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Home Depot makes Java a fixture

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Many companies merely dabble in Java, but The Home Depot, Inc. has made a strong commitment to the 3-year-old programming language and the Common Object Request Broker Architecture (CORBA) for distributed computing.

The Atlanta-based retailer eventually hopes to have all of its 360 to 400 in-house programmers using Java, which was created by Sun Microsystems, Inc. Right now, 130 have been trained, and 60 are active Java developers, according to Home Depot's Mike Anderson, vice president of information services. "I'm hoping [Java] lives for 10 to 15 years," Anderson said. "That's our goal."

Fourteen months ago, Home Depot turned to Java with the following goals in mind: to write applications that can run across multiple platforms, interoperate with applications written in other languages and let all of its programmers develop in the same language and leverage off the same infrastructure. Despite some early hurdles, Home Depot is finding thatJava is working as planned. The company has at least three key Java applications running:

pA Virtual District Office that allows district managers to view store-performance reports, which are presented in Hypertext Markup Language through World Wide Web browsers.

pA customer service form that lets the company rent out trucks to customers using a graphically oriented Java application to fill out the contract. Novera Software, Inc.'s JBusiness application server sits in the middle tier.

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pAn Employment Application Kiosk that lets a prospective employee watch a video, take a test and fill out an employment form through a Java application. Managers can access resumes and even activate employees through the Java application.

Home Depot programmers break up the code into a thin presentation layer on the client, putting business logic in the middle tier and data access objects on the back end, Anderson said.

Although other companies have been hesitant to take the plunge, Home Depot embraced CORBA for its distributed computing environment because it runs on all the operating systems Home Depot uses: Unix, Windows NT and mainframes.

"With Java, you get the ability to move an application from one platform to another, but by using CORBA as the middleware provider, what you also get is the ability for an application on any platform to communicate with any other application on any other platform," said Tim Sloane, an analyst at Boston-based Aberdeen Group, Inc. "Through the Interface Definition Language, CORBA allowed us to have a Java object call a Cobol object or a Cobol object call a C object," Anderson said. "[So] we could leverage off of legacy code."

Not surprisingly, building applications using the still-developing Java hasn't been without obstacles. With its Employment Application Kiosk program, Home Depot programmers had to write their own transaction initiator in CICS on the mainframe and develop their own drivers for touch-screen and electronic-signature capture because there was none available, Anderson said.

Home Depot developers also had to tinker with applications to improve performance because they don't run at the same speed on Microsoft Corp.'s Windows NT, Hewlett-Packard Co.'s Unix or IBM's OS/390 and AIX.

"Different implementations of the Java virtual machine [that compiles the Java code] is where the problem lies," Anderson said. "We were having substantial ... different response times across different operating systems. It makes us have to rearchitect a little bit in order to get the performance the way we need it to be."

On the whole, Java's benefits outweigh the risks. Developers can concentrate on the business logic, and their Java applications can be distributed easier via a central server, he said.

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