Editors' Corner

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Has Smalltalk passed its prime? Will it remain relevent as we move to distributed and Web-based applications? Clearly, if Smalltalk is to prosper in its second quarter-century, it must evolve to remain a language of choice for developers of corporate applications. The good news is that the Smalltalk vendors are among the first out of the starting gate with tools for supporting highly distributed applications and building live Web applications. Here is a short preview of what's available in the new releases from the Smalltalk vendors and what's in store for the future. In upcoming issues of THE SMALLTALK REPORT, we will endeavour to explore both of these areas in much more detail.

To date, Smalltalk has most often been used in two-tier client/server applications involving server-based relational database management systems. As the trend toward three-tier architectures and truly distributed applications accelerates, Smalltalk must provide much enhanced support for distributed computing. There are many issues to be faced when developing truly distributed applications. In a Smalltalk development context, for example, there are the issues of inspecting, debugging, and garbage collection when objects are distributed across Smalltalk images. In addition, new tools are required to assist developers in determining how an application should be distributed and how such an application should be tuned for performance.

Both IBM (Distributed Smalltalk) and ParcPlace-Digitalk (ServerWorks) plan to offer support for distribution between Smalltalk objects residing in different images and differing operating environments, as well as access to object request brokers (such as DSOM in the case of the current release of IBM Distributed Smalltalk or HP Distributed Smalltalk's CORBA-compliant ORB) to provide access to non-Smalltalk objects. IBM shipped its Distributed Smalltalk along with the 3.0 release of VisualAge for Smalltalk in November, while ParcPlace-Digitalk will ship the first release of ServerWorks sometime this year. IBM (for obvious reasons) and ParcPlace were slow off the mark in support for OLE; Digitalk and VMark with their Object Studio product have led the way. Now all the vendors are promising enhanced support in the near future.

The excitement generated by Java and similar technologies has reached fever pitch in the last few months as organizations seek to realize the potential of client/server software on the Internet. We can't count the number of times we have been asked: "What will be the impact of Java on the use of Smalltalk?" The implication in the question is that Java is somehow a threat to Smalltalk's very existence! We (and the Smalltalk vendors, we are sure) view the WWW as a marvelous opportunity for Smalltalk to demonstrate the power of the marriage between object technology and the deployment vehicle the Web provides. For people in organizations with existing Smalltalk applications who are accustomed to the development environment and class libraries underlying all the Smalltalk dialects, the move to Web-based applications should be a fairly smooth transition. Indeed, it will likely be quite some time before Java-related technologies provide application development environments with features equivalent to those of Smalltalk. Moreover, there are plenty of opportunities for synergy between Smalltalk-based Web technology and Java.

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Both IBM and ParcPlace-Digitalk have demonstrated web technology at recent shows. VisualWave from ParcPlace-Digitalk, based on the VisualWorks Smalltalk environment, is the first product to ship and promises developers the opportunity to go beyond the existing "brochure duplication" and "form-filling" characteristics of most Web sites to provide highly interactive applications giving the feel of a reactive two-way conversation.

The beauty of Smalltalk is that by its very nature it is highly extensible. While there are many challenges to overcome, Smalltalk is well-positioned to provide elegant transparent solutions to the challenges of the future and, what's more, to get there ahead of the crowd.