

PRESENTATION # 3030
APPLICATION FUSION AND USE OF WEB TECHNOLOGY FOR IMPROVED ACCESS TO
INFORMATION

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Introduction

Easy access to accurate and up-to-date information, regardless of its location, offers a strategic advantage to most enterprises. Because the availability of information for activities such as decision support and customer service can create a such great competitive advantage, enterprises are often motivated to improve information access.

This paper discusses the use of application fusion to non-invasively integrate existing applications and databases such that the data can be combined and appear as one. It describes how Web-enabled technologies, combined with a middle tier of processing between the browser and the existing applications and databases, can be used to provide a consolidated view of the information. For example, a customer service representative at a telecommunications company can have a single screen that shows all information about a customer - the types of services and features installed, billing information, pending trouble tickets, etc., even if it exists in multiple locations. Access to information can be through the Internet, a privately managed Intranet, a LAN, a WAN, a PAN, or any combination thereof. Web-enabled systems enhance the ability to access relevant information in a manner that provides immediate value to the end user.

Web browser technology is inherently ideal for an information access system because of its easy-to-use, intuitive, graphical interface and its transparency over hardware and operating systems. By also adding a middle tier of processing, access to information is totally controlled and information from multiple sources can be merged to create a custom view of information from any type of workstation at any location. Information on multiple hardware platforms using multiple operating systems can be integrated, allowing it to be accessed across enterprises, bringing it to where it is needed.

Internets and Intranets

There are two components of the Web currently in use: the Internet, a public network; and Intranet, a private network that moves internal data within an organization. Both provide a standard communications protocol for enterprise information viewing, sharing and manipulation, all at a low cost per desktop. A new component, the Extranet, is emerging as a way to exchange data and conduct business between separate organizations such as partners.

Why Use Web Technology?

Web technology promises improved access to information, offering advantages from both a user and business perspectives. It also offers improved operational efficiencies, easier administration, lower costs, and competitive advantages. This has been described by some as a “Zero Administration” environment that can operate across what appears to be an infinite number of workstation platforms and operating systems.

Web Limitations

Unfortunately, Web technology today has limitations. For example, each application session is treated as an entirely separate browser window, and standard Web technology does not address the need for a workplace environment that manages multiple application sessions. While this limitation may be acceptable for outside parties that casually connect to access information, it is entirely unacceptable for end users that are expected to simultaneously work with a number of endpoint applications to get their jobs done.

Furthermore, in the Web world at this point in time, security is left up to the individual applications. Because each has its own approach, there is no way to easily overlay a central security administration environment.

A further limitation of the Web world is that since browser sessions are autonomous, there is no capability to easily fuse applications such that they work together to get a task accomplished. An almost endless combination of components at the Web client, at the Web protocol layer, and at the Web server are typically used to implement Web-based client-server applications, and many of these components are not available across the full range of workstation operating systems.

A final complication for sites that want to move towards a full Web environment is how to incorporate the numerous non-Web applications, as it will be some time before all applications are Web-based.

The net result to all the above is that the promise of a Web-based “Zero Administration” environment today may appear more and more to be a mirage.

The Use of Application Fusion

There is, however, a solution. By adding a middle tier of processing to the operating environment, current Web limitations can be overcome. This middle tier can provide a multi-session workplace, more elaborate security that can standardize security administration while reducing the burden on endpoint applications, and the ability to fuse applications (that is combine multiple application sessions) to streamline the work environment.

A key element to this architecture is that the workplace can be activated with the entry of a single password, either directly or through the use of various positive identification devices. Once activated, available applications can be launched and controlled as well as coordinated through a context management layer that detects changes in sessions’ position and informs related application sessions to reposition themselves. A security management system determines what applications are presented and executable by each end user.

A key capability of the workplace is the ability for end users to sign-on to any Web or non-Web workstation and be presented their same personal workplace. This nomadic operation of the workplace is key in any enterprise where users need access to information from a variety of locations. Another significant capability is workstation control, whereby the workplace can optionally be made to supersede the workstation’s operating system and control workstation usage, thereby simplify training and operation and reducing help desk traffic.

Application fusing (that is combining information from multiple application sessions into a single view) eliminates the need for end users to manually coordinate and navigate through each application to perform work. And because the middle tier can manage both Web-enabled and conventional applications, sites can immediately start to take advantage of the “Zero Administration” environment.

Summary

Consolidations and changes in business will continue to drive enterprises toward technological solutions that provide greater efficiency, cost effectiveness, and higher quality customer service. It is clear that the Web world, especially with the addition of application fusion, holds much promise for significantly improving these areas.