

FOR IMMEDIATE RELEASE

French Agency DGA Selects AdaCore's GNAT Pro with SQUORE Technology

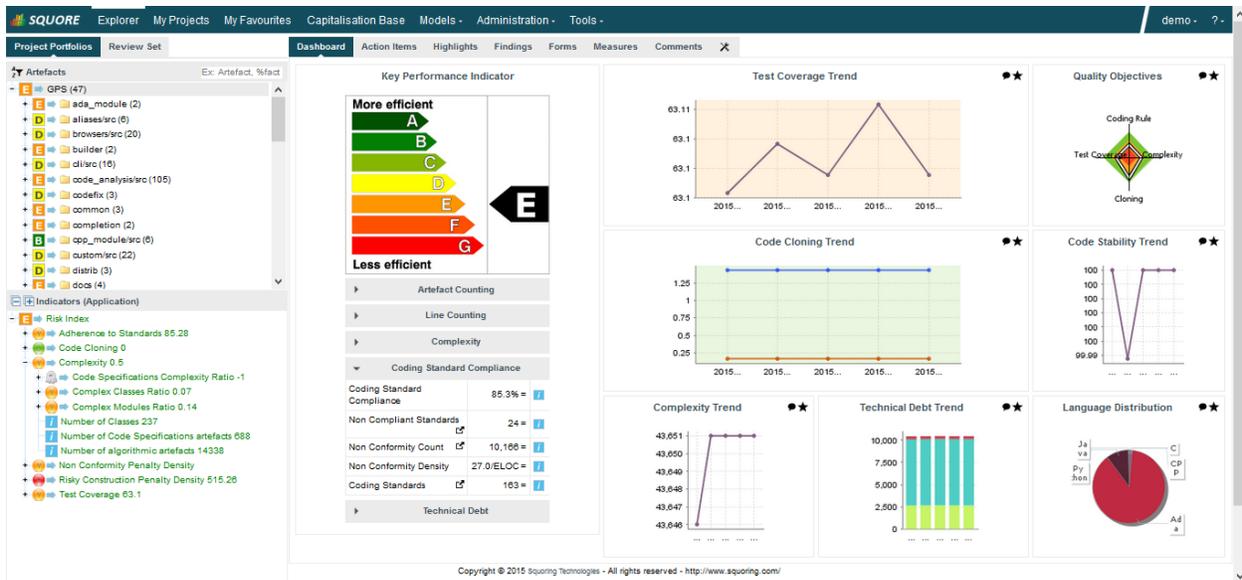
Two-year project designed for auditing and certifying military software initiatives

NEW YORK and PARIS, January 27, 2016 – AdaCore today announced that the Direction Générale de l'Armement (DGA) – the French government agency that oversees military procurements – has selected AdaCore and SQUORING Technologies to provide a graphical tool, AdaSquare, for military and civil avionics software audits. Featuring a smart dashboard that monitors the quality metrics of critical components, AdaSquare will facilitate the analysis of existing and new code in Ada and SPARK, and will support the processes defined in the DO-178C standard's supplements on formal methods (DO-333) and object-oriented technology (DO-332). DGA's software suppliers will be able to use AdaSquare to monitor the quality of their Ada and SPARK software across their various projects. The tool will produce high-level indicators that measure the code's technical debt, safety, maintainability, and portability, and will also provide a prioritized list of action items to help correct highlighted issues.

AdaSquare will be particularly well suited to safety-critical projects, which usually run a variety of code analysis tools ranging from coding standard checking and complexity metrics generation to structural code coverage analysis. Managing and interpreting the large amount of data generated by those tools can be challenging. The Square technology addresses this issue by aggregating the data into higher level indicators through customizable quality model templates; these reflect criteria such as maintainability, portability, freedom from vulnerabilities, and technical debt. The templates may be either generic or specific to a standard such as DO-178C, and can be further refined and specialized to match company or project requirements. These indicators may then be used to automatically prioritize corrective actions and to provide a comprehensive human-readable picture of the project status and progress. The AdaSquare project will develop appropriate data analysis tools together with a quality model template for Ada/SPARK applications that use formal methods or object orientation.

The technology can be used as required on a case-by-case basis or as part of an agile development process using continuous integration. It will provide indicators of trends allowing managers to monitor the progress of quality over the whole software life cycle.

AdaSquare will integrate data coming from various AdaCore static analysis and testing tools (including CodePeer, SPARK, GNATmetric, GNATcheck, GNATcoverage, and GNATtest) as well as SQUORE Analyzer developed by SQUORING Technologies. Mixed-language projects can take advantage of other SQUORE features to analyze those parts of the application that are not in Ada or SPARK, and future work can integrate those features with requirement management tools, widening the monitoring scope to the Systems Engineering area.



AdaSquare Dashboard

“We are very excited about this project,” said AdaCore President Cyrille Comar, “because it will help leverage the advantages of Ada and SPARK for developing critical software. With Ada and SPARK, customers have the safest available language technology and an unprecedented ability to combine static and dynamic verification. With AdaSquare they will be able to capture the relevant quality metrics for their software, monitor the progress of their team in achieving their goals, and get an immediate indicator when issues arise.”

“We review several projects each year, and with GNAT dashboard enhanced with the SQUORE technology we will be able to more quickly prove the validity and security of mission-critical projects,” said Vincent Louis, Software and System Safety Expert at DGA.

“The AdaSquare project provides an opportunity to extend the SQUORE evaluation and analysis capabilities with new advanced verification results. It is also a stepping stone to provide a transversal monitoring approach, as defined by the Systems Engineering field.”, said Patrick Artola, CEO of Squoring Technologies.

About SQUORING Technologies

Founded in 2010 by a group of software engineering experts, SQUORING Technologies specializes in the evaluation and monitoring of software and systems development projects.

The SQUORE decision-making dashboard for improving quality and performance of IT projects is dedicated to all industries where software plays a key role in terms of cost or safety : aeronautics, aerospace, automotive, railway, defense, energy, telecommunications, information systems.

About AdaCore

Founded in 1994, AdaCore supplies software development and verification tools for mission-critical, safety-critical, and security-critical systems.

Four flagship products highlight the company’s offerings:

- The GNAT Pro development environment for Ada, a complete toolset for designing, implementing, and managing applications that demand high reliability and maintainability,
- The CodePeer advanced static analysis tool, an automatic Ada code reviewer and validator that can detect and eliminate errors both during development and retrospectively on existing software,
- The SPARK Pro verification environment, a toolset based on formal methods and oriented towards high-assurance systems, and
- The QGen model-based development tool, a qualifiable and customizable code generator and verifier for Simulink® and Stateflow® models, intended for safety-critical control systems.

Over the years customers have used AdaCore products to field and maintain a wide range of critical applications in domains such as space systems, commercial avionics, military systems, air traffic management/control, rail systems, medical devices, and financial services. AdaCore has an extensive and growing world-wide customer base; see www.adacore.com/customers/ for further information.

AdaCore products are open source and come with expert on-line support provided by the developers themselves. The company has North American headquarters in New York and European headquarters in Paris. www.adacore.com