Simics Brings Agile Practices to Embedded Software

With Wind River® Simics®, organizations can reap the business benefits of progressive development methods to create and deliver better software, faster.

The Challenge

Hard to share, difficult to manage, and often late in arriving, hardware has held back embedded software teams from embracing Agile methods.

Agile development principles—which rely on fast, successive iterations based on collaborative teams using continuous feedback—are revolutionizing how software is made. Compared to waterfall or other more serialized processes, Agile techniques are helping organizations produce higher quality software, more quickly, with far greater flexibility.

This is allowing businesses to rapidly respond to changing customer needs, competitive challenges, and new strategic opportunities. The bottom line: Agile is proving very good for business.

Hampered by Hardware

Unfortunately, many embedded software development teams have been watching the Agile revolution from the sidelines. Unlike their counterparts who develop for websites, desktop applications, or other software-based platforms, embedded developers build software directly for hardware. And that has posed a host of challenges. But Simics offers a new virtual hardware development environment that helps embedded software teams embrace the Agile revolution.

Simics is a virtual software environment that simulates your hardware system. It provides an accessible, flexible, and collaborative development platform for helping your organization go Agile.

43% of embedded software developers report communications and coordination challenges in adopting Agile methods.

Source: Standish Group & VDC Research

By freeing embedded software teams from the constraints of physical hardware and providing a common, collaborative development platform, Simics catalyzes operational improvements, product innovations, and bottom-line efficiencies to bring critical competitive advantages to your organization.
How Simics Helps

Simics significantly improves the ability of embedded software teams to embrace Agile methods by eliminating key barriers to rapid releases, continuous development, and seamless collaboration. It keeps projects on time and under budget to drive substantial business improvements across the three critical dimensions of access, collaboration, and automation.

Access

Create anytime, anywhere virtual hardware availability at a fraction of the cost of physical hardware labs.

With seamless and reliable access to the Simics virtual hardware platform, teams can refine in real time, iterate continuously, and move through design, development, and test challenges to more quickly build on improvements.

• Create anytime, anywhere access to virtual hardware for anyone within or outside your development team.
• Freely test what you need to test rather than only what physical hardware allows you to test.
• Validate requirements early in the development process.

Collaboration

Break down barriers to simplify and improve team communications.

Simics provides an environment where team members can show each other issues rather than creating requirements and documentation to describe software behavior.

• Easily share a common view of hardware and software system data with any team member.
• Reduce dependencies between hardware and software teams.
• Reduce communication silos and the need for specialized teams.

Automation

Streamline and speed the test, integration, and release processes.

Simics helps shorten development and testing cycles by automating what is impossible to automate with physical hardware.

• Eliminate time-consuming, manual tasks by automating any function or configuration variation.
• Inexpensively scale testing capacity and easily run tests in parallel.
• Test the impossible with advanced techniques—such as fault injection—as often and to any degree required.

Simics: Key Business Benefits

| Move Faster | Shorten development times by as much as 50% |
| Improve Quality | Reduce system defects up to 80% |
| Increase Productivity | Speed problem analysis and resolution times up to 40% |
| Boost Velocity | Shrink feedback loops from days or hours to minutes |

Learn more at www.windriver.com/products/simics.

Wind River is a world leader in embedded software for intelligent connected systems. The company has been pioneering computing inside embedded devices since 1981, and its technology is found in nearly 2 billion products. To learn more, visit Wind River at www.windriver.com.

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