

A Look at Seapine's Surround SCM

by Allan McNaughton

MOST DEVELOPERS KNOW THAT VERSION control is an integral part of the software development process. Although the reasons to manage change are abundant, finding the right tool to streamline this often cumbersome activity is easier said than done. It often seems that so-called “high-end” change management solutions are only appropriate for the largest projects—with equally large budgets. At the other end of the spectrum are open source tools that require minimal capital—but deliver limited functionality.

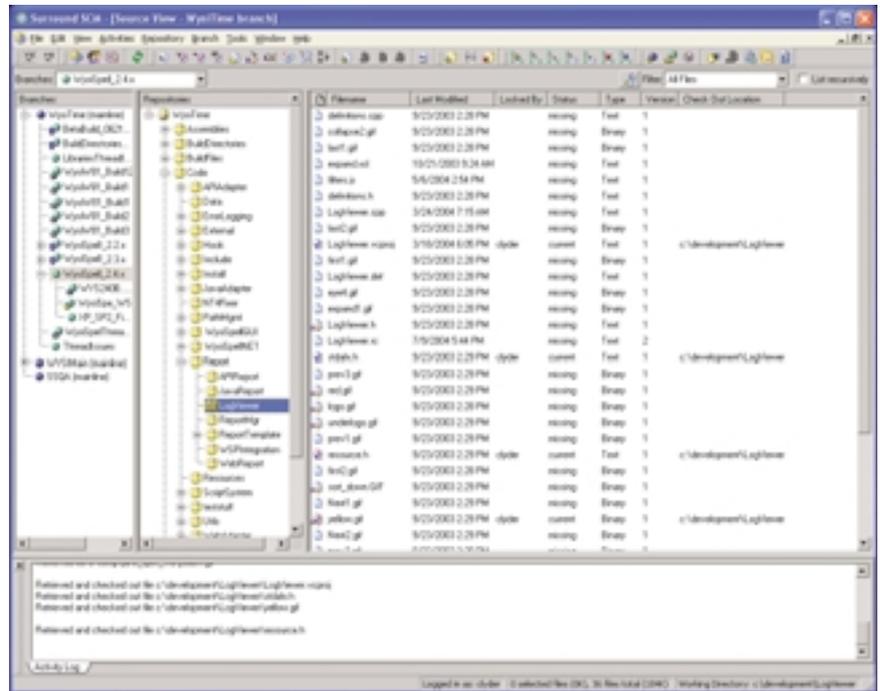
Fortunately, those of us who desire a competent version control solution at a reasonable price can turn to Surround SCM from Seapine Software. Surround SCM solves the daily problems faced by most developers. It does not contain every feature that marketers dream up—a la “battleship-class” SCM systems such as Rational’s ClearCase. What Surround SCM does deliver is a well-executed product that is easy to use, has strong branch and merge support, integrates with popular IDEs, and generates reports you might actually use.

Getting Started

Installing Surround SCM took only a few minutes and was glitch-free. Surround is a client/server application, so you must first install the server component (preferably on its own machine) and then install the client on each developer workstation. Support for heterogeneous environments is a strong point of Surround. Its client and server can run on any mix of Windows, Solaris, Linux, and Mac OS X machines.

The Surround client communicates with its server through a TCP/IP connection (with optional 512-bit encryption). Surround does not provide a Web interface, nor does it need one—remote developers use the same client as local developers. All Surround requires is an open firewall port for the client and server to communicate—no hassling with virtual private networks. Even from a dial-up connection on the road, I had no trouble accessing the Surround server at my office.

Surround’s true client/server architecture is a departure from tools like Microsoft’s Visual SourceSafe. Visual SourceSafe relies on Windows file sharing to access the repository’s file system. This can compromise security or, at the very least, compli-



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cate deployment, as all users must have read/write access to the repository directory. With Surround, a single administrator account on the server—not every developer—needs direct access to the repository. This makes unintentional damage to a repository very difficult.

