Specialized Software achieves e-business metamorphosis.

Darwin would have been amused to see how his concept of natural selection — originally intended to describe the biological world — so exquisitely defines the inanimate but equally competitive world of modern business. Indeed, survival of the fittest in today's business arena compels companies to reinvent

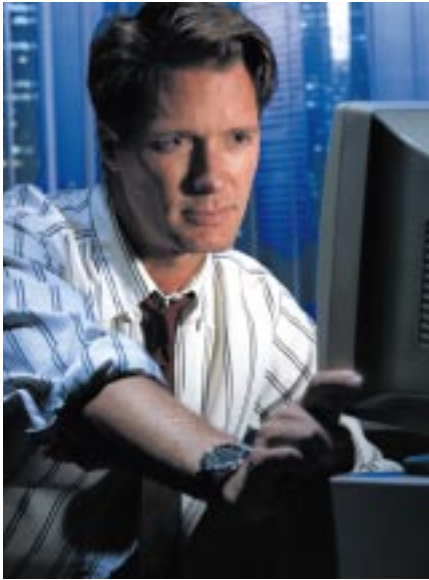|	
Application	Business-to-business and business-to-consumer e-business solutions
Business Benefits	More than 50% revenue growth in one year; up to 50% of revenue from WebSphere product family; up to 33% reduction in development cycles; shorter time-to-market
Software	IBM WebSphere™ Application Server, Standard and Advanced Editions IBM WebSphere Studio IBM VisualAge for Java™

themselves incessantly, realigning their operations and offerings with the latest technology trends.

This is especially true in the software industry. Consider Specialized Software, for instance. Established in 1982, the Worcester, Massachusetts-based company grew its annual revenue base from less than $600,000 to more than $21 million by evolving from a developer of IBM DB2 ODBC drivers and other mainframe-based software products to a full-service e-business solutions provider. The company's consulting and e-business revenues increased from 1.75 percent of

total revenue in 1998 to 52 percent of total revenue in 1999.

"We always recommend WebSphere [Application Server] when we need to integrate the Web application with an existing legacy platform or application."

— Prasad Thammineni, Vice President and CTO, Specialized Software

Specialized Software uses WebSphere Application Server for diverse applications — from retail to healthcare to financial services.

e-business

It's about business, not just technology.

The platform portability of the WebSphere family enables Specialized Software to develop on Windows NT and deploy on virtually any other platform.

"WebSphere Application Server, Standard Edition offers a very low cost of entry, enables rapid development and performs extremely well. Later on, the customer can scale easily … to accommodate enterprise-class capabilities."

– Prasad Thammineni

Enabling this evolution is Specialized Software's continual investment in Java-based technologies—the latest of which is the IBM WebSphere family of tools. Using these and other IBM technologies, Specialized Software delivers cutting-edge Web sites and Web-based business applications on a broad range of computing platforms.

The evolution of an e-business solutions provider

Specialized Software implemented its first WebSphere application for GeoLogistics, a relocation company that wanted to enable its customers and agents to track shipments over the Internet. The self-service Web site GeoLogistics envisioned would streamline customer communications, reduce costs and would be accessible to its international agents and customers anytime.

To enable maximum scalability, the company decided to use Java as its development and deployment platform. It called on Specialized Software to help it build a Java-based Web application that would integrate with its legacy environment—COBOL applications using data in flat files residing on a System/36-based host.

Specialized Software selected the WebSphere family for its adherence to the broadly accepted Java servlet development kit specifications (SDK), as well as its scalability and platform portability. Using IBM WebSphere Application Server with IBM VisualAge for Java, Specialized Software was able to develop the tracking application on Microsoft® Windows NT® and deploy it on GeoLogistics' Sun Solaris™ servers. By not needing to invest in a Solaris server for development, Specialized Software saved $25,000 in development costs and reduced the development cycle by 33 percent.

