

EmbeddedMarket

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Embedded Market Forecasters: Poor development tool selection costing embedded developers an average of \$553,000 per project

New report finds Model-Driven Development the key factor in reducing delays and improving accuracy

FRAMINGHAM, Mass. – May 21, 2007 – Embedded Market Forecasters, a strategic consulting and embedded research firm, today announced that poor development tool selection is costing embedded developers an average of \$553,000 per project, exclusive of opportunity cost and corporate overhead.

According to a survey of 510 embedded development engineers, Embedded Market Forecasters found that, on average, 42 percent of embedded designs are behind schedule an average of 4.1 months, with an average cost per month of delay of approximately \$321,000.

The report also shows that developers using Model-Driven Development (MDD) experience significant reductions in design delays and cancellations and produce better design outcomes—such as conformance of final design results with pre-design expectations—than their counterparts who do not use MDD. MDD is used to more clearly specify systems, design software and create test scenarios using graphical models, providing enhanced communication. Simulation and rapid prototyping of the graphical models allows engineers to ensure that the specification and design are correct early on and continuously throughout the process, thus improving quality. Additionally, production code can be automatically generated from the models, reducing development time.

“In our analysis of embedded development engineer’s responses, we found that developers who use MDD—and more specifically, those who use the Unified Modeling Language—are able to manage more design starts and completions than the industry average,” said report author Dr. Jerry Krasner. “In addition, MDD developers enjoy superior results over non-modeling developers. This indicates that adopting tool selection analysis as a best practice for embedded development projects could save businesses and government agencies billions of dollars every year.”

To download Embedded Market Forecasters’ report, “What Do You Do When the Horse You’re Riding Drops Dead? Why Model-Driven Development is Emerging as a Preferred Best Practice,” go to www.embeddedforecast.com.

Some additional key findings in the report include:

- ♦ MDD has been the fastest-growing segment of the embedded marketplace since 2004.
- ♦ Many military and government organizations, including the Joint Chiefs of Staff, have put Unified Modeling Language (UML) modeling systems in place. “Systems of Systems” (SoS) modeling has become a major thrust within the military and MDD is widely viewed as key to design success.
- ♦ UML contributes significantly to a reduction in design, development and implementation costs.

The report includes an analysis of the productivity of various development tools, including IBM Rational RoseRT®, The MathWorks’ Simulink®, Telelogic’s Rhapsody and Wind River’s VxWorks, as well as the productivity of MDD developers and non-modelers overall.

About Embedded Market Forecasters

The premier market intelligence and advisory firm in the embedded technology industry, Embedded Market Forecasters (EMF) is the embedded market research division of American Technology International, Inc. We specialize in providing high-quality data and expert analysis to support our clients’ ability to assess the opportunities, risks, and competitive issues involved with developing and deploying embedded technologies. EMF has extensive experience providing both multi-client and custom research on topics including embedded boards, buses, software, hardware and development tools markets as well as embedded technology applications including embedded systems, digital signal processors (DSPs), FPGAs, single board computers, communications/IT, and multimedia. EMF is a consultant in strategic planning and go-to-market strategies for embedded vendors, prime contractors and the US military. Our clients range from startups to Global 100 companies worldwide.

Author Profile

Jerry Krasner, Ph.D., MBA is Vice President and Chief Analyst of Embedded Market Forecasters and its parent company, American Technology International. A recognized authority with over 30 years’ embedded industry experience, Dr. Krasner was formerly Chairman of Biomedical Engineering at Boston University, and Chairman of Electrical and Computer Engineering at Wentworth Institute of Technology and Bunker Hill Community College. In addition to his academic appointments, Dr. Krasner served as President of Biocybernetics, Inc. and CLINCO, Inc., Executive Vice President of Plasmedics, Inc. and Clinical Development Corporation, and Director of Medical Sciences for the Carnegie-Mellon Institute of Research. Earlier, he was Senior Engineer at the MIT Instrumentation Laboratory. Dr. Krasner earned BSEE and MSEE degrees from Washington University, a Ph.D. in Medical Physiology / Biophysics from Boston University and an MBA from Nichols College. He is a visiting professor at the Universidad de Las Palmas (Spain) where he is recognized for his work in neurosciences and computer technology.

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