

Journal of
Enterprise Architecture

August 2009 | Volume 5, Number 3

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A quarterly publication of the Association of Enterprise Architects
An International Forum for Enterprise Architecture

Review of Enterprise Architect 7.5

In a similar vein to last quarter's "Architect's Toolbox" column where David Rice reviewed *Essential Architecture Manager 1.0* I have chosen a tool for this issue's column that tends to attract interest due to its affordability. At US \$135-\$998, I have often had students in my EA classes ask "Have you ever heard of Enterprise Architect?" even when the economy was good.

Tool Overview

Enterprise Architect 7.5 is a UML based tool from an Australian company. The company website does a very good job of providing information on the tool, other reference resources, and is set up for what seems to be the primary method of acquiring the software: web purchase and download. Regarding UML suitability for enterprise scale architecture and business modeling, the Object Modeling Group states that "*the objective of UML is to provide system architects, software engineers, and software developers with tools for analysis, design, and implementation of software-based systems as well as for modeling business and similar processes.*"¹ Sparx Systems positions *Enterprise Architect 7.5* as an all in one tool for business, software, and real time systems.

Installation, Setup, and Overall Architecture

A fully enabled 30-day trial version of the tool is available from the website home page, with the minor exception that diagrams printed and reported from the trial version contain a watermark.

Download of the trial software and installation took approximately five minutes. One nice feature of the tool is that a help window with a user guide page appeared when the tool was first started, along with a "Getting Started" and a "User Tutorial" link in the initial screen of the tool.

The tool offers a number of different editions (with different price points) in both 'Standard'

and 'Suite' options. The Standard group includes the Desktop, Professional, and Corporate editions and the Suite group includes the Business & Software Engineering, Systems Engineering, and Ultimate editions (in ascending order of price). Sparx Systems also provides something called EA Lite, a free read-only edition.

While this review is focused on the Business and Software Suite Edition (US \$599), each time the trial version is opened, the user is allowed to select which edition they would like to try.

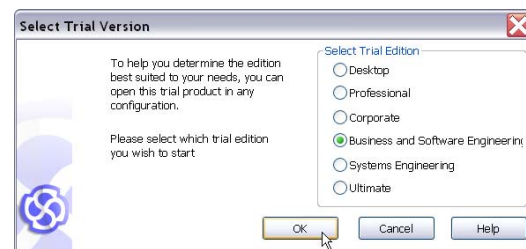


Figure 1. Trial Version Edition Selection Dialog Standards Support

While *Enterprise Architect 7.5* is primarily a UML modeling tool, there are a number of other notations supported, as well as three EA frameworks with the purchase of the MDG (Model Driven Generation) Technology. The supported standards are:

- UML 2.1
- BPMN 1.1 and BPEL (Business and Software Suite edition only)
- Added cost "MDG Technology"²
 - DDS (Data Distribution Service)
 - DoDAF-MODAF
 - SysML
 - TOGAF
 - Zachman

Integration/Interface Capability

Enterprise Architect 7.5 has a number of interfaces, mostly focused on requirements

¹ OMG's Unified Modeling Language™(OMG UML), Infrastructure, Version 2.2, February 2009

² Only available with the Suite Editions

management and software development. None of these were tested for this review.

MDG Technology Integration and Link for:

- Visual Studio
- Visual Studio .NET
- Eclipse
- TcSE
- DOORS

Reporting Capability

There is an easy to use RTF and HTML reporting capability that allows the architect to quickly move the models out of the tool for read only consumption. In addition, Sparx distributes EA Lite to allow read only access to the models.

Overall Impressions

Many of my recent consulting projects have been in the business architecture space, and as a result one of the things that I look for in an EA tool is the ability to capture architecture data at the higher levels of abstraction (strategy, business functions, high level systems engineering) along with the IT and software development lifecycle artifacts that many EA tools focus on. Therefore, I was pleasantly surprised to find the default Business Process model to include Business Context, Strategy, Stakeholder, and Topology ('node') packages beyond the traditional process model diagrams. These four types of packages easily lend themselves to the more abstract business architecture perspective. The one type of package that does not seem to be contained 'out of the box' is a business function hierarchy, although I suppose some creative use of the process model diagrams could mitigate that.

In addition, each default package includes a diagram that is pre-populated with basic information on the diagram describing what its intended purpose is, and the basic object types that each diagram includes. As someone who does not use UML as often as other notations, I found this to be very useful and to also to take some of the mystery out of how to set up the UML packages and models from the business perspective.

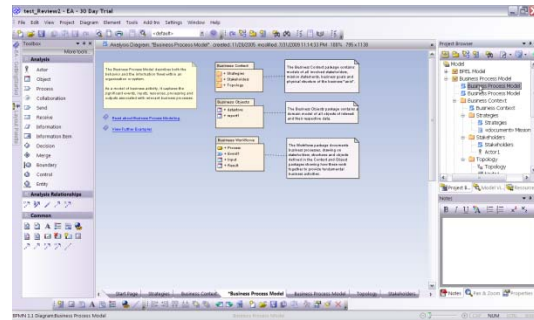


Figure 2. Default Business Process Model with Purpose and Object Descriptions

A minor quirk that I found was that business process diagrams defaulted to a generic, non-UML or BPMN diagram type. This was a little confusing at first, but I was able to quickly find the way to add the BPMN diagrams to the Business Process Model Package.

