

# Webinar “Fundamentals of Model-Based Systems Engineering”

## Questions and Answers

**1. What change management tools can your products interface with?**

All our products can be integrated with Teamwork Server (TS), and as of version 18.3 – with Cameo Enterprise Data Warehouse (CEDW). Both servers are No Magic products as well.

For more information about TS, see <http://www.nomagic.com/products/teamwork-server.html>.

For more information about CEDW, see <http://www.nomagic.com/products/cameo-enterprise-data-warehouse.html>.

**2. Rather than copy-pasting requirements, is it possible to link to an MS Excel spreadsheet or a DOORS database?**

Yes, it is possible to import requirements from Rational DOORS into Cameo Systems Modeler project and keep them synchronized later on. For this, you must have another tool installed – Cameo DataHub.

For more information about the data synchronization, watch the demo on YouTube –

[https://youtu.be/w12dprJkT\\_0?t=0s](https://youtu.be/w12dprJkT_0?t=0s).

For more information about Cameo DataHub, see <http://www.nomagic.com/products/cameo-datahub.html>.

Linking requirements to MS Excel spreadsheet is not possible, but you can re-import (copy-paste) them as many times as you need and track changes. After re-importing the requirement that already exist in the model, its properties are updated, without removing any relations this requirement has in the model.

**3. Should the requirements package always be a standalone package?**

There is no such rule, but keep in mind that packages help organizing model elements in order to make the model coherent and well formed.

**4. How can I use MBSE in system design optimization?**

System design optimization can be performed by analyzing system parameters specified in SysML model by means of SysML parametric analysis or behavioral simulation. Simulation takes different variation sets of these parameter values to calculate the values of target (countable) parameters and verify them against system requirements. A set of parameter values that best satisfy system requirements can be regarded as optimal configuration of system design.

**5. What about specifying *partial* traceability between requirements and design elements? For example, is it possible to specify that certain design element partially satisfies the requirement?**

Yes, it is possible, though requires a little effort. Partial satisfy is not a predefined type of relationship, so you must create it yourself by means of DSL engine supported in Cameo Systems Modeler/MagicDraw.

For more information on creating DSL elements, see

<http://www.nomagic.com/files/manuals/MagicDraw%20UMLProfiling&DSL%20UserGuide.pdf#G6.1>

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**6. How can I use MBSE in tracing requirements?**

Requirements can be traced by analyzing standard SysML relationships that relate requirements to one another or to other model elements. Relationships, such as containment, define the hierarchy of requirements; relationships, such as refine, can help to discover model elements that refine or are refined by requirements; relationships, such as satisfy and verify, enables to find out what design elements and test cases cover relevant requirements.

Cameo Systems Modeler/MagicDraw allows creating all standard SysML relationships and performing change impact analysis, coverage analysis, etc.

Find more information about standard relationship types in the blog post at

<http://blog.nomagic.com/modeling-requirements-with-sysml/>.

Also, watch the demo about tracing requirements on YouTube – <https://youtu.be/iX7AhNvKcCk>.

**7. Can you explain the difference between architecture frameworks and methodologies?**

Enterprise Architecture framework (EAF) tells the modeler which artefacts of the enterprise architecture model he/she should produce and when. However, it is not enough to create the model, because the framework (even detailed enough) won't tell the modeler how to produce specific artefacts according to the process. It is a common situation that two models created by different modelers, who use the same EAF, lack consistency. This happens because of different thinking, different choices made even using the same framework. This implies using the framework in combination with some methodology.

Methodology is a set of principles, tools and practices which can be used to guide processes to achieve a particular goal. It allows performing activities in a coherent, consistent, accountable, and repeatable manner. There are many methodologies, each with its own strengths and weaknesses. Every organization choose the methodology according to its own needs.

Shortly speaking, the frameworks is 'what' the enterprise is aiming for, and the methodology is the 'how', which includes methods, tools, etc.

Nowadays, there is a countless number of EAFs, and some of them, such as MODAF, DoDAF, and NAF for defense industry architecture as well as TOGAF and Zachman's for enterprise architecture, are supported in Cameo Systems Modeler/MagicDraw + UPDM Plugin.

No Magic is also working on the universal approach for systems engineering – the MagicGrid solution, which includes both the framework and methodology. For more information about it, watch the demo on YouTube - <https://youtu.be/KMwl44aK8f0>.

**8. Does MagicDraw/Cameo Systems Modeler provide a template for showing a model in a specific framework view? For example, a specific DoDAF view.**

Templates that predefine model structure according to specific framework, such as DoDAF, MODAF, NAF, TOGAF, and Zachman's, are available in another No Magic product – Cameo Enterprise Architecture (CEA). They are also available in MagicDraw, if UPDM Plugin is installed together. For more information about CEA, see <http://www.nomagic.com/products/comeo-enterprise-architecture.html>.

Standalone MagicDraw includes several templates as well. These predefine structure for Scrum model, use case model, model from the source code, etc.

9. **Can I update the file attached to the project?**

Yes, you can. After opening the file (simply by double-clicking), you can either review, or modify its contents. When closing the modified file, you'll be asked whether you wish to save or discard the changes you've made.

Find more information at

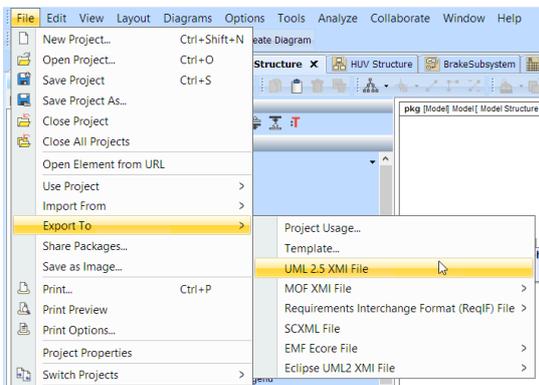
<http://docs.nomagic.com/display/MD184/Working+with+attached+files#Workingwithattachedfiles-Modifyingthecontents>.

10. **Does Cameo Systems Modeler support both heavy-weight (meta-level) extensions and light-weight extensions (stereotypes)?**

Yes, it does. You can create both stereotypes and Domain Specific Language (DSL) elements as well as customize standard ones.

11. **Is it possible to access the underlying model structure or export it in a readable format, for example, XMI?**

The underlying model structure can be accessed by using open API. It can also be exported to XMI, as shown in the following figure.



Moreover, if you want to export some specific information, but not the entire model (for example, classes only), you can do this as well. For this you need to create a custom template (with the help of Velocity Template Language (VTL)).