SmartBear
SOFTWARE

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User Story – Cisco Improves Software Team Communication with CodeCollaborator

See why Cisco® engineers say "CodeCollaborator is the best product out there."

CodeCollaborator got our distributed team started doing code reviews and helped us accomplish our goals of reviewing code efficiently, easily, and frequently. Now we review all bug fixes, and we don't know how we'd do it without this useful tool.

Our team of five developers here at Cisco Systems works on Cisco Unified MeetingPlace, a multimedia conferencing product that integrates voice, video, and Web conferencing capabilities. A few years back, Cisco implemented an engineering-wide policy that mandated code review for every bug fix before check-in, so we went looking for a code review tool. We wanted to increase defect detection, to simplify and speed up the review process, and to remove some of the drudgery normally associated with code inspections. We found CodeCollaborator™ to be the best solution, and we have been using the software since it was an alpha product.

Our team is geographically distributed across the US from coast to coast, so a solid communication infrastructure is essential for us to work together. Multiple other teams at Cisco (about 50 people total) use CodeCollaborator to help groups communicate from Belgrade to San Jose to Research Triangle Park and Boulder. With team members in so many different time zones, getting together for live reviews rarely happens, so we needed a code review tool to make it easy for developers to carry on discussions with each other, but still review code in their own time.

Before code check-in, authors use CodeCollaborator to invite participants to a review, where the software presents before/after "diff" views to all participants. Everyone can type comments next to any line of code, and can carry on threaded discussions with each other, in real-time or on their own time.

While Cisco does have an internal conferencing product that allows real-time application sharing, it involves manually creating "diffs" and shipping them around to reviewers. The tracking features in CodeCollaborator are particularly helpful to our team. We can immediately see what the outstanding issues are, and we can verify that all bugs found in review have been fixed before we release a version.

Platform: Windows and Linux .

Source Control Management Software: Perforce, ClearCase®.

Development Environment: MicroSoft® Visual Studio® , Eclipse.

Industry: Networking.

The Challenge: Connecting a geographically-distributed team of developers to efficiently and easily conduct code reviews.

"Code Collaborator is the best product out there."

– Brandon Fuller

Our biggest challenge in implementing code review was getting people to try it. Our engineers initially resisted it because, like many engineers, the concept of code review conjures visions of excruciating process, meetings, paperwork, and time spent not coding. Once they tried CodeCollaborator, however, perceptions changed. Now the team looks positively on code review, as they both recognize the benefits and enjoy the process of working together. And we have the bandwidth to review code for every bug fix.

Another benefit of CodeCollaborator is its ability to integrate with our internal defect tracking system. This system will not let us resolve a bug until the code has been reviewed, and we must submit reviews to this system in a certain format. We were able to work with SmartBear to integrate CodeCollaborator into our defect system to make this process smooth. Now, when a team member finishes a review, the right "enclosure" for our system gets built automatically and attached to the defect. Then our defect tracking system allows us to check in the change and resolve the defect. This integration saves us a lot of time.

CodeCollaborator is also extremely easy to use. The interface is intuitive, and since it integrates directly with Perforce, it really simplifies the processes of both packaging code for reviews and of conducting them. Reviews are packaged and sent automatically, so we don't need to manually assemble files and mess with emailing them.

Before CodeCollaborator, our team only did reviews for very important items, and the reviews required everyone to be together in the same location – so only a small fraction of our code was getting reviewed. Our goals in implementing code review were to make code reviews efficient, easy and frequent – and we feel that we've accomplished them all. Our team highly recommends code review in general and CodeCollaborator in particular, as a useful and fast way to produce better code. CodeCollaborator is the best product out there.
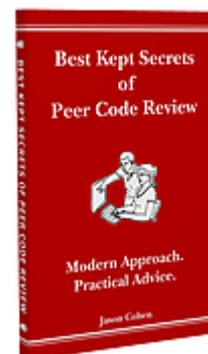
For more information about Cisco and the Cisco Unified MeetingPlace team, contact Brandon Fuller at Brandon@cisco.com or visit their **product page**.

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World's Largest Case Study

In addition to our team, multiple other groups at Cisco use CodeCollaborator. Cisco worked with SmartBear Software to conduct the world's largest published case study of peer code review, spanning 2500 reviews of 3.2 million lines of code over a 10-month period.

Our joint findings are outlined in SmartBear's book, Best Kept Secrets of Peer Code Review. The book gives A-Z coverage of a vastly under-represented topic. It's a must-read for development teams interested in product quality, customer satisfaction, and making the most of their time.

To order your FREE copy, visit **www.smartbear.com**

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