

Samsung Electronics Delivers Cutting-Edge Functionality with Parasoft's Static Analysis



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Samsung Electronics develops a diverse portfolio of services and products from voice-activated phones, to smartphones, mobile accessories, and MP3s. As a global leader in the telecommunications industry, Samsung is expected to deliver more and more complex functionality in less time than ever before. However, Samsung's stringent quality standards complicate their ability to deliver complex functionality at a rapid pace. With Parasoft's assistance, the company can sustain a high productivity level—rapidly delivering new functionality without having to compromise Samsung's strong commitment to product quality.

With Parasoft's automated enforcement of coding guidelines, they can eliminate errors early in the process. Early detection and prevention eliminates time wasted debugging the application later in the process, which frees up time to address high-level concerns related to design and requirements. This will ultimately enable them to achieve their goal of delivering new functionality faster.

Challenge: Deliver More, Cutting-Edge Functionality . . . In Less Time

Samsung Electronics develops embedded applications that drive some of the most innovative functionality the technology market demands. On increasingly compressed schedules, Samsung is expected to deliver exponentially more complex and fully-tested functionality. Their development effort is distributed across the world, underscoring the importance of communication and transparency.

The Software Engineering Group determined that the key to delivering more complex and more reliable applications faster was to reduce the time spent finding and fixing defects late in the process. They knew that one of the most effective and efficient ways to do this was to root out error-prone code at the earliest stages of development.

Action: Improve Code Quality with Parasoft C/C++test

Samsung needed a solution flexible enough to enforce its unique internal coding guidelines and reliable enough to handle its vast number of projects. Parasoft recommended C/C++test to automatically monitor compliance with internal coding guidelines via static analysis. C/C++test is the C and C++ analysis component of Parasoft's Development Testing Platform, which enables automated and integrated compliance monitoring for a range of guidelines that improve software development team productivity and software quality.

After an extensive proof of concept, Samsung concluded that Parasoft's Development Testing Platform solution was suitable for their software testing and development needs. What first impressed them about the Parasoft Development Testing Platform is how it meets a vast number of industry standards out of the box. Through these standards, Parasoft C/C++test ensures that Samsung's code meets uniform expectations around security, reliability, performance, and maintainability.

Another primary driver was that it automatically checks standards that are customized for their particular needs. When Samsung wants the development team to follow custom rules or policies that fall outside of the scope of the built-in rule set, Parasoft's RuleWizard technology allows them to customize built-in rules. Compliance with these rules can then be monitored automatically using static analysis.

In addition to static analysis, it also facilitates code review, unit testing, and runtime error detection.

Results: Samsung Fulfills Its Needs with the Right Solution

The team is currently using the solution to prevent defects while porting applications and to make code more readable and maintainable. By introducing the C/C++test into their process, Samsung is able to prevent coding errors that compromise security, reliability, and performance. This reduces the overall time in dealing with low-level problems and increase the time available to address higher-level concerns such as design issues, missing customer requirements, and algorithmic issues.

In this way, Parasoft C/C++test assists Samsung in their efforts to speed up their development while maintaining stringent quality standards. They expect new functionalities to be updated faster and easier than ever before.

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