

SanDisk

SanDisk gains a competitive advantage using AccuRev SCM Software.

Overview

SanDisk employs 150 engineers in firmware and software development, and ASIC design, in California, Scotland, and Israel. In a distributed environment, this group of engineers must meet the needs of 55 products and their development schedules while still maintaining commonality in the code base.

Challenge

The fast pace of the business, the number of divergent product requirements, and limited human resources produces tremendous pressures on SanDisk's development processes. In 2002, Andy Tomlin, Director of Firmware and Software, realized that the open-source version control system in use, CVS, could not keep pace with the demands of the business, and he initiated a search for a replacement.

"CVS had become a hindrance more than anything else," Tomlin said. "It wasn't able to meet the needs of a fast-paced business like ours. It wasn't flexible enough, and it had lots of

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Director of Firmware and Software
SanDisk

problems. So we began an extensive evaluation of version control systems." This evaluation eventually led SanDisk to choose AccuRev.

Solution

Tomlin wryly classifies his group's development style as "organized chaos." He calls it chaos because of the fast pace of the business and the rapid pace and variations of development. And he calls it organized because of how SanDisk uses AccuRev streams to execute its development processes.

Tomlin's group constantly contends with the tradeoff between the risks of the software development environment versus the needs of the business to take the software and run with it. With more to produce and more developers working on the same code base, there are more complicated problems to manage and greater opportunities for mistakes. "Having a tool like AccuRev is a business advantage," says Tomlin. "Other ways of version control limit the number of balls you can juggle. Their constraints put a limit on what you can do at the product level. "If your version control system can't keep pace with the business," Tomlin continues, "it becomes a business problem."

Streams in AccuRev give SanDisk a time dimension view of its code base. And each stream understands its relationship to all others, eliminating the need for developers to keep track of



SanDisk®

At a Glance

■ Industry

Retail & Distribution

■ Location

United States

■ Challenge

The organization needed to replace its open source version control solution with a more flexible and powerful solution.

■ Solution

Use the stream-based architecture of AccuRev to effectively execute development processes.

■ Results

- + Simplified management for administrators
- + Increased flexibility with the introduction of streams
- + Introduced simple drag-and-drop functionality

“Once you get used to how AccuRev works and the power and flexibility of the tool, you look back and say, this is obvious, why didn’t someone else think of this before?”

ANDY TOMLIN

Director of Firmware and Software
SanDisk

where their code belongs in the hierarchy. Code higher up in the stream hierarchy is more mature. Code further down in the stream hierarchy is newer and less mature.

For SanDisk, AccuRev streams allow them to have code in all these different time and development states and still manage it all. “AccuRev allows us to manage different versions of the code base in a way that makes sense,” Tomlin says. “One of our products needs one feature, another product needs a different feature, and we’re able to manage all those things effectively, without conflicts.”

With AccuRev, the “code freeze” becomes a thing of the past. Ongoing development of a product can continue even while the current version of a product is being released. “With streams making it so simple,” Tomlin states, “we constantly have code in the process of being matured independent of the development stage. AccuRev makes the whole development process much more efficient.”

The flexibility of AccuRev’s streams architecture also enables Tomlin’s group to change quickly as needs change. If there’s an issue found in a product’s code after it’s released, for example, a drag and drop of the mouse moves the product back to an older version.

Results

With 150 AccuRev users at SanDisk, a single administrator spends about one half of his time managing AccuRev. “That person is adding users and managing the server, that type of stuff,” notes Tomlin. “He isn’t doing any management of the development process structure, the streams management. The engineers using the product do that.” Tomlin continues, “To make traditional SCM systems usable, you need a department to manage the tool. That’s wasting resources.”

SanDisk has found reconfiguration of AccuRev as the organization changes to be a trivial process. When the development process must change, the corresponding change in the stream structure is simply a drag and drop and it’s done. “The thought process of deciding how you want to restructure is harder than reconfiguring the tool,” Tomlin says. “The reconfiguration is trivial.”

“My developers used to look at version control as a necessary evil,” states Tomlin. “But when you have a tool like AccuRev, version control becomes a better way of doing things. They all like the tool. It gives them the flexibility to do the things they need to do when they need to do it!”



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