

# State Portals as a Framework to Standardize E-Government Services

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## INTRODUCTION

State portals play a prominent role in the convergence of politics and administration. On November 8, 2000, U.S. voters received conflicting media projections, but the Secretary of State's Office in Florida was able to provide them with that state's most timely election counts. With this example, software design factors, such as the use of dynamic Web programming, suddenly sprung to the forefront of attention. For almost all federated entities, the establishment of state portals has become an advanced stage of e-government; most now have them, and they provide a wide variety of services. They can be a gateway or central access point, but to appear coordinated, the use of portals should provide a development framework. This article presents the convergence of advanced software engineering practices with the empowerment of public administration standards and the swift enabling of public policy via state portals.

Years ago, government agencies progressed from simply republishing their forms on a front-end Web site. However, far fewer have advanced on to developing back-end Web applications. Advanced portal features can now be extended and implemented to include more file-intensive processing. Because software is a form of organizational memory, it has been called a type of federated governance (Strassmann, 1995). E-government portals now include self-service applications, and may enable the ability to initiate government contacts, interactivity, and consultation (Aitkenhead, 2005; Curtin, Sommer, & Vis-Sommer, 2003; Sharma & Gupta, 2003; Thomas & Streib, 2003; West, 2004). Further, citizens will demand more of these interaction capabilities in the future (Thomas & Streib, 2003). It is prudent for the chief executive, or his/her designee, to take control of such developments. Factors to consider among agencies would include the quality, accessibility, privacy, and security of their Web site functions.

In theoretical terms, the concept of a state provides for a framework for analyzing the organizational and ethical complexities of life. Further, a state can provide a unity of attention amid a diversity of details and speculation (Farr, 1993). With design and engineering, a focal point of contact can be achieved. As a minimum, a government-wide portal should provide links to various applications on the Internet "...organized in a way that makes the site easy to navigate

and desired links easy to locate" (Edmiston, 2003, pp. 23-24). A state portal is a specific form of government portal. In almost all instances, there are one-to-many states, and within those states there may be one-to-many disparate functions. Yet, a government portal should be fully executable with integrated online services offering considerable convenience to its visitors (West, 2004). This attribute is desired for most of the organizational entities, even those at a peer level. In short, government portals are "... the entry point for business and citizens to access information or services that are for the good of the community" (Aitkenhead, 2005, p. 214) and, like with software engineering, state portals should attempt to have replicate functionality.

Various types of portals have been categorized (Tatnall, 2005) and a state variety could be thought of as being a General/Mega type. While vigilantly considering the needs of state constituents, these portals try to be a "one-stop" source for services, thus the mega description. It is also hoped that the user would return to the same portal for yearly government renewals. Examples may include intermittent visits, such as the payment of parking tickets, or yearly visits, like the payment of taxes or motor vehicle fees (Johnson, 2002). A uniform belief is that these fee-based interactions would be considered encroachments on a constituent's time and resources. As such, states do their utmost to make the experience politically acceptable.

A common goal for state portals is for the Web-enabled services to have a similar look and feel. The front-end graphical user interface (GUI) should not be a source of client frustration. This goes for both functionally specific and centralized processing agencies. Resources may vary from state to state as each provides a wide variety of services. However, most want their constituents to be comfortable with the use of their Web site. Factors of consistency and application reuse are primary among the various organizations of a state. A well-designed framework, similar to those crafted by software engineers, may be the best way to ensure that consistency.

## POLITICS

For the usability reasons stated, the chief executive of a state may want a prominent role in the portal's capabilities, devel-

opment, and content. This is because e-government "... is as much about politics as it is about government ..." (Curtin et al., 2003, p. 14). That individual should be able to enlist (or coordinate) staff from executive branch agencies. However, without proper planning, the developers would still need to converge to ensure that their efforts yield a uniform look and feel. Thus, the administration of software engineering and standardization between agencies becomes key.

Exceptions may pertain to autonomous elected officials positioned below the chief executive. They may choose to be less standardized. These offices often have links from the main portal, and those officials may or may not follow standardization attempts. They may try to look similar if they are from the same party as the chief executive; if not, they may try to differentiate themselves. In some instances, the autonomous offices employ their own programming, networking, and/or outsourced staff. The degree of uniqueness may be an attempt to contrast with the chief executive's site, but seldom is an elected official's Web site less usable. Sometimes, due to the nature of those elected offices, they may have less budgetary oversight and more specialized features.

## **PUBLIC ADMINISTRATION**

The Weberian notion of a bureau maintaining files is at the crux of public administration. Very publicly, a state's Web portal has the ability to greatly increase agency efficiency. Standardization, a form of coordination, was identified by Weber as a form of rationalization and is still essential to bureaucracies. Most agencies are rule bound, but presenting their regulations via the Web is transformational. Due to information and communication technology (ICT), it has been said how the implementation of law has been virtually perfected (Bovens & Zouridis, 2002). Interorganizational exchanges are now quite commonplace, and state portals provide a focal point for individual government entities to provide their services and information.

This is especially so if one or more agencies have the same types of files or database management systems (DBMS). The system designers for those agencies play a huge role. For a front-end developer in a functionally specific agency, it may be easy to post regulations in a HyperText Markup Language (HTML) format. However, in more file-intensive bureaus, and to incorporate conditional processing, sophisticated back-end programmers may be required. Regardless of agency size, client views of agencies are more likely now to originate from the Web.

Shrewd public administrators may obtain or borrow parts or wholly functional enterprise frameworks while striving to develop greater efficiencies. For instance, e-payment options may be transferable within a state between various

state agencies. In much less frequent (but notable) instances, entire software frameworks are ported to other state jurisdictions. The enabling factor may be the ability to distinguish between functionally specific attributes of a state and core features where the base-classed functions are the same. Ask seasoned programmers and, if they have worked with government projects, see if they are aware of adaptations involving intra- or interstate endeavors.

## **INFORMATION TECHNOLOGY STANDARDS**

The technical standards regarding Web development have evolved a great deal. This pertains to both hardware and software. In terms of telecommunications and networking techniques, it has been recognized that lesser developed states often borrow standards from others. However, in a collaborative way, they too must provide input to achieve full participation (Chauvel, 2003). This includes interactions with other federated entities. In terms of e-accessibility, the state portal host and sponsors will not want any weak or inconsistent links.

In contrast to modular software and programming practices, which have been in place for decades, the most popular client services often have links originating directly from a state's homepage. Facilitated by the portal, this is often the case, regardless of government entity. By utilizing cascading style sheets (CSS) and other common techniques, the same GUI can be achieved. Large and established software frameworks, such as Microsoft's .Net and Java Community Process' J2EE, may be utilized. Regardless of the state's framework of choice, the standards of Web services need to be employed to achieve a common communications infrastructure (Williams, 2003). This may facilitate greater interorganizational exchanges, whether they originate publicly or privately.

## **INFORMATION RESOURCE MANAGEMENT**

Some have recognized how "[m]ulti-organizational collaborations need an institutional framework" (Dawes & Prefontaine, 2003, p. 42), and it is the state's portal that provides one. Teams within a state, regardless of executive department, may be enlisted in the development of a state's portal or Web architecture. This is also an overseeing function of information resource management (IRM) entities. The teams that participate early may have greater influence, as their ideas and practices would be foundational. However, if the back-end programs are long-linked and/or lack modular-

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