One of the interesting things I noticed when creating a basic business process diagram is that part of the metadata of each object is a section to capture requirements. While I suspect that a requirements management tool would be useful in large or complex effort (and *Enterprise Architect* does have a DOORS link, although not tested for this review), having an out of the box place for requirements is a nice feature in an architecture tool (see Figure 3).

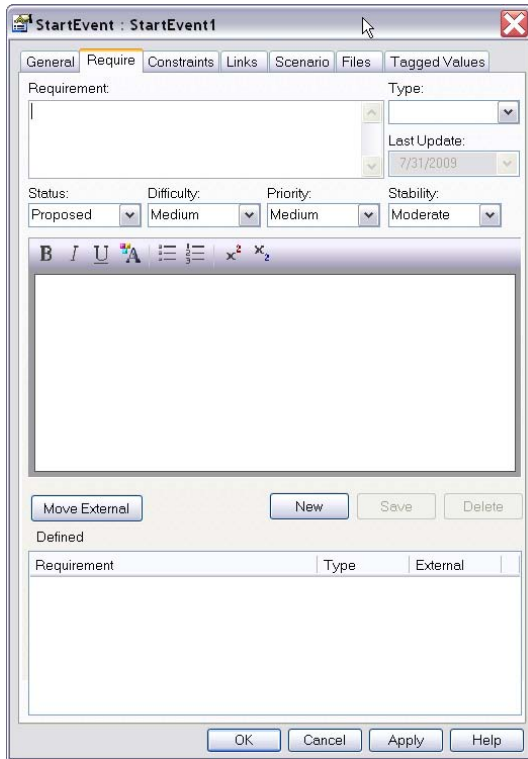


Figure 3. Requirements Capture Within Architecture Objects

Another very nice feature exists within the drawing space. Notice the three icons to the right of the selected BPMN activity in Figure 4. The arrow is a 'quick link' tool that allows the user to easily connect existing elements, or to create and connect new elements. A floating menu assists with object selection. The second icon, a paint brush, brings up a floating menu to edit the font, color, etc of the associated element. The third icon, a magnifying glass, is not a zoom, but allows the user to select a number of options to look at the details of the object.

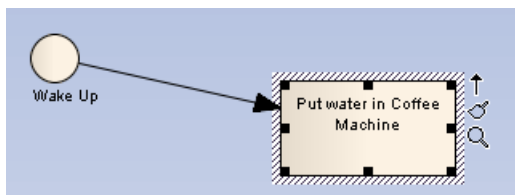


Figure 4. Object Modeling Aids

While it is true that the primary focus of an EA effort is on the data captured in the architecture and it's relationships, an important aspect of elicitation and/or presentation of the architecture

is the 'drawing' interface. An easy to use interface facilitates thinking, and reduces a tremendous amount of effort on the architect's part.

Overall I found this to be an easy to use tool that actually does live up to the claim of being able to document the whole enterprise. While not having been able to fully 'stress-test' it at an enterprise level, it is certainly a viable option, especially to independent or smaller businesses that may not have a large EA tool budget.

Quick Scorecard: (0-4)

4	Overall Ease of Use
4	Coverage of EA Modeling Needs
3	Adherence to Model Standards
4	Automation of Model Build/Edit
4	Appearance and Readability of Models
4	Use of Model Data Internally
3	Use of Model Data Externally (interfaces)
2	Reports Included
2	Reporting Writing Capability
4	Stability
3	Use on a Large EA Program
2	Customizability
40	Total (out of 48)

0 = No Applicability; 1 = Poor;
2 = Fair; 3 = Good; 4 = Excellent

System Requirements

System Requirements for *Enterprise Architect 7.5* (30-DAY TRIAL VERSION)

- 70 MB Hard Disk Space
- 1024 * 768 or higher resolution display

Operating Systems Supported:

- Windows Vista
- Windows Server 2008
- Windows 2003 Server
- Windows XP Professional
- Windows XP Home
- Windows XP Media Edition
- Windows XP Tablet Edition
- Windows 2000 Professional
- Windows 2000 Server

About Sparx Systems Pty Ltd.

Sparx Systems was founded in 1996, and *Enterprise Architect* was first released in 2000. The Proprietary limited company (at least 1 shareholder and no more than 50 non-employee shareholders under Australian law) claims a worldwide user base of approximately 200,000

licenses. They seem to rely on Value Added Resellers (VARs) to provide consulting support (there are twelve in North and Central America), although they have an easily findable and somewhat extensive whitepaper library along with an active discussion board.

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Tool Cost

Enterprise Architect 7.5 costs US \$135-\$699 per seat (1-4 seats), but reaches as low as US \$95 in volumes of 100+ seats. MDG Technology add-ons are US \$145-\$199.

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Ian Komorowski is a Senior Manager of Federal Architecture Requirements at Whitney Bradley & Brown Consulting (WBB) supporting Federal, Department of Defense, and commercial customers (www.wbbinc.com). He provides strategic advice on the development and use of enterprise architectures to improve executive decision making in capital planning, system acquisition, and business improvement. Additionally, Ian is an engaging instructor, and leads ½ day to four day courses that help students understand fundamental EA concepts, the frameworks that are used to organize architectures, and how best to use tools within an architecture effort. Ian also a regular guest lecturer at the MIT System Engineering Research Initiative (SEArI) and has spoken at the National Defense University. Contact Ian at ikomorowski@wbbinc.com.

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