like literacy or physical impairment – more citizens will be able to access their government through a voice interface than through a visual one.

Return on investment, short-term/long-term payback

To date, the State has invested approximately \$15,000 to establish and develop the contractual relationship with an outside hosting provider that maintains a VoiceXML gateway. This gateway allows Delaware agencies to quickly and easily deploy voice applications to serve their customers. In addition, approximately 12 weeks of staff time (two FTE employees) has been dedicated to developing applications to be deployed as part of the State's Voice Portal.

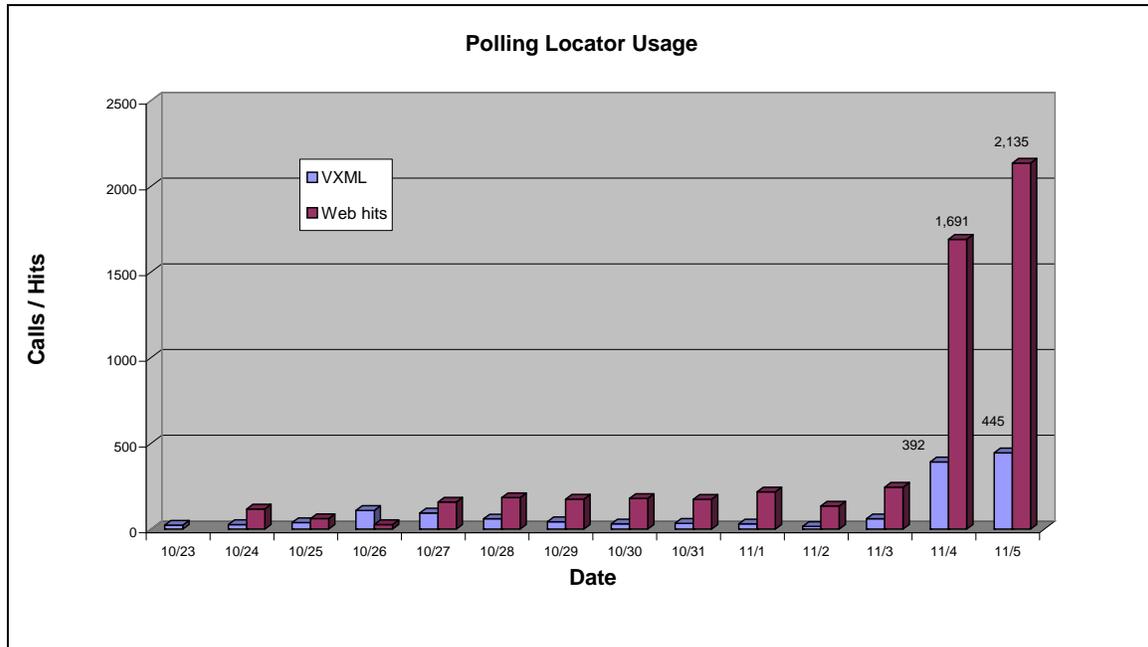
The ROI calculation for a VoiceXML application is generally the same as for other web-based applications. However, the dimensions of this calculation are different because VoiceXML allows an agency to take an existing web-based application and expand the audience for it dramatically. Two of the three VoiceXML applications launched to date have been modifications to existing systems that expanded the audience for these services without changes to the underlying application logic or backend systems.

The voice-enabled Polling Place Locator received and handled about 900 calls from the 3rd to the 5th of November during the 2002 general election. For those three days, that amounted to 20% of the inquiries processed, with 80% using the existing Polling Place Locator website (see chart below).

During the last month of tax season, the voice-enabled tax refund status application received over 1,600 calls – about 14 percent of all web-based tax

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refund inquiries.³ A fuller description of this service, including a technical illustration, is provided below.



We believe that VoiceXML can provide tremendous benefits for state agencies by providing an alternate web-based application development approach:

- VoiceXML is a markup language that makes building voice applications easier, in the same way that HTML simplifies building visual applications. VoiceXML is open and accessible by agency staff that have familiarity with HTML and web publishing.
- VoiceXML applications can use the same existing back-end business logic and legacy systems as their visual counterparts, enabling voice solutions to be efficiently introduced to help improve service delivery.
- Unlike a proprietary Interactive Voice Response (IVR) system, VoiceXML provides an open application development environment that generates portable applications. This makes VoiceXML a cost-effective alternative for providing voice access services.
- VoiceXML directly supports networked and Web-based applications, meaning that a user at one location can access information or an application provided by a server at another geographically or organizationally distant location.

³ The VoiceXML refund status application was launched on April 7, 2003. The filing deadline in Delaware is April 30, and the refund status application usually remains active through the month of June to accommodate taxpayers filing on extension.

Enhancing the Accessibility of Tax Services with VoiceXML

Project Description

This project involves the development of a VoiceXML-based system to provide information to Delaware taxpayers through a toll free number. Through this number, taxpayers can access a suite of tax related services and information. For example, any Delaware taxpayer can access information on the status of their tax refund. Taxpayers who have not yet filed can locate a facility in their neighborhood where they can access free Internet access and file their taxes electronically.

Why is it important?

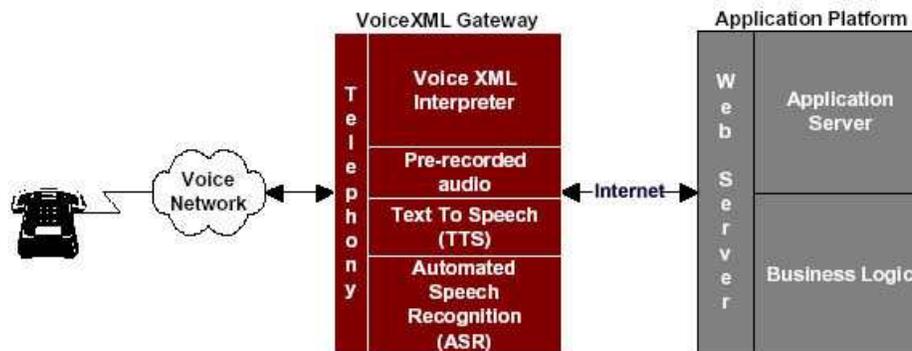
The Delaware Division of Revenue currently provides a wide range of information and services to the public through its website. Taxpayers can access a range of services including online tax filing and a web-enabled refund status application. The Division has taken steps in the past to help taxpayers overcome barriers to Internet access that may prevent online filing and hinder access to tax information on the web. This project is an extension of those efforts that provides telephone access to existing web-based tax information and services.

In the past, the audience for these services has been taxpayers with Internet access (about 50-60 percent of households, on average). This VoiceXML system will extend the audience for these existing services to all taxpayers with telephone access (about 95 percent of all households).

How does it work?

The suite of voice-enabled tax services utilizes a technology called "VoiceXML." VoiceXML is a non-proprietary, web-based markup language that enables web surfing using voice commands and telephone key pad entry. It is similar to HTML (HyperText Markup Language – the basic language of web pages). Just as a web browser renders HTML documents visually, a VoiceXML interpreter renders VoiceXML documents audibly.

VoiceXML applications can use the same existing back-end business logic and legacy systems as their visual counterparts, enabling investment in existing web applications to be expanded to more and more citizens and taxpayers.



For more information -- http://www.state.de.us/dti/access_de.htm