The Embedded Software Modeling Tools Market

A Report Supplement Sponsored by Sparx Systems

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Venture Development Corporation (VDC)
Embedded Software and Tools Practice

Recent VDC Report Finds Low-Priced UML Tools like Sparx Systems' Enterprise Architect are a Disruptive Force within the Embedded Software Modeling Tools Market

The following information originates from previously published research and press releases produced by Venture Development Corporation (VDC):

Embedded Software Modeling Tools Market Overview

Embedded device manufactures continue to face pressure to rapidly deliver more complex products with increasingly advanced capabilities to their core customers. As device complexity increases, software and systems developers continue to require additional tools that assist them in quickly and easily creating, changing, organizing, and managing the software necessary to operate these devices.

Design automation tools offer developers a method for accomplishing a number of development functions that are becoming increasingly important within the design cycle, including:

- Modeling complex software/system designs at higher levels of abstraction
- Simulating and testing existing software/system designs
- Reusing software from previous designs
- Communicating designs more clearly among engineers within a distributed project environment
- Organizing, documenting, and managing software code
- Verifying software conformance with device requirements
- Automating the process of creating software code

As such, the use of design automation tools continues to represent a strategy for improved application development and lifecycle management. VDC expects increasing market adoption and continued commercial opportunities for software vendors within the design automation tools market as manufacturers continue to look for ways to cost-effectively manage the product development cycle and develop increasingly complex embedded software and systems.
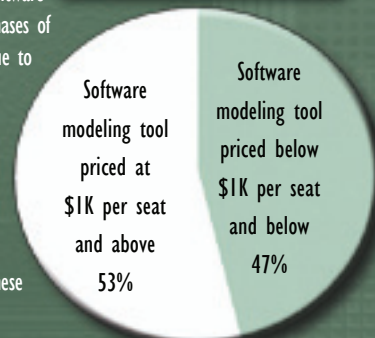
UML Design Tools Market Continues to Face Competitive Pressure from Low-Priced Alternatives

The growing complexity of today's embedded software and systems has driven many developers to consider a model-driven development strategy. Recently published research by Venture Development Corporation (VDC) indicates that more developers are expecting to adopt model-driven development approaches, including UML, over the next two years to cope with this complexity and an increase in the lines of software code per device.

However, increased adoption of software modeling tools has not translated into equivalent increases in commercial market revenue to the degree that VDC had previously anticipated. VDC suspects that a number of factors, including the availability of low-priced UML modeling tools, have significantly impacted the growth of the commercial market for software-modeling tools.

Within the embedded UML market, numerous lower-priced commercial alternatives have appeared. VDC believes that providers of these lower-priced tools are offering solutions that are adequate for the needs of developers that have fewer high-end requirements. VDC expects continued adoption of model-based development tools, as the benefit of modeling complex systems helps developers to organize and manage complex software and system development. These tools currently see the most use in the early phases of the design process. However, as adoption increases and leading suppliers continue to advance their solutions to drive modeling environments to the center of the development process, VDC expects additional users to more readily acquire additional tool extensions with increasingly sophisticated capabilities. One of the keys will be to understand the requirements of new adopters in order to capture additional share. Findings in VDC's end-user research show that early adopters of design automation tools (those currently using these technologies) have quite different characteristics than the group of developers yet to adopt these types of tools.

Percentage of Developers Using Software Modeling Tools by Price (Percent of Respondents)

Software modeling tool priced at $1K per seat and above 53%

Software modeling tool priced below $1K per seat and below 47%

Comments on Sparx Systems

Specific inhibitors to future market growth for software modeling tools include increasing competition from smaller, low end (in terms of price) vendors (e.g. Sparx Systems) and enterprise focused UML drawing/modeling tools providers. Many of these competitors have improved the quality of their products and this will continue to exert pricing pressure on the market. One of the market participants offering a very low priced tool is Sparx Systems. The company offers tools starting at around $150-$300 per license and seems to be gaining significant market traction (having just recently announced their 100,000th development seat). VDC believes that many developers are still experimenting with UML as a design paradigm and many are simply looking for a basic UML drawing tool, luring many engineers to this innovative product. In addition to the basic UML drawing functionality, Sparx Systems has rapidly been improving the quality of its tools, with additional modeling, code generation, and requirements management features, integration with Visual Studio and Eclipse development environments, integrations with other ALM tools, and many other advanced capabilities. VDC believes that this company is clearly becoming a disruptive force within the market, and other vendors will have to keep pace with improvements in order to justify pricing their products magnitudes higher than Sparx Systems' Enterprise Architect.

