

## CodeSonar Helps Vivante Deliver Reliable GPU Cores On Time

Popular consumer mobile and home entertainment devices displaying state-of-the-art graphics content rely on Vivante's graphics processing unit (GPU) cores at the heart of their systems. At the center of every Vivante graphics solution is a complete suite of innovative software and hardware technologies, supporting the latest graphics standards and industry specifications. With a unique blend of performance and cutting-edge designs, Vivante cores enable products to run faster, smaller, and cooler.

The proliferation of handheld and consumer entertainment products, combined with the popularity of Vivante solutions embedded into leading OEM products, has driven the company's rapid growth over the last several years. The organization's focus on development and engineering excellence, and customer-focused dedication, have helped transform the company into a leading visual computing technology provider to the world's leading semiconductor companies.

Vivante GPUs feature a scalable, fully programmable, multi-threaded architecture, enabling the GPUs to support current and next generation applications. The GPU's flexibility allows developers and engineers to tailor applications for individual customers, but development time must be balanced against production schedules and against the need to strictly adhere to the highest quality standards. In the middle of 2010, Vivante investigated the use of advanced static analysis to help strike this balance. GrammaTech CodeSonar was one of the tools investigated, and the one they ultimately adopted.

Frido Garritsen, Chief Architect at Vivante, managed the evaluation. "When we tried different static-analysis tools on our code base," noted Frido, "a major factor we looked at was the quality of results—how accurate the results are, how complete the test coverage is, and what beneficial feedback the tool provides that we can apply directly to our code. In addition, we were pleased that CodeSonar was able to detect and catch a "challenge" problem we had intentionally embedded in the code base to test the tool's accuracy. CodeSonar was the only tool that found the challenge problem."

The adoption of CodeSonar into Vivante's test and QA process helps maintain the highest standard of quality while maximizing developer efficiency to solve code problems. Now Vivante engineers can spend more time focusing on developing the next generation of cutting-edge graphics technologies.



*"We were impressed by the depth of CodeSonar's analysis."*

**– Frido Garritsen,  
Chief Architect**