

BPM TECHNOLOGY SPECIAL

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Geoffrey Sparks
Founder & CEO

Sparx Systems:
Mastering Enterprise
Processes through
Agile Modeling Tools

Sparx Systems : Mastering Enterprise Processes through Agile Modeling Tools

By Shashikanth Peetla

Business Process Modeling captures the pulse of an enterprise: building maps of the thousands of activities that daily transform information and materials in ways that relentlessly drive a company forward. People, IT equipment, suppliers and communications channels are evaluated on how well they participate and facilitate the execution of a process. Imagine what the power of visualizing each of these interacting entities and their interdependencies in real time can do to process management. Bringing such an advantage to the fore for over two decades is Sparx Systems—delivering tool suites that not only capture dynamic process information, but also show it in visually enriching ways.

“Sparx Systems grew out of my desire to build effective visual modeling and design tools whilst at university during the early 1990’s,” says Geoffrey Sparks founder and CEO, Sparx Systems. He first started developing process mapping tools for gaming software development and became strongly aware of the need for tools that supported process development and architectural design.



Architectural modelling imposes a structured methodology on the planning and development process. It constantly forces the team to align architectural design and resource allocation to the underlying business requirements. It keeps everyone on the path

Geoffrey Sparks,
Founder & CEO

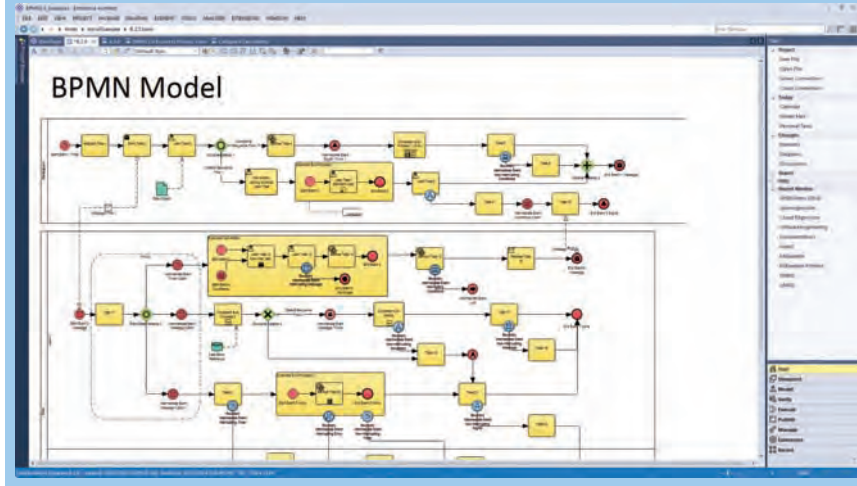




As a tool vendor Sparx Systems is focused on providing high precision modeling and design tools that match the needs of consultants, trainers and industry in general

Geoffrey, exploited the custom extension features of UML, the general-purpose modeling language, repurposing process design software to suit different aspects of product development. “I utilized it to add extensions to support the broader effort of defining business processes, requirements, project management, testing and other necessary facets of a fully integrated enterprise wide model that in turn gave birth to our flagship offering—Enterprise Architect,” remarks Geoffrey.

Enterprise Architect helps flesh out the descriptive power of visual modeling through use case and requirements models, activity graphs, state machines and similar visual models. Also, by incorporating BPMN (Business Process Modeling Notation), a graphical representation for specifying business processes, Enterprise Architect provides both a rigorous visual language plus the capability to generate fully executable models. “With the emergence of BPMN as a high-fidelity BPM language, the ability to unambiguously define and support direct execution of process maps in the processing engine became a reality,” says Geoffrey. Along with UML and BPMN, Enterprise Architect also supports open standards such as SysML, and frameworks such as TOGAF, ArchiMate



and UPDM. “I am strongly committed to the development and implementation of common, well understood modeling languages that enable disparate domains to communicate and integrate their specific processes and architectures into a single, well understood platform,” declares Geoffrey. Based on open standards and proven best-practice, Enterprise Architect can comfortably scale from small, single-user models to large team-based repositories and even to globally distributed Cloud based solutions.

Enterprise Architect—redefining business process modeling

Enterprise Architect, an integrated modeling, design and construction platform always sought to tightly couple the definition, construction, management, accountability and verification of modeling and design artifacts in an agile and transparent platform. It encourages and supports both the specification of business processes, and the software and architecture that implement these processes. “I believe the most important innovation we have implemented internally is the total commitment to use Enterprise Architect to the maximum extent possible to model, build, profile, test, manage and deliver our software product line,” states Geoffrey. “It also means continual refinement and evolution of the Enterprise Architect

platform to better support the needs and requirements of the modern, agile company,” he adds.