Since completing the tracking application for GeoLogistics, Specialized Software has taken on an eclectic mix of other e-business projects involving WebSphere. Some recent examples of Specialized Software's WebSphere applications include:

- Business-to-business e-commerce/collaboration: Specialized Software Web-enabled the loan application process for Northwest Farm Credit Services (FCS) by employing VisualAge for Java, WebSphere Application Server, Standard Edition, IBM HTTP Server and Lotus® Domino™. FCS members can now apply for loans and track their customers' loan status over the Web as well as communicate with the loan processing officer—all in a secure environment. The application also interfaces with NFC's established workflow process, which is based on Lotus Domino and Lotus Notes®. The status of the loan application is updated as it moves from one department to another, and originating members can view the loan status and contact their loan officer at any point in time.

- Business-to-consumer e-commerce: Using WebSphere Application Server, Standard Edition, in conjunction with IBM Net.Commerce, Specialized Software built CrazyBuy.com, a computer component retail outlet. An extension of an existing wholesale business formerly known as ASCI Computer, CrazyBuy.com intended to capture the consumer retail market by offering bargain basement—i.e. "crazy"—prices. "This was an interesting project," Thammineni notes, "because it was a catalog application, which made it suitable for Net Commerce. However, it also had a self-service component, which we were able to implement most easily with WebSphere."

- Business-to-business extranet: PharmaCare is a pharmaceutical company that enables doctors, health maintenance organizations and insurance carriers to order medications and fill prescriptions electronically. This service eliminates the need for pharmacists to decipher physicians' cryptic handwriting, thus enabling patients to get the right medications faster. The challenge for Specialized Software was to Web-enable the existing application, which was based on terminal access to a mainframe. Working with IBM Global Services to design a new user interface, Specialized Software developed the server-side application with VisualAge for Java, relying on WebSphere Application Server, Advanced Edition for the Web application infrastructure.

For new applications in development this year, Specialized Software has turned to IBM WebSphere Studio. "For us, WebSphere Studio is both a work bench and an integration tool," Thammineni explains. "For example, if you want to work on a Java program, you can use WebSphere Studio to launch VisualAge for Java. You can also use it to launch NetObjects Fusion, if you want to use that tool for Web-page design."

Offering best-of-breed solutions

By the end of 2000, Thammineni expects that 50 percent of the company's business will come from Java-related projects and that "a good portion of those will involve the WebSphere family of products."

"When customers ask about the longevity of the product vendor, we can recommend [the] WebSphere family with confidence. There's no doubt that IBM will be around years from now."

—Prasad Thammineni

Northwest Farm Credit Services' online loan tracking application incorporates a Java Web interface and a Lotus Domino collaboration component.

The initiative to use WebSphere products in a development project may come from the customer or as a recommendation from Specialized Software. "We don't go in on the first day and try to sell WebSphere," Thammineni says. "Typically, we propose two or three solutions that best fit the customer's needs, highlighting the advantages and disadvantages of each. If we are asked to make a recommendation, we do so with an understanding of the customer's priorities. In a growing number of cases, the best solution involves WebSphere Application Server."

For example, Thammineni uses WebSphere Application Server to:

- Integrate with legacy systems. "We always recommend WebSphere when we need to integrate the Web application with an existing legacy platform or application," Thammineni notes. "And customers immediately understand why: WebSphere has very strong support for legacy environments, such as IBM CICS®, IMS™, AS/400® and OS/390®."

- Roll out a pilot Web application with a minimal initial investment. "WebSphere Application Server, Standard Edition offers a very low cost of entry, enables rapid development and performs extremely well," Thammineni asserts. "Later on, the customer can scale easily to WebSphere Application Server, Advanced Edition and to Enterprise Edition to accommodate enterprise-class capabilities, such as Enterprise JavaBeans™ and accessing multiple databases. There is a smooth growth path for customers to migrate from one version to the next."

- Ensure compatibility with chosen application development tools. "In the last few months, people have been selecting a development tool and then seeking an application server that fits the tool," Thammineni explains. "If they select VisualAge for Java, we recommend WebSphere because the two are tightly integrated. This integration increases productivity and time-to-market tremendously. For example, with the test environment that's built into VisualAge, developers can develop an entire application and then make it available to other testers on a staging server. They don't need to install WebSphere Application Server on everyone's workstation just to test their applications."

In addition to all of these considerations, customer confidence in the application server technology is a key factor in a customer's decision. "When customers ask about the longevity of the product vendor, we can recommend WebSphere with confidence," Thammineni adds. "There's no doubt that IBM will be around years from now."