

Competitive Review

July 2003 Issue 8

Application Integration: “Who Will Lead the Next Parade?”

By Myles Suer

During the market downturn, it has become increasingly important for enterprise software to demonstrate a positive return on investment. As this modality has become central to enterprise capital spending, new ideas have emerged including Web Services and Business Activity Monitoring. Web Services in particular is enabling organizations to rethink how they develop and deploy enterprise software and share information between discrete business processes. At the same time, leading-edge software companies are starting to reach below the tip of the icebergs that are Web Services, Object Oriented Programming, and Business Logic Level design. They are seeing the potential to change how packaged application software is deployed. This provides an opportunity for enterprises to gain unprecedented control over their software investments as well as lower their customization cost. This represents an inflection point for application software vendors facing potential disintermediation by emerging application platform vendors and systems integrators should they fail to get out in front of this emerging new trend.

Introduction 1

Current Market Participants 1

Table 1: Market Segments, Companies, and Response 2

Next Waves of Application Integration 3

Expected Reactions 4

Table 2: Comparison of Vendor Technologies for Composite Applications 5

IBM 5

Sybase 5

Oracle 5

Plumtree 5

Vignette 5

What Does It All Mean? 5

The Sageza Group, Inc.

836 W El Camino Real

Mountain View, CA 94040-2512

650-390-0700 fax 650-649-2302

London +44 (0) 20-7900-2819

Munich +49 (0) 89-4201-7144

Historically, packaged software applications supporting enterprise management of business processes have come in an array of disconnected stovepipes — each solving a different business problem. The lack of intra- and inter-stovepipe connectivity has meant the same data was often entered by the enterprise more than once, creating multiple versions of the “truth.”

Many organizations have dealt with this through often painful and almost always expensive enterprise application integration (EAI) or by creating a data warehouse with associated data marts and analytics. Even so, it has been very difficult to create an integrated view of information contained in multiple transactional systems, warehouses, and data marts. For example, an integrated customer view may require tapping sales force automation, marketing automation, order entry, and customer support software. At the same time, it has been difficult and expensive to tailor applications to the unique needs of a company. Reflective of this reality is the reported advice from Oracle and SAP that it is often easier for their clients change company procedures than attempt to make the software match their business processes.

Nonetheless, vendors are now starting to enable enterprises or integrators to develop applications on top of existing stovepipe business processes. This would, in effect, enable enterprises to directly develop new applications and reports to meet unique needs without rewriting existing business-critical applications; in other words, enabling businesses to think about their unique business processes and use their traditional applications effectively as back end, macro process engines.

There are a number of companies from the EAI, Application Server, Portal, and Business Intelligence (BI) markets poised to help enterprises create these new applications. While each vendor class brings its own advantages and disadvantages to bear, none appear to have the inside track for the hearts and minds of enterprise developers or integrators.

Portals create a layer above applications that becomes the users’ view into operational systems. To assume the central role, however, portals need to enable custom software development and micro or composite work flow. Application servers represent a function of growing importance to the enterprise as they are where Web Services connections will be wired together. However, most application servers lack a broader portal-like interface to compete for this market. EAI is about connecting existing business processes; however, companies in this space lack experience with user interfaces and applications. The noted exception is Vitria, which is in the process of reinventing itself. Many EAI companies are jumping into the arms of BI players who need their technology to enable real time Extraction Transform and Load (ETL).

Meanwhile, BI has been about extracting and using information from disparate operational transaction systems. BI software companies take information from back- and front-office transaction systems, condition it via an ETL Tool, and populate the results in a warehouse, data mart, or SQL database. By applying analytics to the collected data, cross data source information can be used for business decisions. To create greater value in their offerings, companies are now broadening their scope from customer data analysis of operational data analysis. Having added the ability to get access to operational data and compare it to historical data and industry metrics, this has given birth to Business Performance Management or Business Activity Monitoring.

Current Market Participants

Table 1 outlines the major players and summarizes each vendor's approach to the market for consolidated application services.

