

This article appeared in the
February 2004 issue of



Subscribe instantly at
www.bijonline.com

- Free in the U.S.
- \$18 per year in Canada and Mexico
- \$96 per year everywhere else

Partners HealthCare Systems Handles Rapid Expansion With InterSystems' Ensemble

By Mary Finn

Application integration is recognized as a major challenge by most organizations. When the IT strategy of an enterprise includes integrating applications and information in an environment that includes literally hundreds of systems and serves more than 50,000 users accessing information on a 24x7 basis, the barriers to success become much more formidable.

Partners HealthCare Systems, Inc. is a Boston-based healthcare delivery network that offers patients throughout Massachusetts a continuum of coordinated, high-quality care. They are working in partnership with InterSystems Corp., which develops and markets the Ensemble rapid integration platform, to ensure they meet enterprise integration objectives.

Founded in 1994, Partners includes Massachusetts General Hospital, Brigham and Women's Hospital, Faulkner Hospital, McLean Hospital, Newton-Wellesley Hospital, Spaulding Rehabilitation Hospital, and North Shore Medical Center among the major institutions comprising its healthcare network.

Innovation Means Early Technology Adoption

Partners is recognized nationwide as a leader in leveraging IT to support improvement in healthcare delivery. Examples of their leading-edge initiatives include:

- An interactive Web portal offering more than 1,000 primary care physicians throughout the Boston area easy, secure access to multiple systems

- A physician's order-entry system that delivered a 17 percent reduction in adverse drug reactions throughout Brigham and Women's hospital, saving as much as \$10 million annually after initial rollout on a client/server network and is expected to have an equally major impact as it goes live on the Web
- A wireless application environment designed to give hundreds of nurses bedside access to clinical information via PDAs and other handheld devices.

"InterSystems' software development model calls for working very closely with their customers to ensure they create solutions that combine advanced capabilities with real-world practicality," says Ethan Fener, Partners associate director of application development.

End-to-end management, high performance, and scalability are critical criteria for successful integration in the Partners IT environment, according to Fener. Focusing on the management issue, he says that problem identification can be extremely difficult when multiple applications are integrated on an enterprise scale. The problem is generally not visible within any application, but becomes very evident at the point of integration, so it's the integration person who gets the phone call in the middle of the night. InterSystems worked to make Ensemble monitoring smart enough to identify the sender or receiver that is the root cause of the problem.

In addition to requiring sophisticated management features in an integration software platform, Fener says that Partners places performance and scalability at the top of the requirements list for integration software. "Our user base includes thousands of primary care physicians located throughout Massachusetts as well as the user population located in the hospitals and clinics that make up the Partners network. At peak times, we can have well over 5,000 concurrent users on the system." It's essential to be able to handle even those types of heavy loads at a speed that satisfies a very demanding, geographically dispersed user base.

Given the fact that Partners' information user population has more than doubled in the last decade and that expansion is expected to continue, scalability is another critical integration suc-

cess factor, notes Fener.

In-Depth Testing for Success

All of these criteria were rigorously tested in a proof-of-concept initiative that involved integrating four clinical applications and performing extensive benchmark testing. "We tested the Ensemble-based integration with real-world transaction loads . . . we brought down the system to test reliability and recovery and we set up an integration scenario that simulated a live environment," Fener says. "The outcome of the project, which was conducted in late 2003, was extremely satisfactory."

The next step in implementing Partners' integration plan will involve deploying Ensemble in three separate projects that require integration. The projects are likely to be identified in early 2004, with development and deployment ongoing throughout the year. The combination of technologies provided by Ensemble—a Universal Service Architecture, Persistent Object Engine, and seamlessly integrated development and management environments, will be extensively explored by Partners' technologists throughout the year.

Application and information integration are definitely areas of focus in the overall Partners IT strategy, Fener says. "We expect Ensemble to be a key component in leveraging our technology investment by integrating our applications with new technologies to enable future initiatives." That will be an important part of ensuring that Partners will continue its mission to provide the best possible patient care, medical research, clinical education, and community benefits. **bj**



Ensemble is available from InterSystems Corp., One Memorial Drive, Cambridge, MA 02142. Voice: 617-621-0600; Website: www.InterSystems.com.



Ethan Fener