

InSightec Ltd.

To ensure its high-tech ultrasound surgical technology worked precisely, InSightec needed flawless performance from the software driving its imaging hardware. High-tech surgery demands high-tech IT performance. Micro Focus® DevPartner® Studio improves performance and developer productivity.



Overview

InSightec Ltd. is a privately held company founded in 1999 to exploit breakthrough MR-guided focused ultrasound technology and transform it into the next-generation operating room. Bringing therapy into focus captures the essence of InSightec's vision: Developing today's surgical environment by combining non-invasive focused ultrasound with real-time MR-guidance to replace invasive and minimally invasive surgery with a non-invasive alternative.

Challenge

When technology is developed that may one day revolutionize the way surgery is performed, there is zero-tolerance of error or poorly performing applications. Intercepting problems early in the development process is crucial for the software engineers at InSightec. Applications failure during surgery is not an option.

“DevPartner tools are easy to use and can be integrated quite effortlessly into the development process.”

ALEX KAVUSHANSKY

Software Manager
InSightec

Using focused ultrasound technology, InSightec has developed a completely non-invasive surgical procedure to treat cancerous and benign tumors. Its ExAblate™ 2000 delivers focused ultrasound energy into the human body, which heats targeted tissue to the point of irreversible thermal coagulation (ablation) and thus destroys it—in a matter of seconds. Treatment is performed under Magnetic Resonance Imaging (MRI), which provides the treating physician with continuous quality assurance feedback.

Developers at InSightec are well aware of how important application performance is during this precise procedure. According to software manager Alex Kavushansky, “The most difficult part of my job is making sure application components function optimally to reach desired performance levels.” Facing the challenge of producing fast and high-quality code, InSightec engineers needed tools for Microsoft development to help make their software more robust and high-performing.

Solution

At this point, InSightec turned to Micro Focus DevPartner Studio to help developers automatically detect, diagnose and facilitate resolution of software errors, maximize code performance and ensure optimum code coverage and testing. “DevPartner tools,” Kavushansky says, “are



At a Glance

■ Industry

Healthcare

■ Location

Israel

■ Challenge

InSightec engineers needed tools for Microsoft development to help make their software more robust and high-performing.

■ Solution

Use DevPartner Studio to automatically detect, diagnose and facilitate resolution of software errors, maximize code performance and ensure optimum code coverage and testing.

■ Results

- + Introduced an intuitive interface that automatically locates performance bottlenecks and reports application and component performance data
- + Introduced code coverage analysis, which identifies how much code was tested, how well it was tested and what wasn't tested
- + Provided powerful built-in assistance that guides developers through DevPartner's functionality and also explains the possible causes of recognized problems and ways to correct the code

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easy to use and can be integrated quite effortlessly into the development process.” InSightec routinely makes use of the automatic error detection, performance analysis and code coverage analysis capabilities found in the suite.

DevPartner Studio’s automatic error detection is used to check the code written by software engineers. The tool automatically pinpoints and analyzes errors in source code during development. It finds problems as they arise in native Windows code, capturing detailed analysis data at application runtime. Kavushansky describes a scenario in which DevPartner Studio proved especially helpful: “In many cases, some memory corruption would result in a fault occurring much later, when it was very, very difficult to recognize the source of the problem. DevPartner Studio has helped us eliminate this situation.”

In addition, DevPartner extends views beyond a single machine, allowing InSightec developers to trace transactions as they execute over client/server systems to obtain information on problems and performance issues.

Results

DevPartner Studio performance analysis helps developers optimize the performance and usability of their software, including distributed applications. It automatically locates performance bottlenecks and reports application and component performance data in an accurate, intuitive

interface. “Time profiling is very critical for us. When I ran DevPartner, I found time leaks in places I never expected,” says Kavushansky. “Last year, when we tried to make our system faster in some executable modules, we got five to seven times better performance based on information we received from DevPartner Studio.”

“To track any misbehavior of the system, we use code coverage,” Kavushansky states.

Code coverage analysis identifies how much code was tested, how well it was tested and what wasn’t tested. The tool helps developers focus testing where it is delivers greatest value—whether code check-in, unit or integration test, or final release.

Kavushansky believes DevPartner makes applications much faster and more secure, and he also believes the product makes his team better developers. “DevPartner Studio makes my work more precise,” he says, “because in many cases when DevPartner found problems, I tried hard not to recreate the same problems later on. It helps keep me focused and corrects my style.”

InSightec’s software engineers also appreciate the powerful built-in assistance provided by DevPartner Studio. The product not only guides them through a wide spectrum of its own functionality, but also explains the possible causes of recognized problems and ways to correct the code.



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