Supporting the modeling of enterprise architectures, software and hardware systems, as well as many other aspects of the modern business environment, the Enterprise Architect platform allows business process diagrams and models to exist within the more global context of the architectural and systems environment. Agile development provides a shared and flexible team experience through complete transparency, iterative development and constant feedback, and “it has been the essential design goal of Enterprise Architect for over a decade and it will remain just as valid today,” says Geoffrey. Also, Enterprise Architect's shared storage capability helps to capture and review information in many different forms, ensuring there is no waste or confusion. Providing this level of traceability and context reveals the reach and effect of both individual and co-operative processes that touch the enterprise on many levels. “Business process models should not exist in isolation but contribute to and draw from the broader strategic, architectural, systems and software models that make up a functioning enterprise—Enterprise Architect is such a shared modeling and design platform,” remarks Geoffrey.

Delivering key competence to the clients

The Port of Melbourne which handles majority of exports for Victoria, a state in the south-east of Australia faced operational challenges in handling a large number of shipping vessels. The Victorian government wanted a seamless system for freight and logistics management to generate major efficiency gains and reduce freight congestion in and out of the Port of Melbourne. The State then engaged a Sparx Global Partner, an Australian professional services and software organization to build an Enterprise Architecture model of the Port of Melbourne Supply Chain. The model was to enable organizations operating within the Port of Melbourne network to provide a clear picture of how they could improve interactions with supply chain participants and reduce the number of assumptions about processes and information that flows throughout the supply chain.

Sparx System's Enterprise Architect was selected as the UML Tool by the partner for the Port of Melbourne Supply Chain Model. Developing an Enterprise Architecture framework traditionally has been a time consuming and costly affair, by using Enterprise Architect, they were able to develop an Enterprise Architecture Framework within months, rather than years, and in doing so realized a significant cost reduction for the state of Victoria. Furthermore, it has allowed the Port of Melbourne to understand and analyze the business processes in its jurisdiction, and therefore identify and prioritize areas requiring process improvement. “The en-



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terprise model developed in Enterprise Architect laid the foundation for improved understanding of the business landscape,” extols Geoffrey. “The Model is the first of its kind to be publicly available, and is currently being distributed to industry and education institutions across Australia, to identify opportunities for business process improvement,” he adds.

Similarly, Enterprise Architect is widely used across many sectors including finance, defense, government, automotive engineering, geospatial and others. “Many of the Fortune 100 companies use our product. The software has an installed base of 350,000, supported by 230 partners in 160 countries,” promotes Geoffrey. Also, Gartner has recognized Sparx Systems in its 2014 Magic Quadrant for Enterprise Architecture Tools report for the fifth successive year.

The ability to understand a problem, create and share solutions and proof it through simulation by transforming one logical representation into another, is fundamental to Enterprise Architect. “This provides the necessary flexibility and expressiveness needed to meet challenges that are yet to materialize,” says Geoffrey. In the coming years Sparx Systems imagines new tools and information processing capabilities that further support the transformation of models into executable form. “We are also developing new business processes and behaviors to address the increasingly 'data driven' world,” he concludes. CR

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20 Most Promising BPM Technology Solution Providers

The buzz across industry is Data. Every organization, irrespective of the sector, has accumulated wealth of data. Traditional computers are unable to process such large amount of data as the computing power of these systems takes too long to answer questions pertaining to research or astronomical calculations or engineering designs. Apart from this, enormous amount of data brings along complexities such as storage and security which need to be addressed effectively and efficiently. The area that specifically focuses on increasing the computational speed in order to address these issues is High Performance Computing. The IT industry is already making strides to avail HPC a cheaper reality for the companies and organizations. According to Computerworld 2015 Forecast Study, 22 percent of IT spending in 2015 will be towards High Performance Computing. HPC ecosystem has already seen influx of revenue from \$2 billion to \$21.9 billion in the past two decades.

For organizations that are already using traditional, resource extensive High Performance Computers in terms of power, cooling and real estate, there are companies working towards replacing these exhaustive systems and provide cheaper alternatives without compromising the efficiency. The emphasis is on providing a robust solution that stands test of time. Moreover, the non-IT industries and labor intensive industries require simulators to build models that provide accurate prediction based on the historical data.

In our selection, we looked at vendor's capability to provide technology solutions to streamline operations in a faster, less resource consuming manner, while keeping the costs under control. A distinguished panel of CEOs, CIOs, CMOs, VCs, analysts, and the CIO Review editorial board has selected top players from over three hundred companies.

We present to you CIOReview's 20 Most Promising High Performance Computing Technology Solutions Providers.

Company:
Sparx Systems Pty Ltd

Description:
Sparx Systems specializes in high performance and scalable visual modeling tools for the planning, design and construction of software intensive systems.

