

Industry:
Banking

Organization:
STATER

Description:
STATER is a leading independent service provider in the European mortgage market with over one million mortgage loans in its STATER Mortgage System. As the market's end-to-end service provider, STATER focuses on support for mortgage financiers in the sale, processing and financing of mortgage portfolios in the Netherlands, Germany and Belgium

Business Problem:
STATER had outgrown their code management system, and needed an SCM solution that could manage all of their source files, simplify parallel development and improve efficiency

Solution:
Rational ClearCase

Key Benefits:
Replaced obsolete change management system with a secure system that can manage all of their source files, maintaining complete, annotated version histories of source code, executables, documentation, scripts, libraries and XML artifacts
Delivered more releases per year by enabling practical parallel development
Increased developer productivity by minimizing the amount of time developers spend worrying about version control
Gained better insight into the build process with a complete, out-of-the-box process for managing change
Managed changes at the activity level to simplify and streamline development

Rational software

STATER Accelerates Development and Simplifies Change Management with Rational ClearCase

In 1997, recognizing the value of their servicing division, Bouwfonds Hypotheken, a leading lender in the Dutch residential mortgage market, made a strategic decision to offer independent, third-party servicing to other lenders. Spun off from Bouwfonds, STATER has grown into a leader in its own right, as an independent service provider in the European mortgage market with over one million mortgage loans in its STATER Mortgage System. As the market's end-to-end service provider, STATER focuses on support for mortgage financiers in the sale, processing and financing of mortgage portfolios in the Netherlands, Germany and Belgium.

Today, STATER's comprehensive mortgage software, STATER Hypotheek Systeem (SHS), offers support for the entire mortgage process, from the customer's first call to a lender, through the entire term of the loan, until the mortgage information is no longer needed. Development of the system, which began in 1991 on a VAX/VMS platform, has progressed over the years to a Windows NT environment. In the early days, STATER used CMS (Code Management System) for version control, but as the system expanded to include over 20,000 source files and a wide range of file types, STATER found that CMS was no longer meeting their needs. The STATER development team needed a change management system that could handle all of their source files. Just as importantly, they wanted the system to:

- simplify parallel development,
- improve the efficiency of their build and release management, and
- provide better insight into the build process.

In Rational® ClearCase® they found a solution that met all their needs and exceeded their expectations. Rational ClearCase is an advanced software artifact management solution that provides STATER with effective version control, workspace management, process configurability, and build management. With Rational ClearCase, STATER has reduced overhead, increased developer productivity, and improved the overall quality of their software.

Version Control for All Digital Artifacts

Heine Zonnenberg, Senior Configuration Manager for STATER, explains that the need to version all of STATER's digital artifacts was a key factor in their decision to adopt Rational ClearCase. "In the old days, we mainly used VAX/VMS for development. Now we use Windows NT for development, and we have Unix teams for the servers and for our Sybase database. We have a lot of different types of source files that we need to manage. We use Uniface for the front-end. We also use C, Visual C, DCL (Data Control Language), Perl Scripts, XML, Java, Delphi and, of course, SQL. We were using DEC/CMS (Code Management System) and it was not able to handle all of the kinds of source files that we were using. It got to be a bigger and bigger problem. As the problem got worse, and we had more and more sources that were not under version management, that's when we started looking for a better solution," Zonnenberg remembers. "Now with Rational ClearCase we can put every source under control." In addition to CMS's inability to store certain types of files – Word documents for example — Zonnenberg notes that the amount of source code that STATER needed to manage was also outgrowing the capabilities of CMS.



With Rational ClearCase STATER can track changes to every file and directory, maintaining complete, annotated version histories of source code, executables, documentation, scripts, libraries and XML artifacts, with a secure, versioned object database that ensures the right users are accessing the right files.

Accelerate Team Development

Rational ClearCase has helped the STATER team deliver more releases per year by enabling practical parallel development and minimizing the amount of time developers spend worrying about version control. Rational ClearCase enables multiple STATER developers efficiently collaborate in the design, coding, testing and improvement of their software from a common code base. It provides the STATER team with the exact versions of files required to complete a specific task, while insulating them from potentially destabilizing changes made by others on the team. Zonnenberg explains, "Parallel development is very important to us. Usually we have two or three projects going on at the same time, and we have fixes on the system almost every day. The problem that we had with the old system is that issues that we had already resolved came back in the next release because someone forgot about it. That kind of repetitive error occurred in almost every release with the old CMS system." Using Rational ClearCase, STATER solved the problem of repetitive errors, and issues that are fixed in one release stay fixed in the next.

Since STATER began using Rational ClearCase, Zonnenberg has noticed an increase in developer productivity as well. The time and overhead developers used to spend managing changes and re-fixing problems is now being spent writing code. "Rational ClearCase has enabled us to move faster. It is much easier to roll our changes from one project into another project. ClearCase keeps track of all the changes that are made and warns us about problems in merging sources. Our old system, CMS, is a very old product, it does not give you very much information, it does not have a GUI, it has no difference tool, and no merge tool. In contrast, the merge and rebase functionality in ClearCase is very good and very important to us – it saves us a lot of time."

Rational ClearCase also provides STATER with advanced build management capabilities to optimize build times and ensure the reproducibility of software versions. ClearCase automatically detects dependencies and produces a detailed bill of materials that reports the exact file versions comprising a build. Zonnenberg finds this to be a huge improvement over their early system, "Previously we didn't have any make utility for building the system. When changes were made, we needed to decide ourselves what part of the system had to be rebuilt, and that was prone to errors. Now everything goes much faster, because ClearCase decides what sources need to be compiled. In a typical build, we might have 2,000 files that need to be compiled, but ClearCase does it, so we don't have to worry about it. All we need to do is start it off and it takes care of everything. That makes everyone's job much easier."

