Element Creator for Enterprise Architect

Disclaimer

The guidelines contained in this document are based on release 9.1.910 of Enterprise Architect. Version 1.0.x of the *Element Creator* add-in can be successfully deployed with EA version 9.1.x.

This deployment, as well as the guidelines included herein, may or may not be applicable to any earlier or later version of the tool as released by the vendor, Sparx Systems.

The 32-bit add-in has been successfully tested on Microsoft Windows XP (SP3) and on a 64-bit Windows 7 system.

If any problems are encountered with the installation or operation of this software please contact us through any of the channels listed at the bottom of this document.

Dependencies

The add-in depends on the following components being installed on the system:

- Interop.EA.dll (part of the standard Sparx installation files).
- Microsoft .Net Framework 4.0 (if missing, the installer will detect this and offer to automatically download and install the Framework).

Overview

The 1.0.x version of the *Element Creator* extension provides the ability to define new Requirements through a visual interface built-in to Enterprise Architect.

- This interface is non modal so all other EA interfaces can be used while the extension is active.
- The context for creating Requirements can be:
  - A single Package.
  - A Package hierarchy (the Requirement can then be added to any Package belonging to that hierarchy).
- The element name can be pasted in, entered manually, or extracted out of the Requirement's notes.
  - Optionally a name prefix can be specified for consistency (e.g. "The System shall").
- Requirement type, status, priority and alias fields can be quickly assigned.
  - The selected values are retained in between creations.
- A notes field is provided to easily capture the documentation for the Requirement.
  - The documentation can be added:
    - Manually.

- By copying and pasting out of Microsoft Word/RTF documents (or any other text management application).

- By dragging text from any application that allows it and dropping it onto the notes field!

  o All pasted or dropped text is automatically converted to RTF format. Text formatting (e.g. bold, underline, italic, text color) is maintained.

  - Note that Enterprise Architect only supports a limited set of text formatting options for compatibility reasons.

  o Any selected text in the notes can be swiftly appended to the name field.

  o Selected text can also be used as a search context to query the Repository for similarly worded Requirements. This feature helps to reduce duplicates.

  - All similarly worded Requirements are presented in a list which can be used to quickly locate them in the Project Browser, and/or edit their properties.

- Optionally external references can be added by:

  - Dropping files.

  - Dropping URL links.

- Also optionally, an RTF file can be dropped for automatic uploading as a Linked Document.

- Finally, after creation, the Requirement is automatically selected in the Project Browser to facilitate the entry of any additional information (e.g. tagged values).

Limitations

- The set of Requirement types presented by the extension interface is limited to those types defined in the "General Types" settings of the tool. Additional Requirement types defined by MDG Technologies or UML Profiles are not included.

- The automation API call that converts standard RTF to the more limited version supported by EA does not properly recognized some of the text formatting. For example:

  o Different font sizes in the text are ignored.

  o Bulleted and numbered paragraphs are not recognized as such.

If this is an issue, please let the vendor (Sparx Systems) know. As a work around you can manually copy and paste these text segments into the EA notes field after creation of the Requirement (i.e. as of version 9.1.x of EA the API implementation code does not work the same way as the code handling manual paste).

Installation

Exit any running instances of Enterprise Architect, then launch the "setup.exe" program provided by Cephas Consulting and follow the on-screen instructions.

The installation will attempt to update the Windows registry, so the User needs to ensure that s/he has sufficient privileges to run the setup program.
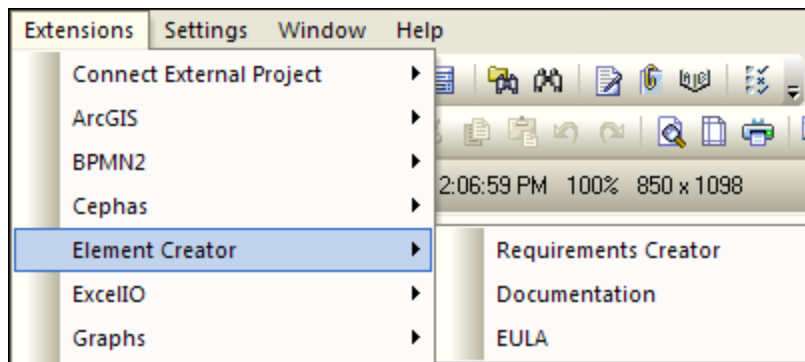
The recommended install path is to place the DLL and any supporting files in an "Addins" folder in the Sparx Systems installation directory (e.g. C:\Program Files\Sparx Systems\Addins).

