

Microsoft Trying to Cast a Large .NET with Standard Platform

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By Joseph Goedert, News Editor

Nearly two years after Microsoft Corp. introduced its .NET platform, and nine months after launching the Visual Studio .NET and .NET Framework application development platforms, health care information technology vendors are rolling out products that use the Web-rich technology.

However, actual use of .NET remains in the early adopter stage as work primarily centers on five vendor partners of Redmond, Wash.-based Microsoft. These vendors and their .NET products include:

- Allscripts Healthcare Solutions, Libertyville, Ill., which uses the technology in its TouchWorks software.
- DataLabs Inc., Irvine, Calif., which has introduced the DataLabsXC clinical trials management software.
- Eclipsys Corp., Boca Raton, Fla., which has launched the SunriseXA clinical software suite.
- Quality Care Solutions Inc., Phoenix, which has debuted the Aqtrans transactions processing platform.
- Stentor Inc., San Francisco, which is incorporating .NET into its iSite picture archiving and communication system.

Open standards

The Visual Studio .NET and .NET Frameworks are "middle-layer" applications. They use open standards that software developers can use to create new Web-based products that integrate easier with legacy systems, explains William Crouse, M.D., global healthcare industry manager at Microsoft.

"The marketplace is demanding interoperability," he adds. "What they are getting from vendors isn't cutting it anymore. If we are going to address electronic medical records, we need interconnected, open standards-based networks."

Microsoft says .NET is not an operating system. To understand .NET, however, it's best to think of it as an operating system, says John Osberg, president of Informed Partners LLC, a Marietta, Ga.-based consulting firm. "It is an architectural tool," he explains. "It was designed for the Internet, whereas Windows was designed pre-Internet and later adapted for the Internet."

In essence, .NET's functionality is that of an operating system, says Sherwood Chapman, chief technology officer at Quality Care Solutions Inc., known as QCSI. "It brings a lot of operating system capabilities," he says. The new Windows 2003 operating system supports many .NET components, while the next version of Windows will be entirely .NET-based, he adds.

How it works

The heart of .NET is the Visual Studio .NET and .NET Framework application platforms. These include templated, preprogrammed objects and classes, which are the basic building blocks of a computer program, explains John Gomez, chief technology officer of Eclipsys Corp.

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The result is a library of base programming to build any Web application. That means a programmer only has to develop additional code to create the functionality desired for a specific application. This cuts software development and testing time by up to 40%, giving vendors increased speed to market, says Chapman of QCSI.

The technology also can help vendors increase the functionality of their software. For instance, Eclipsys' new SunriseXA suite can much more easily support mobile computing devices than previous versions of the software. While Eclipsys' existing use of .NET primarily is in the SunriseXA suite, "over time it will become the standard development for all our products," Gomez says.

The .NET technology also makes information technology cheaper-and more user-friendly-for vendor clients, some experts say. Rush-Copley Medical Center uses Web networking technology from Citrix Systems Inc., Fort Lauderdale, Fla., to make its Eclipsys clinical systems remotely accessible. "That's a costly layer of application," says Beckie Covert, director of information services at the 150-bed facility in Aurora, Ill.

Now the medical center plans to implement seven clinical modules of the Eclipsys SunriseXA suite and a new pharmacy information system in only 12 months, all accessible to authorized users via a Web portal. "We will slowly be able to eliminate our Citrix environment," Covert says.

Further, the operational speed of two systems already implemented-computerized physician order entry and results review-is faster than with the older software, says Lisa Brady, vice president of business strategy at Rush-Copley.

For end users, .NET is transparent, Gomez says. Information technology staff, however, likely will find applications using the technology easier to install and maintain because of common procedures for managing server configurations and security, he adds.

That's what I.T. personnel at Rush-Copley have discovered. "My staff can configure applications and have them in a usable state much quicker," Covert says.

More benefits

A major benefit of .NET is its support for the full family of Internet authoring languages, including extensible markup language (XML) and Simple Object Access Protocols (SOAP), plus 20 traditional programming languages. In other words, it bridges the gap between old and new, promoting easier integration of disparate systems, says Chapman.

For example, SOAP is an integration standard interface, or a standard way of querying information systems for their public interface specifications.

The content-tagging capability of XML self-identifies the public interface specifications. Combined with having basic programming for any Web application already complete, the integration tools in .NET help vendors build software quicker, Gomez says. "It's important for us to maintain a competitive edge by getting to market faster."

By its very nature, .NET is much more secure than Windows, enabling better control of Internet-based communications, asserts Osberg, the consultant.

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"Windows was modified to work in an Internet environment," he says. "The architecture is porous and there are many ways to get in or out of a program or file. But .NET is a gateway technology; there is only one way in and one way out."

While .NET has yet to set the health care information technology arena on fire, interest is starting to increase, Gomez believes. "Its use in health care is ramping up as people start to gain confidence in it and as vendors introduce larger applications," he adds. "Hospitals see .NET as a way to get new software while reducing the cost of ownership."