"For me ClearCase and UCM is a great solution, because it is not only a version tool, but it has the whole development process in it as well, from the development environment to deployment."

—Heine Zonnenberg,
Senior Configuration
Manager for STATER

The STATER team has also used Rational ClearCase triggers to further automate their change management process and extend the capabilities of ClearCase. Specific events in Rational ClearCase, such as a check-in, or a check-out can trigger a script to be run. STATER makes use of this flexibility to handle a wide range of tasks. Mark Felt, Assistant Configuration Manager at STATER explains, "We have a lot of triggers, and they are very useful for us. For example, when we check-in or check-out from Explorer, a trigger will automatically copy to or from our Uniface repository. Similarly, there are a lot of sources that need to be copied from NT to VMS because they can only run on VMS, and we use triggers for that as well. The ability to make changes with triggers to meet our own needs was one of the major reasons we selected Rational ClearCase."

Unified Change Management: A Process for Managing Change

Along with Rational ClearCase, STATER is using Unified Change Management (UCM), Rational's best practices process for managing change throughout development. UCM defines a consistent, activity-based process for managing change that STATER applied to their development projects with ease. UCM simplifies and streamlines development for STATER by allowing the team to manage changes at a higher level, in terms of activities. With UCM, an activity is automatically associated with its change set, which encapsulates all the correct versions of the project artifacts used to implement the activity. UCM frees STATER from manually keeping track of all the files that represent a change activity.

Zonnenberg reports that UCM has been particularly helpful to him. He adds that UCM was easy to adopt because it was similar to the process that STATER had built themselves. "When we used CMS, we developed a complete environment around the version management system ourselves. What surprised me is that UCM is almost identical to the process that had taken us years of experience and effort to develop ourselves. We have a development environment where the developers make changes; and then there's a delivery process into the integration environment where the software is built and tested. If it is all right there, we bring it into production. Managing with activities has really helped us. All the sources that are changed for a particular RFC (request for change) are referred back onto one activity. Then you can deliver that one activity — which is very helpful because it means we don't have to keep track ourselves of what sources have to be delivered. Rational ClearCase just delivers it. UCM is exactly how we understand the development cycle."

He continues, "In our old version control system there was almost no extra information available as the process was going on. There were no mechanisms like activities, so we could not easily see what sources were changed for a certain RFC. Now, with Rational ClearCase we can see exactly what is going on in each project. Everything is in the ClearCase database from the beginning. ClearCase gives a lot of information to all of us, including the testers and project leaders. We have better insight into all the changes that are made."

Accelerating Implementation

When STATER first began using Rational ClearCase, Zonnenberg and Felt attended the Rational University training courses Rational ClearCase Administration, Rational ClearCase Fundamentals and Applying Rational ClearCase Metadata to ensure a smooth transition to ClearCase. Zonnenberg also got help from his Rational technical representative throughout the evaluation, installation and configuration of Rational ClearCase. He remembers, "The Rational University training absolutely helped us. It not only helped us understand specific ClearCase concepts like views, VOBs, and streams but also administrative tasks like configuring ClearCase servers and setting up projects. By now it seems easy to us, but in the beginning I had a lot of questions about Rational ClearCase, and especially UCM. We faced a lot of challenges, and it really helped to have the course. We found that ClearCase is so easy for our developers to use, that they didn't need formal training. From the beginning the developers never had any problems with ClearCase. It was actually easier to use than the old system they were familiar with, because the old system was really separate from the development environment, and with ClearCase they do all the work in one environment."

Zonnenberg adds that his experience with Rational Technical Support was exceptionally positive. "Whenever we have questions or problems, they always help us immediately, and always with real solutions. If necessary, they will even send someone to us to help solve the problem. We are very satisfied with the technical support. One night, we were working on a conversion and we had a problem, and that time the help desk in America helped us. They didn't question us; they just helped. It is good to know that Rational is behind us and that their solutions work."

Developing Faster with Less Errors

Using Rational ClearCase and UCM has helped the STATER development team become more efficient and more productive, while giving them higher confidence in the quality and reliability of the software they build. Zonnenberg has noticed significant improvements as a result of the automated merge facility in Rational ClearCase, as well as the ability to put every source under version control and manage change at the activity level. Plus, he notes that recurring problems, which were a common occurrence with the old CMS system, have been all but eliminated since moving to ClearCase. He concludes, "Rational ClearCase saves us time and money. I estimate that we've seen a 10% improvement in productivity due to ClearCase. Last year we had four releases, and this year we will have six. For the developers, it certainly saves time because they don't have to do the same things two or three times. It saves time for me as well, because we have really good build procedures that we can use to reliably rebuild the system. Using Rational ClearCase we can really do a better job than with our old system – improved parallel development, more efficient builds, and better insight into the entire build process. For me ClearCase and UCM is a great solution, because it is not only a version tool, but it has the whole development process in it as well, from the development environment to deployment."

About Rational

Rational provides a software development platform that improves the speed, quality, and predictability of software projects. This integrated, full life-cycle solution combines software engineering best practices, market-leading tools, and professional services. Ninety-six of the Fortune 100 rely on Rational tools and services to build better software, faster. This open platform is extended by partners who provide more than 500 complementary products and services.

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CS-589A; 12/03. Subject to change without notice.