Manage Change

Managing change is all about managing files, which is a task that Surround SCM does well. Surround SCM uses a tree view to clearly show repositories, branches, and individual files. I found typical developer tasks, such as checking in, checking out, and comparing and merging files, were easily accomplished. It is simple to create and populate new source trees. However, Surround would benefit from being able to directly import files and their change histories from other SCM systems.

What really distinguishes Surround SCM is its robust branching support. A branch is a separate line of development that starts with an existing repository and its files. Branches are either private, shared, or snapshots. Private branches cannot be seen by other developers and insulate the source base from works in progress. Once work in a private branch is complete, changes are promoted to a shared branch. Promoted changes also can be delivered into other private workspaces using the rebase command.

Even before the task is completed, Surround lets you preview how a workspace will be modified by a rebase or promotion.

Shared branches serve as integration areas for multiple developers and form the basis for snapshot branches. A snapshot branch is static and generally corresponds to a project milestone, such as a QA build or final release build. For users who are comfortable with tools such as Visual SourceSafe or CVS, Surround supports labeling files. However, it is much easier to simply create a snapshot branch.

Surround SCM does not make you subscribe to any particular branching model (branch-by-release, branch-by-purpose, etc.). It is flexible enough to support whatever approach your team currently follows. However, one should take advantage of Surround's branching support, as it creates opportunities to streamline software development with branching strategies that facilitate parallel development and continuous integration.

Harness Change

Surround SCM does more than just track changes. It can be customized so that certain file-related changes (check in, promotion, etc.) help drive other development processes. One way to do this is to create a trigger that calls a user-defined script when specific changes occur. For example, you could create a script to automatically deploy files when they are promoted to the release branch. Surround simply calls a shell process that receives parameters in environment variables, meaning you can develop scripts in the language of your choice.

Triggers form the basis of Surround's email notification system. Instead of calling an external script, a trigger can fire off emails to interested parties when certain actions occur. You can edit email templates directly within Surround, so it is simple to customize messages for your team's needs.

Shadow folders are another useful Surround feature. Using the Surround client, you specify a folder that always contains the current read-only contents of a specified branch. When a file is promoted or checked in to the branch, Surround copies the file to the shadow folder. This gives interested parties quick access to the source tree without purchasing additional licenses.

Report Change

Surround SCM's reports are clear and precise. Its history report includes up-to-date information about files, actions, and the users who performed them. This report can be generated on actions of interest during a specified date range for any subset of users. Surround also generates trend reports, which provide an aggregate count in tabular form of who did what. With a trend report, one can monitor areas of activity by examining the frequency and location of check-ins during specific time periods. If you are still in the habit of labeling files, Surround can generate a report that lists all files that match a specific label.

Reports are generated either in HTML, so they can be easily distributed, or in a tab-delimited format for later analysis.

Integration Points

Surround SCM integrates with Microsoft Source Code Control Interface (SCCI), compliant applications such as Microsoft Visual Studio and Visual Studio .NET, WebSphere Studio, Macro-

media Dreamweaver, Borland Jbuilder, and TestTrack Pro.

If you still prefer command line tools, Surround has a full-featured command line interface. Surprisingly, you can even perform mundane administrative tasks, such as adding users from the command line. This could come in handy as Surround's current lack of LDAP support makes it tedious to create accounts for a large pool of developers. (Seapine has announced that Surround SCM 3.0 with LDAP support has shipped, but it was not available for review at publication.) You can work around this by creating a script to extract user information from the LDAP server and calling Surround's 'adduser' command with the appropriate parameters.

Final Analysis

In my opinion, Surround SCM achieves its goal of offering a capable version control solution at a modest price. It does not attempt to be everything to everyone. Surround offers the features you are most likely to use without the complexity encountered in more expensive change management systems. Surround's ease-of-use, combined with its sophisticated branching support and powerful integration features, should make it a popular choice among many developers and testers. **{end}**

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1/4
page
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