



Software company embeds advanced analytics from IMSL® C# Library for Microsoft® .NET to reduce time, effort and cost of Six Sigma software development

Fast Facts

Partner: Visual Numerics
Web site: www.vni.com
Company Revenue: Private
Country or Region: United States
Industry: Numerical Libraries

Partner Profile

Visual Numerics, a VSIP and Microsoft Partner, delivers data analysis and visualization solutions for technical, business and scientific communities worldwide through the accurate and reliable analytics of the IMSL Numerical Libraries in C, C# for .NET, Java, Fortran and Python.

Solution Profile

The IMSL C# Library for .NET leverages Visual Studio to deliver advanced mathematical and statistical numerical analysis, as well as charting and graphing for C# and VB.NET languages.

Software and Services

- Visual Studio 2008
- Microsoft® SQL Server® 2005 Analysis Services (SSAS)
- Windows XP®, Windows Server® and Windows® HPC Server 2008

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Scott Patrias, Software Development Manager, NextSigma, Inc.

Business Needs

NextSigma develops, sells and supports an integrated software solution that enables Six Sigma technologists to accomplish project management, process improvement and data analysis within the Define-Measure-Analyze-Improve-Control (DMAIC) and Define-Measure-Analyze-Design-Validate (DMADV) methodologies. Based on input from NextSigma's customers, NextSigma was tasked to investigate how to provide advanced data analysis capabilities within their software solution that integrated with Microsoft® Visual Studio® and Microsoft® Visual Basic® development systems with minimum development, cost and effort.

Business Challenges

NextSigma first considered developing data analysis algorithms and functions in-house. They quickly determined that they could

accelerate development and reduce their risk by licensing functionality from a commercial vendor. “As a software development company, our development team has a standing goal to get new releases quickly to our customers with rock-solid quality,” said Scott. “We knew a commercial library could allow us to leverage existing work, but we needed to be sure the commercial product was robust enough to meet our requirements and would also integrate into our development environment of Microsoft Visual Basic and Visual Studio.”

Partner Solution

Based on a recommendation from one of their developers who had previous experience with the IMSL Libraries, NextSigma evaluated and selected the IMSL C# Numerical Library for Microsoft .NET Applications to provide advanced data



Visual Studio® PARTNER SOLUTION BRIEF

analysis capabilities within their software solution.

The IMSL C# Numerical Library for Microsoft .NET Applications is a numerical analysis library written in 100% C#, providing broad coverage of advanced mathematics and statistics for the Microsoft .NET Framework. Developers writing in C# or Visual Basic .NET (VB.NET) get seamless accessibility to analytics capabilities in the most integrated language for the .NET environment, with the highest degree of programming productivity and ease of use with Visual Studio.

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New features in SigmaWorks that are enabled by functions in the IMSL C# Library include Monte Carlo simulation, optimization and various types of data analysis.

Benefits

- Increased NextSigma product value with added functionality from the IMSL C# Library
- Improved programming productivity
- Ease of use with Visual Studio
- Reduced code maintenance

Adding Microsoft technology to advanced data analysis functionality opens up the potential market for NextSigma solutions to anyone who requires advanced analysis

from a Microsoft Office® Excel® spreadsheet software plug-in.

Integrating IMSL Numerical Libraries with easy-to-use tools like Visual Studio lets analytics developers quickly explore new ideas and create new solutions with less effort.

The IMSL C# Numerical Library for Microsoft .NET applications is 100% .NET compliant. It is callable from any language and embeddable in any .NET application or architecture across myriad industries that require advanced analysis.

Another example of a software development company who has successfully embedded advanced analytics from IMSL C# Library for .NET is Moore Nanotechnology. Moore Nanotechnology, a leading manufacturer of ultra-precision machining systems develops NanoCAM, an advanced CAM software for freeform programming and analysis.

NanoCAM is used by their customers in defense, aerospace, consumer electronics, and ophthalmic industries to create 3D freeform surfaces such as optical lenses, mirrors and inserts. The IMSL Numerical Library functions embedded into NanoCAM provide the fast computation capability required to process large datasets in a fraction of a second, hence speeding up the design and analysis process.

The Microsoft logo in its classic bold, sans-serif font.