IBM

MDinTouch eases medical practice pains with Internet portal.

Application	B-to-B clinical and administrative Internet portal for medical practices
Business Benefits	For MDinTouch: Projected 100% ROI in 18 months; 500% est. growth in membership by yearend; 20% to 30% reduction in development costs; ability to support 1.1 million hits per day; For physicians: 25% reduction in administrative costs; 25% increase in productivity; ability to focus more on patient care and less on administrative functions
Software	IBM WebSphere™ Application Server, Standard Edition

While today's young physicians have the benefit of the latest scientific research and advanced medical technologies, there are a few important things they don't learn in medical school. Like how to navigate the maze of administrative work it takes to run a profitable medical practice; how to access the latest network-based clinical services with outdated computers; and how to keep on top of business at the office while making rounds at the hospital.
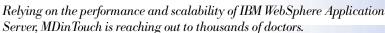
MDinTouch understands how hard it can be. Calling on a collective 35 years of experience in the healthcare industry, the Miami, Florida-based software developer aims to simplify the information explosion at the doctor's office through an Internet portal called MD Webtop. Requiring only a standard Web browser and a high-speed Internet connection, the portal provides a single interface from which doctors and their staffs can access a variety of administrative and clinical applications.

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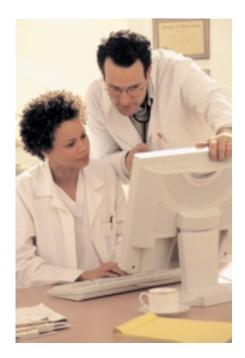
– *Ben Gustman, Chief Operating Officer, MDinTouch*

Relying on the performance and scalability of IBM WebSphere Application Server, MDinTouch is reaching out to thousands of doctors.

e-business

It's about business, not just technology.

Leveraging standards-based IBM software, MDinTouch can quickly put all the applications doctors need at their finger tips.

At the heart of MD Webtop is IBM WebSphere Application Server, Standard Edition. Functioning as the development foundation and the runtime infrastructure for MD Webtop, WebSphere Application Server is well-known to MDinTouch's founders and chief developers from their extensive work with it at the Miami-based Baptist Healthcare system. And while other application servers have been evaluated, exhaustive testing at MDinTouch has reinforced the company's commitment to WebSphere Application Server.

For MD Webtop, the MDinTouch team leveraged the support in WebSphere Application Server for JavaServer™ Pages (JSP) technology, CORBA and XML to create an application and presentation framework that allows them to rapidly build and expand the portal. Says Ben Gustman, chief operating officer at MDinTouch, "If you think of our portal metaphorically as a tree, WebSphere Application Server is the roots. Without it, MDinTouch wouldn't grow."

The application and presentation framework built on WebSphere Application Server not only allows MDinTouch to incorporate best-of-breed clinical and administrative applications into the portal, but it also enables them to create useful links between previously disparate applications, which, on average, have been shown to increase physician productivity 25 percent and reduce administrative costs 25 percent.

These advantages have not been lost on the physicians in Dade County, Florida. More than 200 have signed up so far, and MDinTouch hopes to grow its customer base by 500 percent by yearend, achieving a projected 100 percent return on investment in less than 18 months. This could mean a deluge of hits to the MD Webtop portal, but MDinTouch is unfazed; its tests have shown WebSphere Application Server to be capable of handling more than 1.1 million page hits daily.

Focus on integration is key to success

By subscribing to the MD Webtop portal at MDinTouch, doctors and their staff will be able to run every aspect of their practice, as well as communicate with colleagues, labs, patients and transcriptionists. Says Kent Wreder, CEO of MDinTouch, "MDinTouch is all about the integration of fragmented clinical and administrative systems, making every system that a physician uses—such as transcription, billing or blood testing—available in one place. The multiplicity of systems underlying the Web portal is transparent to the user."

"In our experience, there's really nothing that comes close to WebSphere Application Server. It's a mature product that supports all of the features you need for large-scale development."