Sparx Systems Profiled

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Corporate Overview	Sparx Systems is an Australia-based company started in 1996 that offers application lifecycle management tools, including UML-based development and requirements management tools. The company's flagship product offering is Enterprise Architect, based on the UML 2.1 specification, enabling model-based development, requirements management, version control through CVS, code generation capabilities, and integration with Visual Studio.NET and Eclipse development environments.

Key Facts

Company Type: Private
FY End: June 30th
CY 2005 Sales (M/USD): Less than $1.5 (E)
1-Year Sales Growth: 33.3% (E)
2005 Employees: 32
(E) Estimated for Embedded Products and Services

Product Category	OS - N/A	Channel Structure	Direct	Major
	SDT - N/A		Distributor	Minor
	DAT - Participant		VAR	Minor
	TAT - N/A		Other	-
Regional	Americas - Major			
	EMEA - Major			
	Asia-Pacific - Minor			

Key Products

Design Automation Tools
❖ Enterprise Architect
  - Corporate, Professional, & Desktop Edition
❖ Model Driven Generator (MDG) Suite
  - MDG Integration for Visual Studio 2005
    MDG Integration for Eclipse
  - MDG Link for Visual Studio .NET
  - MDG Link for Eclipse
  - MDG Link for DOORS (Beta)
  - MDG Technology for SysML
  - MDG Technology for DDS (Beta)

Vertical Markets	
Automotive	- Minor
Consumer electronics	- Minor
Industrial automation	- Minor
Medical	- Minor
Military/aerospace	- Minor
Mobile phones	- Minor
Office/business automation	- Minor
Retail automation	- Minor
Telecom/datacom	- Minor
Other	- Minor

Strategic Partnerships and Joint Alliances

Sparx Systems' partners include AccuRev, Progress Software, RaQuest, X12, Swinburne University, tassc, Zicom Mentor, and Tangible Architect.
The company is a contributing member of the Object Management Group (OMG). Sparx Systems is also a VSIP Premium Marketing Partner.

VDC Notes

In September 2006, Sparx Systems partnered with Real-Time Innovations (RTI) to integrate Sparx Systems Enterprise Architect and RTI's Data Distribution Service (DDS). Sparx Systems has sold over 100,000 Enterprise Architect licenses in more than 60 countries.
Sparx Systems maintains relationships with over 230 partners.

Within the Volume IV: Embedded Design Automation and Simulation Tools report, VDC offers several strategies for commercial software modeling tools suppliers in the embedded market to effectively compete within this emerging UML space. In addition to software modeling tools such as UML, this report also includes analysis of other modeling and simulation technologies in current use within embedded development, many of which have seen more steady commercial revenue growth.

About Sparx Systems

Sparx Systems is a software development company specializing in high performance, highly productive and scalable visual tools for the planning, design and construction of software intensive systems. With customers in industries ranging from aerospace and automotive engineering to finance, defense, government, entertainment and telecommunications, Sparx Systems is a leading vendor of innovative solutions based on the Unified Modeling Language (UML) and its related specifications. A Contributing Member of the Object Management Group (OMG), Sparx Systems is committed to realizing the potential of model-driven development based on open standards.

The company's flagship product, Enterprise Architect, has received numerous accolades since its commercial release in August, 2000. Now at version 6.5, Enterprise Architect is the design tool of choice for over 100,000 registered users in more than 60 countries world wide.

For further information about Enterprise Architect visit http://www.sparxsystems.com or contact:

General Enquiries: sparks@sparxsystems.com

Support Enquiries: support@sparxsystems.com

Sales and Purchase Enquiries: sales@sparxsystems.com

About VDC

Venture Development Corporation (VDC) is an independent technology market research and strategy consulting firm that specializes in a number of embedded, datacom/telecom, component, industrial, RFID, AIDC, and defense markets. VDC has been operating since 1971, when graduates of the Harvard Business School and Massachusetts Institute of Technology founded the firm. Today, we employ a talented collection of analysts and consultants who offer a rare combination of expertise in the market research process; experience in technology product and program management; and formal training in engineering and marketing. VDC's clients include thousands of the largest and fastest-growing technology suppliers in the world and the most successful investors participating in the markets we cover.

For further information about the "Volume IV: Embedded Design Automation and Simulation Tools" report or any other VDC service, contact:

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