

WEB APPLICATIONS

THE NEW LEGACY SYSTEMS

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A SUBTLE, YET PROFOUND CHANGE IS OVERTAKING THE IT INTEGRATION LANDSCAPE. NEW BROWSER-BASED PRODUCTION APPLICATIONS ARE BECOMING THE TRANSACTION DELIVERY SYSTEMS OF CHOICE.

MEASURABLE RETURNS FROM PROPER USE OF TECHNOLOGY ARE ALL AROUND US. THE BENEFITS OF SYSTEM INTERACTION AND TRANSACTION INTEGRATION ARE HERE TO STAY. CUSTOMER SELF-SERVICE IS AFFECTING EVERY CONSUMER AND INDUSTRY, FULFILLING THE TRUTH THAT NO ONE EVER WENT BROKE OVERESTIMATING THE AMERICAN CONSUMER'S DEMAND FOR CONVENIENCE. ➤

As soon as a production application goes into production, it becomes a legacy application. The green screen of the past isn't going away; the browser will replace it. Since all legacy applications will be available via browser, the browser will soon become the universal integration point.

FUNDAMENTALS INTACT

A production application includes logic, a user interface for data entry and output, and a data repository for storing results. The traditional view of a production application involves a green screen terminal and a friendly operator who takes phone orders, enters customer data, verifies inventory or availability, and initiates delivery. Not all production systems culminate in a purchase, but the functions of a production transaction are always the same.

Recently, internally owned legacy systems have been extended to a new class of users via legacy extension and integration, a new industry segment. The functionality remains critical, whether it's an inventory lookup or letting users adjust 401k investments.

The four distinct classes of product in this segment each provide increased functionality and sophistication (see Figure 1). The segment evolved from green screen emulation in PCs to automated access. Initially, users could access the legacy application through an emulator program, effectively a window into the mainframe. Today, the user of multiple legacy applications can now be another program, with no human intervention.

This evolution occurred because of our need for access to logic and data available only on another system. Rather than having to toggle out of a system to access the legacy system, these internal solutions now provide a seamless user experience. At the high end, a program controls access to and from the legacy system's logic and data.

The imperative for access to logic

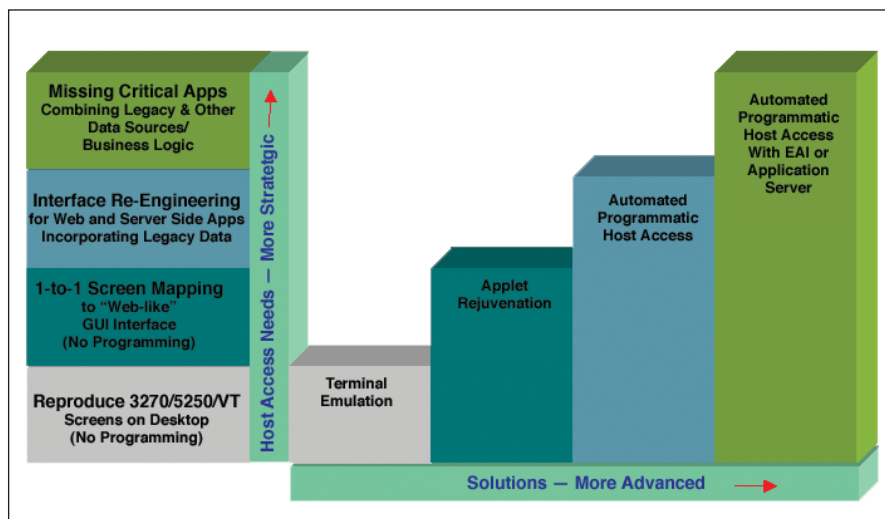


Figure 1 — Traditional Legacy Integration Solution Segmentation

and data only available on another system remains constant. Moreover, the need to seamlessly access this functionality will continue to grow exponentially. But the delivery mechanism and the ownership of the applications have changed. In place of a green screen, delivery is now via browser. Even the leading ERP and CRM systems provide thin-client browser access to their applications. Every legacy application's full logic and data will soon be accessible via browser, if it isn't already.

We're already seeing parallels between the evolution of traditional legacy application access, as shown in Figure 1, and the plethora of production applications with browser interfaces.

The browser, like the green screen, is already a universal interface for users who require more than just inquiry. Users don't care what platform supports the underlying application as long as it allows Web-based inquiry or updates.

Users no longer face the traditional restrictions requiring that the application be "owned and operated" by their company, or necessitating that they have special access privileges. Critical Web applications often aren't owned or operated by the companies requiring access-

sibility. Universal access has prompted universal availability; you need only a login ID and password.

For those who build the technology that enables these solutions, this means providing the tools and systems that make it easy, practical, cost-efficient, and prudent for predominantly external systems to interact.

Figure 2 shows the progression of solutions we can expect in this new browser-based environment. Advanced solutions exist to provide Web application consolidation through multi-browser mapping into a unified, Web-based Graphical User Interface (GUI) for a new, single browser view. These new integration solutions combine disparate Web applications under the covers to create powerful condensed applications, which analysts and vendors call portals. It's only a technology wrapper or integration point for multiple production applications, presenting a single interface to the user.