—Eric Navarro, Chief Technical Architect, MDinTouch

Here's one way MD Webtop can work. A physician may make a query through MD Webtop for test results at an outside lab. Previously, the physician may have had a dial-up modem or fax connection to the lab. On MD Webtop, the lab-result request on a Web page is interpreted by WebSphere Application Server, which invokes a Java™ servlet, routing the request to the lab through the Internet. When the lab data is retrieved, WebSphere Application Server uses JSPs to present the lab report on the portal.

Similarly, the portal provides an application called Report Viewer, which allows doctors to view medical transcriptions. MDinTouch contracted with a transcription service that uses an application from Care-Flow|Net to transcribe physicians' dictations. CORBA allows the Report Viewer to connect with the transcription application, while JSPs interact with the CORBA objects to control the appearance of the transcripts in Report Viewer.

In this manner, MDinTouch can deliver a very broad-based service, with 20 percent to 30 percent lower in-house development costs—and consequently a very short time-to-market. "With WebSphere Application Server, we can plug into other applications and present them as if they were our own," says Vice President of Development Eric Butler. "With the transcription service we were able to go live just a couple of weeks after we made an agreement with the transcription company."
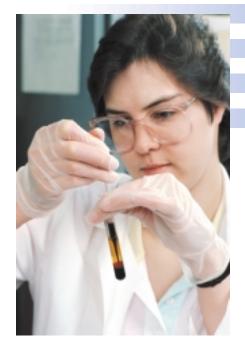
Standards pave the way to innovative services
The number of applications residing in the portal is growing steadily. Designed for the MD on the move, the portal will soon be accessible not only from the desktop but also from wireless application protocol (WAP)-compliant cell phones and personal digital assistants (PDAs).

To support the different data presentation formats employed by these devices, MDinTouch has written an XML engine, which runs as a service within WebSphere Application Server. If, for example, a user logs into MD Webtop from a WAP phone or a PDA and accesses the portal's physician directory, the XML engine identifies the device type and applies the appropriate XSL stylesheet to the XML code generated from the directory database.

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– Eric Navarro

Support for JSPs allows WebSphere Application Server to deliver standard lab test results in a Web browser.

XML is the default format for all the data exchanged between applications and users in MD Webtop. And, like CORBA, it is an industry standard — increasing the likelihood that it will be used by the developers of other applications. "Consequently, MD Webtop needed an application server that could communicate using industry standards," explains Eric Navarro, chief technical architect and co-founder of MDinTouch. "The fact that IBM adheres to standards in WebSphere Application Server — and throughout the Application Framework for e-business — is very important."

MDinTouch prefers proven technologies

MDinTouch's enthusiasm for WebSphere Application Server has held up to multiple reality checks. "We did pilots with several application servers, including BEA WebLogic, Oracle [Application Server], [New Atlanta] ServletExec, JRun and even Netscape [Application Server], but we stuck with WebSphere Application Server," Navarro says. "In our experience, there's really nothing that comes close to WebSphere Application Server. It's a mature product that supports all of the features you need for large-scale development."

One of these features is the support for multiple virtual machines, which allows developers to create separate execution environments on a single server. "We can do our staging on one server and go live on another, and it's all on the same box," Navarro explains. "It's a lot more stable, and it's easier to roll back in case of problems."

Touching physicians everywhere

While it is currently focused on the 11,000 physicians in Dade County, MDinTouch plans to extend its business model to a larger member base. As it works to innovate the way physicians manage clinical and administrative challenges, MDinTouch plans to continue building more applications on top of WebSphere Application Server.

Since the growth potential for MDinTouch is so great, the potential for a future need to change platforms is not only likely, but imminent. Currently, MDinTouch runs on a Microsoft® Windows NT® server, but the developers have already run tests on Sun's Solaris™ Operating Environment to assure portability. Says Gustman, "WebSphere Application Server will take us pretty far up the IBM hardware chain as well."

MDinTouch envisions a future where physicians interact with all of the information needed to run better practices — from their offices, laptops, PDAs or WAP-enabled phones. With WebSphere Application Server as the root of MDinTouch's innovative service, the physician community has been given an advantage. An advantage that assures a future where doctors will spend more time healing and less time dealing with paperwork and administrative tasks.

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