Note that older versions of the software are automatically removed and replaced.

Should the installation fail for any reason other than insufficient User privileges, please take appropriate screenshots and email the data to the support address listed at the bottom of this document.
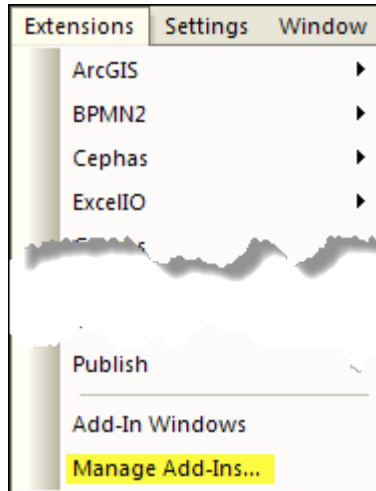
Verifying the installation

Bring up Enterprise Architect and verify that there is an "Element Creator" menu item under the Extensions menu:
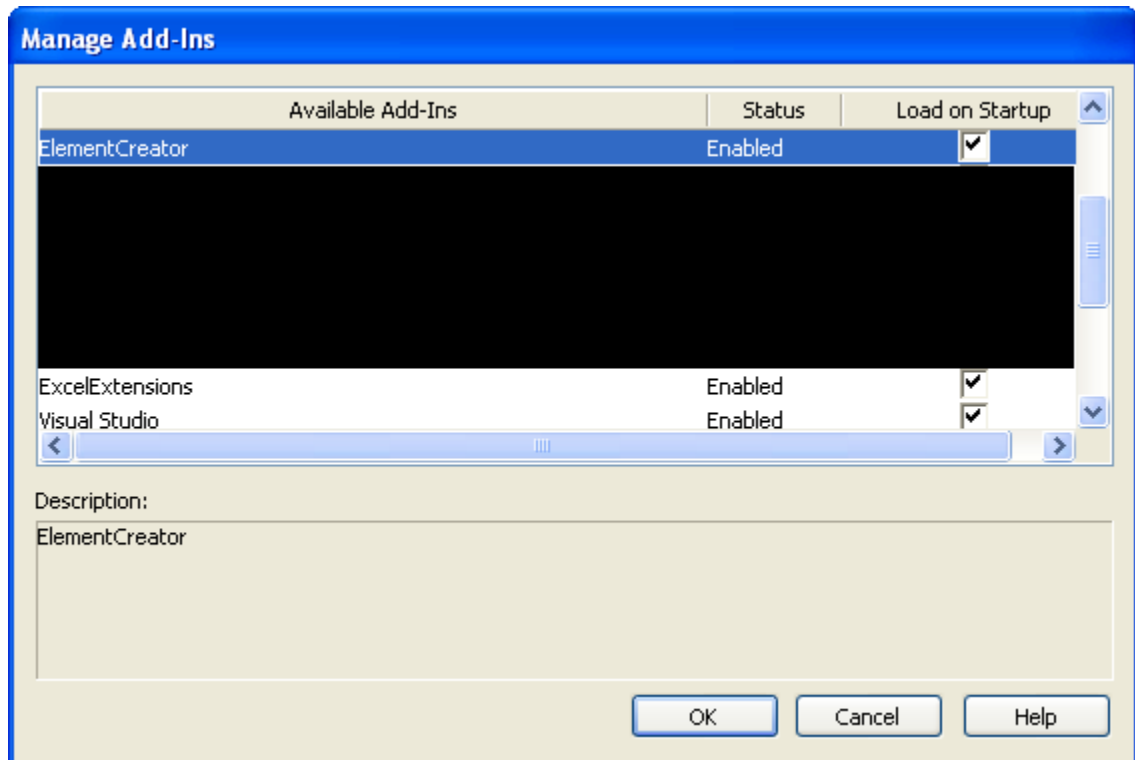

Other add-ins may be present as well, depending on your EA version and configuration. The content of the "Element Creator" sub-menu may vary depending on the selected context in EA (Package, element, diagram,...).

