

RAZOR HAS BEEN USED BY NASA AT THE KENNEDY SPACE CENTER TO WRITE SPACE SHUTTLE LAUNCH PROCESSING SOFTWARE

The first law of software development is that when you build computer software, change always happens. And because it happens, you need to control it effectively. Software configuration management (SCM) is a set of activities designed to control change by identifying the work products that are likely to change, establishing relationships among them, defining mechanisms for managing different versions of these work products, controlling changes that are imposed, and auditing and reporting on the changes that are made.

According to Susan Dart, *"the goals of using CM are to ensure the integrity of a product and to make its evolution more manageable. Although there is overhead involved in using CM, it is generally agreed that the consequences of not using CM can lead to many problems and inefficiencies. The overhead of using CM relates to time, resources, and the effects on other aspects of the software lifecycle."*

To cut down on that overhead, Visible Systems offers Razor, a simple, economical, and easy-to-use software configuration management product that helps companies manage their software development projects and their files. It can be used by any company writing software to manage all the files that the developers who create the product use to create it -- often in the thousands—and also to track issues and problems.

Visible's Razor has been used by NASA at the Kennedy Space Center to write space shuttle launch processing software, by the Boeing Corporation, by Motorola, and by the National Security Agency. Users are impressed by both its integrated issue tracking system and by its aggressive pricing, a bargain compared to its competitors that lack integration.

According to Al Menendez, whose company Spaceco Systems was a contractor at the Kennedy Space Center, *"you can take your company's own development process and implement it in Razor. It's very cost effective; at under \$800 a seat it runs your development process. And it has a very open architecture, which makes it easy to administer and configure. It doesn't require a toolsmith – just a couple of years of Unix experience."*

Menendez, who chose Razor after evaluating all its competitors, adds *"the issue management system is tightly integrated with the files version and*

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baseline release parts of the tool. Competitors are missing that integration with the problem-tracking system

Razor offers control and coordination of file versioning and product build management for both ASCII and binary files. Its easily parsed ASCII database encourages users to generate their own scripts for report generation and process control. By attaching shell scripts both before and after Razor events, the tool becomes an enforcement vehicle for the development process. Razor is available on SunOS, Solaris, HP-UX, AIX, IRIX, Linux, and MS WinNT with clients also on MS Win95/98/NT.

The *issues program* could be considered the heart of the Razor package. It's a highly configurable problem tracking system; locally defined problem forms can use text fields, radio buttons, check boxes, choices etc, for important information.

Through the *versions program*, Razor provides an intuitive and insightful window interface to all of the standard version control needs; checking files in/out for edit, parallel development, reporting changes, viewing differences, browsing, etc.

Because a final product is actually the culmination and integration of innumerable changes spread across a wide number of files. The *threads program* provides an easy mechanism for managing all of this. With this tool, users and teams easily manage the releases they're generating.

Through a simple GUI/mouse maneuver, users are able to easily relate their check-in, check-out, and thread activities directly to problem reports in the system. This linkage provides the greatest power of the package. Both managers and engineers have direct insight into not only the changes that are being made but also the issues, which drive them.

Razor is modularized, so the issues, versions, and threads programs may be used separately. It is extremely easy to try out Razor. Both documentation and a full copy of the product for evaluation are available by FTP. New releases and patches are handled in the same manner.