Table 1: Market Segments, Companies, and Response	
Company	Response
BEA	<i>Segments: Application Servers</i> Continuing to add value to the application server.
Brio	<i>Segments: Business Intelligence</i> Expect to play in BAM but not composite applications.
Business Objects	<i>Segments: Business Intelligence</i> Do not expect to play because they are not active in BAM.
CA	<i>Segments: BI, Portals, Tools</i> Could play from portal/BI perspective.
IBM	<i>Segments: Application Server, Development Tools, Portal</i> Has Portal, Application Server, and Development Tools. Expect IBM to participate in market.
Informatica	<i>Segments: Business Intelligence</i> Developing a BAM front end and the ability and tools for composite applications including business process modeling.
Microsoft	<i>Segments: Application Server, Development Tools, Productivity Software</i> Could play. Has application server and knowledge of applications. Also developing InfoPath that gives PC control of interfaces.
Oracle	<i>Segments: Application Server, Portal, Development Tools, Applications</i> Enabling composite applications as part of Portal 9i. Sees itself enabling process portal. Using EAI/Web Services to grab data. Can be tied to .NET. J Developer can be used for Micro BPM. Needs Java for applications.
Peoplesoft	<i>Segments: Portal, Applications</i> Sees composite applications as having a relationship to portal offering. Views composite applications as creating a new user experience. Provides prebuilt composite (horizontal) apps as well as enabling customers to build own.
Plumtree	<i>Segments: Portal</i> Developing a layer above J2EE and .NET that enables composite applications from development tools.
SAP	<i>Segments: Portal, Applications</i> Pursuing portal as well as business intelligence and composite applications. Prebuilt 60 composite apps.
Sybase	<i>Segments: Application Server, Portal, Development Tools</i> Playing in Portal, Application Server, and Development Tools. Expect Sybase to participate in market.
Versata	<i>Segments: Development Tools</i> Developed very strong business logic development tools; expect them to not play given the potential margin difference from their current market.
Vignette	<i>Segments: Portal</i> Developing all the pieces for composite applications, including app server, integrated development environment, and portal.
Vitria	<i>Segments: Business Process Management</i> Gets broader composite application play. Focusing on process-oriented users such as health care and financial services.

WebMethods	<i>Segments: EAI, BAM</i> Joined with Informatica to combine EAI/ETL tools as well as develop their joint BAM solution
------------	---

Next Waves of Application Integration

The next wave of application integration will start by making it easier to share data between applications, dramatically reducing application development risk. Given the historic difficulty of extracting data from other applications, the potential savings from not having to know the structure of the database and the security specifics beyond a password is significant. In this wave of application integration, existing applications will receive Web Services wrappers, UDDI would enable the discovery of services, and SOAP would enable the exposure of services. In summary, Web Services connectors would seek to increase the ease of information sharing.

Subsequently, the focus would shift to building composite displays of stovepipe functions. One such example would be building a composite customer view drawn from Sales, Service, Marketing, and Order Entry Systems. This would entail unlocking the latent potential of building applications displaying or using data from existing applications. To enable this prior to completion of Web Services standards, portal vendors among others are developing the ability to create a common data model between applications; this way, data definitions are enforced between all systems. We foresee vendors competing increasingly on the best-of-breed applications within a stovepipe. Remedy's recent move out of a complete CRM suite is an example of this change. We also perceive the potential for companies such as Informatica to enable ETL functionality within the transaction systems instead of in the warehouse. This may come to represent a competitive force for BI companies who have been enabling analysis of the enterprise transaction systems. This may force BI vendors to compete on analytical modules or on their skills to glue together integrated composite reports.

Taken to its logical conclusion, the final wave will represent a fundamental change for the software industry where Web Services effectively becomes a business process complier. Vendors would largely compete on best-of-breed components or on discrete business processes currently embedded in multi-headed business applications, and companies like PeopleSoft and Siebel would rewrite their applications as components or addressable business processes engines. Empowering this trend is the emerging ability to glue together objects as business logic rather than as Java or C++ code. Integrators would become more important since they would play a role in building Composite Applications. From Sageza's perspective, Composite Applications include all of the following:

- ◆ An application interface created to a single or multiple applications for the unique needs of a customer;
- ◆ An application built to make use of data contained in multiple existing applications;
- ◆ A custom application built for a customer or market segment using existing applications as an engine;
- ◆ A custom application built off of application-specific objects from multiple vendors.

To this end, we believe that the idea of embedding integrated design environments into the portal to enable the direct design of composite applications will gain traction over time. Moreover, the notion of enabling design at business logic rather than Java level will bring down the level of design talent needed to design interfaces to applications and to create applications that make use of data in existing software and databases. Thus, developers and to some degree users will make requests for services by using standardized applications/objects interface.

Although existing applications could try to continue to constrain user options, the enablement of cross system applications would make existing enterprise applications effectively “canisters” of objects (or specific business process engines). We perceive the potential to enable developers to select the objects and building blocks from which they want to build, thus creating an advantage for those who migrate their code base to a J2EE object base because they would be able to establish connectivity to lower level objects rather than the application as a whole.