Should the menu entry not be present, select the "Manage Add-Ins" menu option:

And confirm that the "Element Creator" add-in is loaded and enabled:

If an error status is shown this typically means that either:

- The DLL installation process failed and EA cannot locate its reference, either in the Windows registry or in the file system.

- The installation did succeed but the DLL file was later moved or deleted.

If the "Element Creator" entry itself is not found then the add-in installation did not complete successfully.
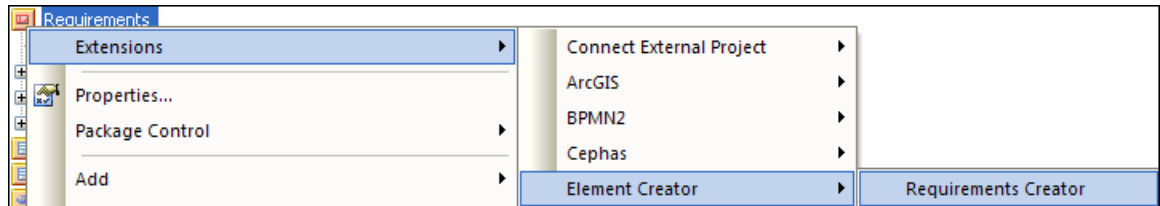
First try the "repair" option when re-installing or, if that does not resolve the problem, uninstall the current version manually and re-install from scratch.

At a minimum the following files should have been installed in the selected installation directory:

- Cephas_Software_EULA.pdf
- Element Creator.pdf
- EA.TLB
- Interop.EA.dll
- ElementCreator.dll

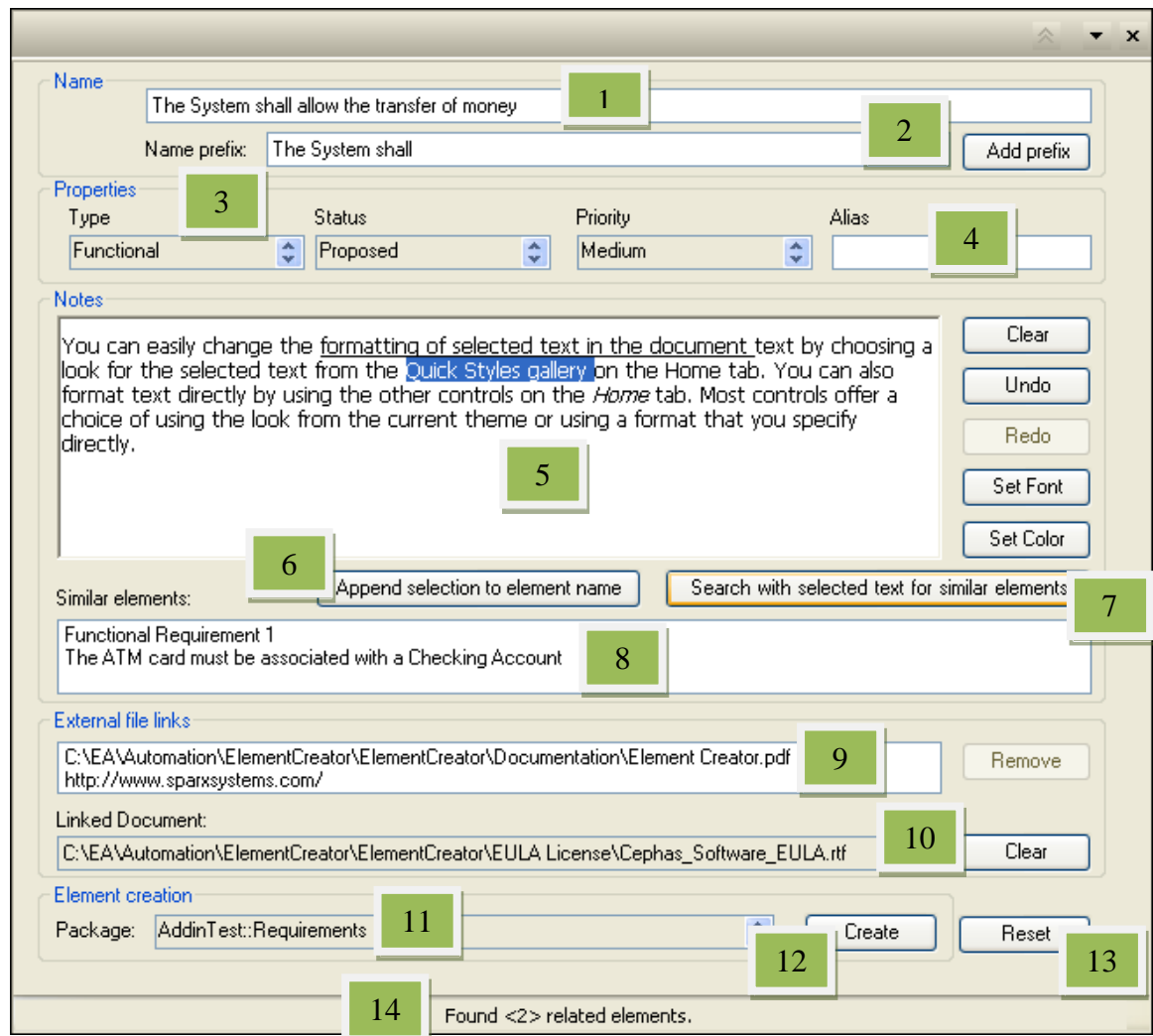## Creating Requirements through the extension interface

