

NobleNet Adopts Rational ClearCase for Multi-Platform, Parallel Development

NobleNet Inc. selected Rational ClearCase configuration management software to support a fast-paced, parallel development environment spanning two product lines and nearly forty supported platforms. NobleNet's software release manager estimates that the software paid for itself in less than one year. Even more important, he says, is the improved team communication and reduced time-to-market attributable to ClearCase usage.

NobleNet, of Southboro, MA, pioneered the development of enterprise integration middleware for distributed applications. The company's middleware technology allows customers to deploy distributed applications more quickly, saving coding time and enhancing application interoperability. NobleNet's customers include large companies and leading independent software vendors.

NobleNet knows that managing complexity in today's fast-paced development environment is vital to success. The company works with many different languages and development environments on a wide range of platforms. Naturally, when NobleNet needed a configuration management tool, it implemented the proven leader in managing complex parallel development – Rational ClearCase.®

"Rational ClearCase is a major part of our multi-product development strategy," said Tim Foster, NobleNet's software release manager. "ClearCase provides the most powerful parallel development environment available for managing multiple projects and products."

NobleNet's flagship product, Nouveau,[™] automatically generates the client/server network code needed to implement software across a network. Because Nouveau ties the new code into existing application programming interfaces, NobleNet customers can deploy distributed applications far more quickly than would otherwise be possible. Nouveau is the first distributed application development

tool to support interoperability across CORBA, COM, Java and NobleNet's RPC-based applications.

"Our customers demand quality and we stake our reputation on it," says Foster, noting that Rational ClearCase's own engineering team was an early adopter of NobleNet technology, and that ClearCase was the first commercial application ever deployed using NobleNet products. "To put it in practical terms – we believe it costs more in the long run to support lower quality software. We implement processes and standards that help us keep the quality of the software high."

NobleNet's software developers manage multiple complex development projects. They work concurrently on multiple releases, on multiple platforms. In order to meet their deadlines, the development group must conduct parallel development efforts within a common code base.

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The problem to solve

NobleNet's previous version control software, Concurrent Version System (CVS), "was greatly hindering development," according to Foster. Only certain objects could be versioned, and their directory structures and related documentation had to be manually tracked. The developers used excessive disk space copying and recopying the same code base to each developer's workstation, so that they could try to work in parallel. Reconciling code differences became a nightmare. This copy-based parallel development model created confusion and multiplied errors with every software release.

Their ideal version control system had to provide more than just version control. First, the new configuration management tool had to support true parallel development, on both Microsoft NT and UNIX. The team also wanted a solution that would seamlessly integrate with Microsoft Developer Studio for NT. They wanted an easy conversion path for their existing CVS data. And, to support the company's increasingly complex engineering requirements, they needed a system that would scale for growth.

True parallel development

The group soon found that Rational ClearCase fit the bill. "We took a little time to fine-tune how we were going to do parallel development, such as our branch and merge scheme," he said. "But taking ClearCase out of the box, getting it installed and up and running was fairly straightforward. We had no problems or lost data."

Responsibility for NobleNet's development rests with its twenty-member engineering group. This consists of fifteen developers, plus technical support, documentation

and release engineering. The developers are divided into four teams working concurrently on various pieces of Nouveau software. Thirteen repositories, some more active than others, contain all the group's product versions, documentation and administrative data.

Rational ClearCase supports Microsoft NT, NobleNet's primary development platform, as well as multiple UNIX systems – Sun Solaris, HP UX, and IBM AIX. It works seamlessly with both Microsoft Developer Studio, NobleNet's development environment, and Visual C++, the company's primary development tool. NobleNet's RPC product runs on about forty platforms.

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Transparent workspace management

Rational ClearCase 3.2 lets NobleNet's developers work on any baseline code they want to work on, quickly and easily. They simply create a view, based on rules they define. ClearCase then creates a virtual workspace for them.

Developers can choose from two types of "views" of their data, for either networked or local usage. Dynamic views provide networked users with instant updates to evolving source files and project data. Snapshot views offer the advantages of local build performance and disconnected use, for working privately or away from the office.

"Developers using a snapshot view can work at home and get the performance of a local file system," said Foster. "Plus, they are isolated from other developer's changes." Foster continued that when using dynamic views, other developer's changes are seen by default, as soon as they are checked into the system. That way, everyone can work from the latest code base. "Some of our developers prefer to see changes immediately and others don't. Snapshot views gives them a choice. What's more, snapshot views are based on the same rules-based

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ClearCase's graphical version tree.

configuration spec. That makes it more powerful than disconnect models from other vendors."

Rational ClearCase is integrated with Visual C++ and with Windows at the operating system and Windows Explorer level. "It's outstanding: configuration management, built right into the file system," Foster continued. "At least that's the way it looks to the developer."

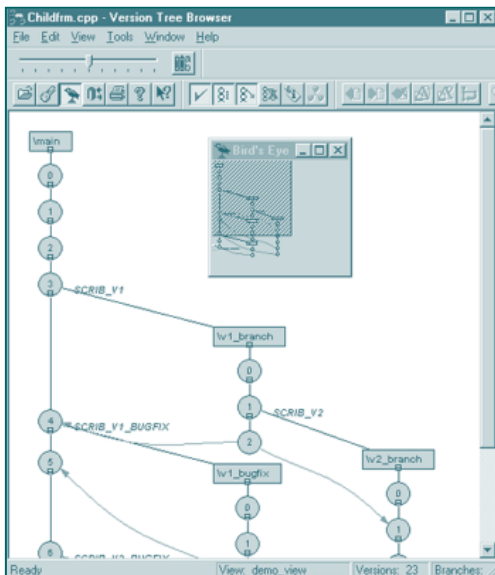
A graphical version tree presents every version of every file in an easy-to-use, hierarchical format. It also allows developers to work on any version of any file — including old releases. "That impressed the developers who had used the CVS tool more than any other feature. A lot of other configuration management tools make selecting any version other than the latest one very hard," said Foster. "We really appreciate the graphical version tree."

Rational ClearCase pays for itself

Foster led the project to convert CVS data into Rational ClearCase. "We pulled what data CVS had generated into ClearCase quite easily," Foster said. "The thing that struck us after a week or so, frankly, is that ClearCase data is far more complete. That will make our code base much easier to manage over time."

Foster estimates that his group will save at least one hour per week, per developer, using Rational ClearCase. The biggest time saver, according to Foster, is the ClearCase merge manager, which automatically and intelligently merges the code of multiple contributors. "The ClearCase merge manager on NT is the easiest merging environment I've ever used, by far," he said. "It's helped us simplify our branching and merging process." He estimates that ClearCase paid for itself within a single year.

"You know, I believe most engineers see source code control as a necessary evil," Foster continued. "What we like to do — what we see ourselves paid to do — is create. So what development tools should focus on is helping the engineer create innovative software. It should make it easy to manage all the other necessary tasks. That's what Rational ClearCase does for us, and that's what we do for our customers. It's an ideal match."



Rational ClearCase graphical version tree

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