Overall, we believe the winning approach would create connectivity to backend applications; composite views of data heretofore only have been possible by the selective few with access to the corporate data warehouses and having the skill to perform online analytical processing. We envision moving from composite views of data to composite use and application of data. This raises the potential for Systems Integrators to pre-develop or fully develop these applications to create new value for their customers.

Expected Reactions

What is unclear is which set of players will lead in the market. We would expect stovepipe application vendors to respond more slowly and try to support the selling their applications first. Nevertheless, Oracle, PeopleSoft, and SAP all have major thrusts in the area. We do not expect EAI players getting into the game. Informatica so far is the lone Business Intelligences player to announce its intentions for the space. Meanwhile, application server vendors have a large amount on their plate but could expand their business definition further. However, this is a big step for BEA.

BI players are in a reasonable position to lead here because they already create business scorecards and dashboards. Adding workflow and tools is not a big stretch. However, this change does to some degree challenge BI's base business of creating warehouses, data marts, and OLAP. Oracle, with a foot in the BI and Portal camps, claims that by orchestrating information it will enable the quality information to be improved without resorting to ETL. If they are right, this could make composite applications a challenge to BAM and maybe even business intelligence.

Portals have been looking for a cause celebre. We think that adding a layer with security and application development tools above the application server could create the value proposition that they have needed.

From our perspective, those who are in the best position to drive this vision to market have the most mature, proven technology for application development. Table 2 shows these elements for the companies who have either announced their intentions or have a very strong base to build upon.

Table 2: Comparison of Vendor Technologies for Composite Applications

Company	Integration: App Server/EAI/ETL	IDE	User Interface/ Portal	Business Process Management
CA	X	X	X	X
IBM	1	1	1	X
Informatica	X	X	0	X
Oracle	2	X	2	X
PeopleSoft	0	0	X	X
Plumtree	0	X	X	0
SAP	X	0	X	0
Sybase	2	1	2	1
Vignette	X	X	X	X
<i>X=Has Capability</i> <i>A=Acquires from Other Capability</i>				
<i>1= World Class</i> <i>2= Measured but Not World Class</i> <i>0= Does Not Make</i>				

We believe companies like IBM, Oracle, and Sybase have the best starting position to build a position for creating what could be called application platforms — the composite of portal functionality and the ability to create and manage composite applications. However, it is too early to judge whether any of these will take advantage of their starting position. As important, Plumtree and Vignette have the most to gain from winning the market.

IBM

IBM has the potential to be a market leader as it leads in application servers with WebSphere and development tools with the Rational acquisition. IBM also has a strong position in portals and can act as an honest broker since IBM is not in the applications business. This gives IBM a strong base and starting position.

Sybase

Sybase does not lead in any category. However, it is in the interesting position of having good technology spanning every category needed to be successful in this business. Sybase is also not in the applications business. To achieve a leadership position, it must integrate its discrete applications and show that it can market and sell. What Sybase has in its favor is that it is hungry and listening to customers and others with market expertise.

Oracle

Oracle has all of the pieces but it needs to show that they can put everything together. However, Oracle needs to do so in a manner that balances all applications — a different proposition if it is successful in acquiring PeopleSoft.

Plumtree

Plumtree has created the concept of enabling applications to sit on top of J2EE or .NET. However, it lacks experience at development tools. Plumtree also has a thick portal strategy predicated on customers potentially buying systems they may have already deployed internally.

Vignette

Vignette seems to have built the deepest suite so far. It includes not only a layer above the application server but also design and workflow elements. The question is what type of focus Vignette can provide when the portal is a kitchen sink of applications. If Vignette can bring integration to the forefront and make the other elements the icing they have a chance at success.

What Does It All Mean?

We see the drive towards application integration and composite applications affecting the market in a number of ways. Fundamentally, it should make the ROI case easier for enterprise applications because the length of install should be reduced and the effective life of product increased. At the same time, it

would make integrators with development skills more important in the IT food chain. It could, however, increase upfront consulting business expenses. To some degree, it would increase the importance of those making the software enabling application convergence. Vendors of enterprise application platforms would become more important. It is worth noting that for the SMB market space, we see much of this integration happening at the application suite or the outsourced service provider level.

Changes in enterprise applications are as much about users as developers. Users increasingly would be able to select software applications based upon their components. Internal development or systems integrators could spend less time and fewer dollars hand-coding applications. At the same time, developers and integrators would be able to create higher value for their customers by building or tailoring the interfaces as well as applications to their customer's business processes. As a result, users would be able to more easily acquire the information they want as they want it. At the same time, developers would be able to deliver cross software applications using existing enterprise applications as effectively components of a solution. Given this, we expect savvy systems integrators to be increasing their value as they drive the market to assist users in building out interfaces, applications, and business processes.