Web applications are to the coming decade what legacy applications were to the '90s. To the technician charged with integrating their functionality, this is a true blind date in that the application will probably have been designed, built, and implemented by others.

business integration journal

takeaways

BUSINESS

- A fundamental shift is occurring in business: customer self-service is affecting every consumer and industry.
- In the new universal browser environment, a third party will own, develop, and deploy production applications that provide most functionality.

TECHNOLOGY

- All legacy applications will soon be available via browser, which will become the universal integration point.
- Today's browser-based applications will remain in production for years to come, with their functionality combined and reused within new legacy applications.
- The browser will eventually become the only API available to all of us; applications will be available via appropriate ID and password to anyone who wants to programmatically integrate them into their own systems.

The application server is quickly becoming the mainframe of the past, which is quite a compliment to the technology since mainframes still handle the bulk of all production applications used today. Likewise, the application server applications of today will remain in production, with their functionalities combined and reused for years to come.

The WebLogic, WebSphere, iPlanet, and Oracle application server production applications are similar to the CICS and IMS applications, but with an important twist. The solutions of Figure 1 were all designed for applications owned by the IT organization itself. Call them self-integration and extension, for want of a better term. For Figure 2, the IT group that increasingly requires access won't own the production application. With the universal browser, most such functionality will come from production applications not directly owned. Users will lack control over architecture or deployment.

MORE CHANGE AND MORE STATUS QUO

Rules for deployment of production applications still apply. As the owner adds functionality, users must be notified of changes. If changes aren't made following the old rules of production application rollout (i.e., with proper testing ahead of time), external users will be severely disrupted. These users will be far less patient than internal users, making it paramount that all changes are well-communicated and skillfully managed. Otherwise, competing applications will replace the troublesome ones.

Whatever can be built can break. For decades, enterprises have faced the irony that the more speed, flexibility, and functionality they build into their systems (by integrating more applications and empowering more users), the more rigid and inflexible the under-the-covers portions of those systems became. Any change to the underlying application breaks the chain, so traditional legacy applications thrive best in a state of controlled maintenance.

As the browser supplants the green screen, this shortcoming must be addressed. The competitive pressures facing all businesses require that the new browser-based production applications become faster and more flexible to meet the demands of new users and conform to reliability standards users have come to expect from legacy systems.

Users are now internal and external,

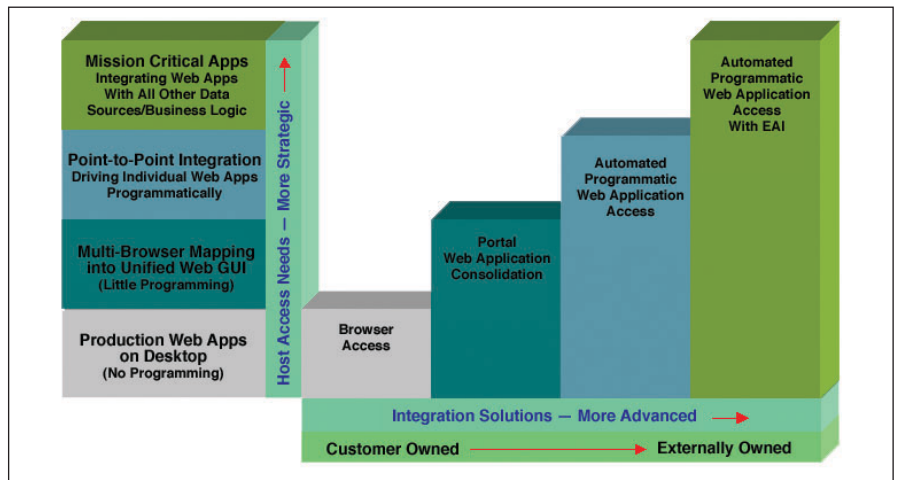


Figure 2 — Future Legacy Integration Solution Segmentation for Browser-based Apps

human at a keyboard and programmatic, so emerging technology will recognize changes in the underlying application, determine where the change occurred, and use the browser's DOM tree to isolate the change and protect the integration point against its effects. The tools for advancing this functionality along the continuum will evolve naturally. Even now, the user with a mouse and a keyboard can easily overcome changes, upgrades, and improvements. The next step will be adaptive integration technology that fixes itself and opens the way to the final phase — complete reliability for financial transactions by a programmatic user.

Often, we'll be adding a dimension: If the new production Web application's true functionality is a traditional legacy application with a Web cover, we face the challenge of integrating already-integrated applications. Clearly, performance issues will come into play as these composite applications are created in countless situations where a third party owns, deploys, and maintains the application.

Although the technology required will be different, the analogy will hold because, despite this added dimension, a production application is always a production application.

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Over the next few years, the browser will become the only Application Program Interface (API) available to all of us. It will be available (with appropriate identification and password) to anyone who wants to programmatically integrate it into his or her own systems. The result will be new, browser technology uses that deliver value and benefits to a larger universe of users. **BI**

About the Authors



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