Currently the only context that can be used as a basis for Requirement creation is a Package selected in the Project Browser:

If the selected View/Package contains child Packages an option will be presented later (at Requirement creation time) to select the specific parent Package from the hierarchy.

The following extension interface, residing inside the diagram frame of the tool, is then presented:

User actions:

Action	Description
1.	Paste the name of the Requirement, enter it manually, or set it from a text selection in the notes box (see Action 6 below). Only plain text is supported in the name field. Note that if EA has been configured (in Settings → Auto Names and Counters) to automatically assign a number to the Requirement name then the name field will be disabled.
2.	Optionally define a consistent name prefix (e.g. "The System shall") for the new Requirements and click the *Add Prefix* button to insert it into the name field.
3.	Select the Requirement's type, status and priority values from the dropdowns presented. The up and down arrow keys can be used to rotate through the values.

4.	Optionally enter an alias for the Requirement. Note that if EA has been configured (in Settings → Auto Names and Counters) to automatically assign a number to the Requirement alias then this field will be disabled.
5.	Manually enter the documentation for the Requirement, or copy and paste it from an external source (including EA), or simply drag the text from any source that allows it and drop it onto the Notes box. Plain text, or any text that can be converted to RTF is accepted. The text will be dropped at the current insert point. Use the *Clear*, *Undo* and *Redo* buttons as needed. It is assumed that proper text formatting will have occurred in the source document, but *Set Font* and *Set Color* buttons are provided for additional formatting needs.
6.	Click this button to append the text segment selected in the Notes box to the name field.
7.	Click this button to search the repository for Requirements in which the text segment selected in the Notes box can be found. The add-in uses the standard EA "Requirements" search definition for this purpose. Any Requirements matching the search criteria are added to the "Similar elements" list box (see Action 8).
8.	Single click any Requirement presented in the list to locate it in the Project Browser, or double click it to open its standard EA property sheet.
9.	Optionally drag and drop any external files that need to be associated with the Requirement into this list box. Additionally paste or drop any URL hyperlink (i.e. any text string starting with "www" or "http"). These links will be added to the Requirement upon creation.
10.	Optionally drop an RTF file to be uploaded as a Linked Document of the Requirement.
11.	If the context Package contains child Packages, the entire hierarchy will be presented in this dropdown. You can use the arrow keys to quickly rotate through the list and select the Package into which the next creation should occur.
12.	Click this button to create the new Requirement. If the name field is not disabled (see Action 1) then a value must be assigned to it before the button is enabled.
13.	*Reset* can be used to quickly clear out the current name, notes, similar elements, external links and linked document fields of the interface. Note that other values such as Requirement type, status and priority are retained in between creations.
14.	Watch this status bar for any User feedback messages!

To exit the interface, simply close it like any other EA diagram.

Support and contact information

Use the contact information below for any installation or runtime issues with the add-in. Feature requests or suggestions for improvement are also welcome!

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