

Thales Boosts Quality & Productivity with Static Analysis

Thales Italia boasts a solid portfolio of products and technologies destined for both civil and military markets. They offer technological solutions that address the security and transportation industries (with expertise in railway signaling and protection/surveillance of critical infrastructures); in the defense division (with expertise in military communications and war electronics); and in the air traffic management field (with expertise in landing, navigation, and surveillance systems).

By applying Parasoft's Development Testing Platform to its Integrated Tramway Management Solutions project— then later deploying it across the entire Automatic Vehicle Location System division—Thales Italia reduced its rate of defective components by 30% and significantly increased application performance.

Increasing Productivity and Quality in Mission-Critical Software

Thales is a world leader in new technologies geared toward the aerospace, space, defense, security, and transportation industries. Thales deployed Parasoft's development testing for Java for its Integrated Tramway Management Solutions project. Parasoft was so effective in helping Thales achieve its Java software quality goals that the company eventually standardized the Development Testing Platform across the entire Automatic Vehicle Location System (AVLS) system division. As a result, software defects are now detected faster—leading to greater productivity and quality in an industry where both are critical.

Thales has remained devoted to Parasoft for many years now. In addition to using Parasoft to standardize static analysis, the division is also using it to validate and optimize their applications' database connections. More recently, Thales has started exploring Parasoft's development testing solution for their SOA environment.

Initially, Thales was drawn to the simplicity of configuring, deploying, and managing a standardized rule set across a team or department. The company soon began to appreciate Parasoft's other qualities, including:

- All-in-one development testing capabilities
- Ability to extend configure their unique coding standards, which eliminates manual review
- Ease of project setup
- Seamless integration into their development testing environments
- Runtime error detection using data flow analysis
- Timely support from the Parasoft technical team

Parasoft afforded the AVLS systems division the ability to efficiently and consistently apply a broad set of complementary defect prevention practices, which greatly improved productivity by helping developers address errors before they proliferate throughout the code. The architect can easily take the rules and settings designed for one code base and apply them to another code base with necessary adjustments and modifications for the new context. This is especially important when the developers work in diverse environments that use different technologies.

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The rule set can be adjusted to suit a different code base in a matter of seconds with a few clicks. And when the architect creates a new custom rule, he or she just adds it to the Parasoft Team Server from which it is immediately deployed across all of the developers’ desktop installations. This allowed them to achieve a huge increase in productivity.

Thales also took advantage of the detailed results reported directly in the developers’ work environment. When developers review static analysis test results, they can click on a reported violation to easily access the rule documentation, which provides details, such as how to fix the errors, code samples, and source references. This improves the overall IQ of the development, which results in continuous productivity gains.

Real Results: 30% Fewer Defects

“One of the greatest advantages of Parasoft is that it taught our engineers how to become better developers” remarks Alessandro Orsi, the AVLS Systems Product Manager. “We are finding fewer and fewer defects in the code base because developers are learning how to write better Java code. As the developers grow comfortable with the existing rule set, the architects incrementally extend it to include more rules. As expected, this results in better code. It’s a cyclic process.”

“When we compare defect rates in the component before and after adopting Parasoft’s static analysis, we find that we are now achieving 30% fewer defects,” Orsi continues. “If other suppliers would provide the type of support that we’ve had from Parasoft, the world would be perfect. The support we have received from Parasoft has been truly remarkable”.

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