Key Person:
Geoffrey Sparks,
Founder & CEO

Website:
sparxsystems.com



Enterprise Architect 12

Release Highlights

(Note: The following list is an overview of major changes in version 12. A more detailed list can be found at sparxsystems.com/ea12)

NEW Total User Interface theming

For a personalized look and feel. Choose from over a dozen elegant and individual theme styles, from light and airy white styles through to dark and mysterious. Includes ability to hide all menu icons for a clean look. Also supports automatically using dark source code syntax highlighting for dark themes. (View/Visual Styles/Select Visual Style)

NEW Portals window

A major new feature in Enterprise Architect 12. Provides rapid and focused access to many common and many advanced features. Access to open and recently closed documents, searches, common functions, workspaces, perspectives, working sets and much more. A new and indispensable tool for navigating and building models. Access to Portal pages is also available by clicking on the Start Page icons associated with each page. (View/Portals)

NEW Navigator bar

Provides Windows Explorer like access to your current position within the model. A minimalistic alternative to using the Project Browser or simply to keep track of your current location. Also includes a Package Finder, Portals shortcut menu and menu access to many common package based functions. (View/Navigator)

NEW Database Engineering toolset

Including Database Builder window and new Datamodel pattern. Supports construction, exploration, differencing, query, DDL generation, Alter DDL, import and merge in a database centric fashion. (Tools/Database Builder) and (Package/New.../Database::Database Engineering)

NEW Wireframing Support

Comprehensive and detailed support for wireframing a huge range of common devices and implementation scenarios using custom drawn graphics. Web, Apple, Android and more. (New Diagram/Wireframing/<selecttype>)

NEW Schema Composer

Quickly and effectively build XSD and other schemas from a selection of elements within the model. Currently targets UN/CEFACT, UBL, CIM, NIEM and generic XSD, OWL and other formats. (Tools/Schema Composer)

NEW XSLT Debugger

Full support for working with XSLT documents, including execution and single stepping. Comprehensive properties and integration with Enterprise Architects visual analysis tools. (Tools/XSLT Debugger)

NEW XML and XSD Editing and Validation

New support for viewing the structure of XML and related documents and for editing and navigating those documents. XSD intellisense support. Also includes new support for validating XML documents using XSD.

NEW Default Document Handler

Support for many common types. Provides the ability to use inbuilt source code editor as the default Windows editor for source code, text, XML, XSD, RTF and other types commonly supported by Enterprise Architect. On launch from Windows by double clicking an open instance of EA will be prioritized; if none exists a new instance is started. (Tools/Options/Source Code Engineering/Code Editors/File Associations)

NEW "Package" main menu

Provides focused access to major functionality associated with Packages. Allows the Project menu to be more tightly focused on Project level functionality.

NEW Package Navigator windows

Replaces the old package browser window. Integrates a custom Navigator bar into each window and allows multiple instances to be open. Supports View as List and View as Gantt. Quickly navigate the project package structure without using the Project Browser. (Package/View as List -- Package/View as Gantt)

NEW Support for XMI merge using Baseline Merge sets

Provide the ability to selectively merge sets of changes in a multi-user environment. Each user must supply both an XMI of their current work, plus a Baseline merge file detailing how their XMI differs from the original. Only the listed changes are merged and all other changes to the Master package remain untouched.

NEW Visual Studio Link and Eclipse Link

Now built in to Enterprise Architect Professional and above. Tighter integration with the built in Visual Analyzer tools, including automated creation of VEA Build scripts based on the Visual Studio Project configuration etc.

NEW Element Types

Including Checklist (Artifact) and Project Management Types (Backlog, Event, Milestone, Meeting, Phase, Risk, Sprint, Version) Available as a new diagram type "Project Management"

REDESIGN Common Property dialogs

Redesigned to provide a better user experience and more efficient use. Dialogs changed include the main element property sheets, new model from pattern, relationships, operation and attribute dialogs, and the merging of the table attributes and constraints property sheets into one common dialog.

REDESIGN Start Page

New more effective and attractive Start Page, including rapid access to principal Portal pages via specialized icons.

REDESIGN Main Menu

A major overhaul of the main menu structure to provide better and more effective access to both existing and to new tools. Also included is the ability to turn off main menu (and Portal) icons for a cleaner and less cluttered look. (see View/Visual Style/Select Visual Style :: Show Menu Icons)

REDESIGN Element Maintenance and Project Management

Docked windows split into their component windows so they can be docked in a wide variety of layouts. Added additional maintenance types: Decisions and Events. (Element/Maintenance)

REDESIGN Test window

Modified to better show all current tests on an element. (Element/Testing)

About Sparx Systems

Sparx Systems specializes in high performance and scalable visual modeling 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 12, Enterprise Architect is the design tool of choice for 350,000+ registered users world-wide.