

Smalltalk for Developers: Giant Leaps for viaLink Customers

This article discusses viaLink's use of Smalltalk (Cincom) as the programming language for our applications. Many Internet-based companies use Java. Many programming departments write code in C, C++, Visual Basic and other programming languages. Why is Smalltalk viaLink's programming language of choice? What does it help us do for our users? Why does it matter? Here's a brief introduction to one of the technology choices that helps viaLink perform at an extraordinary level to deliver solutions to the industry's problems.

Rapid development

The size and complexity of an application are often characterized by "function points." viaLink's application is large for a web-based application, comprised of approximately 6,000 function points. According to research, Smalltalk enables the development of approximately 23 function points per staff per month, while Java or C++ enable about 15, and C only about 8. [McConnell, Steve, Rapid Development (Microsoft Press, 1996)] That means that viaLink can spend fewer hours writing code to accomplish the same functionality for users. Smalltalk allows viaLink's developers to be completely user-centric and to focus on business problems rather than programming constructs.

Quality and accuracy

According to Cincom, the creators of Smalltalk, Smalltalk developers create only one third as many bugs as Java developers and only one sixth as many as C++ developers. viaLink's experience bears that out. In 2001, viaLink's development team completed over 350 enhancements to our applications involving more than 16,000 hours of development, with a defect rate of only 5%. The team, releasing updates monthly, went 5 months of the year without a single defect reaching production. Fewer defects mean less maintenance and more time spent on more new features.

Continuous enhancement

Smalltalk enables developers to make ongoing changes to an application. A developer can apply a "patch" or portion of code and alter functionality, whether fixing a defect or adding features, while the application is running. That means continuous availability for users. viaLink schedules regular monthly updates to the software and also deploys patches to correct defects or to add new features to meet urgent customer requirements as required.

Flexibility and scalability

Smalltalk applications run on any of the major support platforms (Windows, PowerMac, Intel Linux, AIX, SGI Irix, Compaq Unix, HP-UX) with no modifications. Deploying the application in a new environment or in a new facility does not present a challenge. Smalltalk also provides the ability to scale the software easily by allowing the creation of multiple images of the application. This ability to scale quickly is important as the number of users of the application increases rapidly and more and more trading partners get connected.

In good company

viaLink is pleased to be in the company of some noteworthy users of Smalltalk, including: Allstate, American Express, BMW, the U.S. Department of Defense, Ford Motor Company, GEICO, J.P. Morgan, Lucent and Sprint.

The latest

In January, viaLink upgraded our applications to the latest release of Smalltalk. The upgrade assures clients of the most advanced capabilities available, including performance enhancements, the capacity for additional XML-based services and even more options for common Internet connectivity.

As Scott Frost, viaLink's Director of Software Development explains, "Upgrading to the latest version of Smalltalk keeps viaLink moving at Internet speed while Internet speed continues to accelerate."