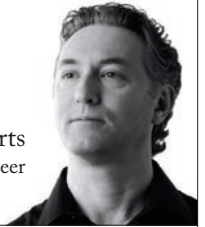


“We wanted more than a product—we wanted a vendor with professional services that could help optimize our use of multiple tools. The Coverity Clear program was instrumental in helping us evaluate and establish an effective process for defect resolution which ultimately helped the development team meet our product release goals.”

Baron Roberts
Dash Navigation Principal Engineer



Dash Navigation Challenge

Developing breakthrough GPS technology for the consumer electronics industry requires both innovation and rapid time to market. The company's new product, Dash Express, is the first and only automotive navigation system with two-way internet connectivity. With this technology, Dash Express helps drivers get where they want to go in the fastest time possible. Dash Express is also the first GPS product to automatically and wirelessly update its software and services.

The development teams at Dash Navigation already use a number of products to enhance productivity including tools for: issue tracking, source code repository, and build and test automation. To develop code and meet their tight development timeline, the Dash team needed to add static analysis to their toolset to achieve deeper visibility into the integrity of their code, including defect detection, severity, status and resolution rate.

Solution

Dash selected Coverity Prevent because it finds critical quality and security defects with the lowest false positive rate in the industry. To accelerate the company's code quality initiative and ensure a rapid integration of Coverity Prevent with other tools in their environment, Dash also selected the Coverity Clear professional services program, designed to help fast track companies to reach zero Coverity-detected defects.

Coverity Clear is a series of collaborative work sessions conducted by Coverity professional services in conjunction with Dash development leads. It includes product installation, training, configuration of defect assignment rules, review of defect resolution workflow, and the construction of a plan to improve overall code quality. Following this initial work, the program includes bi-weekly follow up meetings between Coverity and Dash to make sure the company successfully meets its defect management goals.

“Coverity Prevent won the respect of Dash developers, because of its ease of use in detecting and helping resolve issues. We have high confidence with Prevent because it reports real defects with a low false positive rate below 8%,” states John Gomes, Dash Navigation Director of Quality Engineering.

In addition to uncovering critical quality and security defects, Prevent was integrated with Dash's existing build and issue tracking systems. These integrations provided different, yet equally powerful benefits to Dash.

Industry: Consumer Electronics

Business Challenge: Dash Navigation is the creator of Dash Express,™ the first GPS navigation system with two-way internet connectivity. This advanced GPS device gathers real-time traffic information from the Dash Driver Network, data that is anonymously contributed by every Dash device, and combines it with other sources of traffic data to provide Dash customers with the most accurate picture of their travel routes.

Dash Express is unique because it offers two-way communication between the GPS device and a set of central servers. It also provides wireless updates directly to the device—essential for maintaining the most up-to-date software and traffic information. With an aggressive schedule to create and release this cutting-edge technology, Dash needed to find a fast route to high-quality, secure code. To accomplish this, Dash looked for an advanced static analysis tool to help improve and accelerate their software development process.

Results: Coverity professional services helped Dash quickly deploy Coverity Prevent without any change to their internal processes or build environment. Prevent was integrated with Dash's existing build system and issue tracking system in a matter of days. Dash leveraged Coverity's experience to help optimize their overall code quality initiative, and retained Coverity to consult with the company on an ongoing basis to ensure the company achieved its goals for code quality and security. Dash eliminated 100% of Coverity identified defects within seven months, today the company leverages Prevent on a daily basis to ensure the quality of new or modified code.

The two way integration between Dash's issue tracking system and Coverity Prevent allowed defects detected by Prevent to be presented in the defect management interface that the company's developers were already using. It also allowed Prevent defects to be managed within Dash's existing workflow for defect management. After identifying defects, this integration enabled Prevent to automatically create, prioritize, assign and update defects in Dash's issue tracking system.

According to Baron Roberts, Dash Navigation Principal Engineer, "Integration between our issue tracking system and Coverity Prevent provided each developer with 'one stop shopping' for managing code quality." This integration helped the development team address defects in a consistent and timely manner.

The second key integration between Dash's build system and Coverity Prevent, allowed the development team to parallelize Prevent analyses as appropriate. This enabled developers to take full advantage of the company's powerful build hardware and benefited Dash by enabling the company to apply a single issue management and tracking process.

Details

On an ongoing basis, the development team at Dash has Coverity Prevent configured to automatically conduct a daily analysis of the Dash Express code base with no action by a human administrator. The analysis is scheduled to run during off hours, to minimize the impact of build throughput on the existing build system. Dash also has Prevent automatically delineate between defects found in different segments of the company's code base, enabling management to track the progress of development teams toward quality and security objectives.

In less than seven months following the kick off of its Coverity Clear engagement, Dash has successfully resolved and closed 100% of the defects identified by Coverity Prevent. The development team at Dash has integrated results from Prevent into their development process, and has successfully met the company's goal of delivering the company's advanced new Dash Express product to market.

Conclusion

With bi-weekly calls with Coverity Professional Services to track continuing success and issues, Dash feels they are truly partnered with Coverity. "Since the first sales call, we've established an outstanding relationship based on mutual respect and trust. The installation, deployment and support have been awesome. The Coverity staff has and

"The most valuable thing, beyond the mechanics of installation, was the information shared on best practices in terms of what works, and what doesn't. Coverity's professional services team was very clear about how Prevent can work with other tools, which was valuable insight that accelerated the integration of Prevent within our existing development processes."

Baron Roberts
Dash Navigation Principal Engineer

continues to be very responsive, proficient and dedicated in achieving our development and quality goals" states Gomes. If intelligent software engineering is getting the most out of development tools, then Dash has put the pedal to the metal - and they actually do know where they're going. A summary of results includes:

- Highly accurate analysis results, with reported false positive rates under 8%
- Dash resolved and closed 100% of defects reported by Prevent in under seven months, ensuring the company met it's release goals
- Issue tracking system integration with Prevent helped the Dash development team identify defects significantly faster than manual processes would have allowed
- Build system integration with Prevent enabling the company to apply a single issue management and tracking process

About Dash Navigation, Inc.

Dash Navigation finds the smartest way for people to get from A to B, and find everything in between. The company is located in Sunnyvale, Calif. and is funded by Kleiner Perkins Caufield & Byers, Sequoia Capital, Skymoon Ventures, Crescendo Ventures, Artis Capital and ZenShin Capital Partners. For more information visit Dash Navigation at www.dash.net.

Free Trial

Request a free Coverity trial and see first hand how to rapidly detect and remediate serious defects and vulnerabilities. No changes to your code are necessary. There are no limitations on code size, and you will receive a complimentary report detailing actionable analysis results. Register for the on-site evaluation at www.coverity.com or call us at (800) 873-8193.

About Coverity Clear

The Coverity Clear offering provides an initial strategy and ongoing mentorship in eliminating all defects in your code. It includes the professional training, deployment, and process guidance to ensure your company a quick start on your code quality and security initiatives. Coverity Clear includes instruction on advanced analysis techniques and continual access to Coverity experts throughout the process. During this engagement, a dedicated Coverity consultant works with you to define and automate static analysis processes such as prioritizing defects based on the criticality of the code. Defect removal goals and release and review processes are established in consideration of the severity of the defect as well as your organization's priorities and resources. The program's final component is the management of defect resolution goals, which includes onsite follow up to track the success of initial the deployment and regularly-scheduled communication to ensure continuous progress.