MagicDraw 18.0 release goals

• Integrate MagicDraw with the new Cameo Enterprise Data Warehouse technology
• Introduce new Cameo Requirements Modeler plugin (based on SysML) with basic requirements modeling capabilities
• Add Glossary support
• Analyze models using new metrics
• Increase modeling performance
• Support UML 2.5
• Enhance support for viewing inherited elements, scripting, and instances
Cameo Enterprise Data Warehouse integration (not publicly available yet)

MagicDraw-CEDW integration benefits:
• Fast project load, commit and update (lazy load support)
• RBAC support
NEW PLUGIN FOR MODEL-BASED REQUIREMENTS MANAGEMENT
Problem (1)

- Software engineers have Use Cases in MagicDraw to specify requirements

- Software engineers **WANT MORE**: 

  ![Diagram of use cases and processes]

  **Definitions**
  - Id = ""
  - Text = "Historical change - change which is detected between the ancestor and target ancestor or source ancestor.
  - Historical change - conflict between historical change and current change.
  - Current change - change which is detected between the target/source ancestor and active version."

  **Equivalent changes**
  - Id = "155.4.4"
  - Text = "These requirements describe how the equivalent changes should be used for the 4-way merge."

  **4-way merge for teamwork projects**
  - Id = "155.4.1"
  - Text = "These requirements describe the 4-way merge for teamwork projects when merge is called using the Collaboration->Merge From menu item."

  **GUI**
  - Id = "155.4.3"
  - Text = "These requirements describe the improvements for the Project selection for merge dialog and Merge dialog."
Problem (2)

1. Import user needs from DOORS
2. Refine user needs with lower level requirements
3. Perform impact analysis
4. Trace to processes, architecture, test cases
Product concept

SysML Requirements

ReqIF support

Cameo Requirements Modeler Plugin
New Value Propositions

- Easy startup and development
- Easily identify the scope and impact of a change
- Requirements Integration
- Automatically identify coverage gaps
- Improved support for metrics
- A new Web Portal for non-MagicDraw users
Easy startup and development
Easily identify the affects of changes

- Trace from requirements to other model elements of business, software, or systems architectures
Easily identify the affects of changes
**Requirements Integration**

- Cameo DataHub provides seamless integration with IBM DOORS and RequisitePro
- Import requirements in a standardized ReqIF file from other requirements management tools, such as IBM DOORS 9.4 and 9.5, IBM DOORS Next Generation, PTC Integrity, Polarion, and Siemens TeamCenter
- Capture requirements in dedicated diagrams, matrices, and tables
- Customize the Requirements plugin and create new requirement types
Automatically identify coverage gaps

- Feedback gathering module
- Notification module
- Training management module
- Users management module

- Training organization system

- Manage user rights
  - Assign user a role
  - User details page GUI
  - Users page GUI
  - Columns visibility by roles in Training page
  - Create, edit, and remove user
  - Edit user details
  - Entering User details page
  - Get back to user page
  - Logging on page GUI
  - Notifications management GUI
  - Registration page GUI
  - Review user details
  - Subscription for notification
  - User rights by roles
  - User role set
  - User roles the system will use

- Manage users
  - Review users list
  - Review users list
  - Check criteria before registering participant
  - Register user for open enrollment training
    - Register for training
    - Confirm/Reject participation request
    - Reject request
    - Notification types
    - Requirements for each of notifications
    - Send participation request

- Users registration management module
  - Reject user request
  - Send request for participation

---

**Active Validation Results**

<table>
<thead>
<tr>
<th>Element</th>
<th>Severity</th>
<th>Abbreviation</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check criteria before registering participant</td>
<td>warning</td>
<td>Lack of Req</td>
<td>UseCase is not described in system requirements</td>
</tr>
<tr>
<td>Perform late registration</td>
<td>warning</td>
<td>Lack of Req</td>
<td>SubProcess is not described in high level requirements</td>
</tr>
<tr>
<td>Perform training</td>
<td>warning</td>
<td>Lack of Req</td>
<td>SubProcess is not described in high level requirements</td>
</tr>
<tr>
<td>Prepare for training</td>
<td>warning</td>
<td>Lack of Req</td>
<td>SubProcess is not described in high level requirements</td>
</tr>
</tbody>
</table>
Value propositions

- Improved support for metrics
  - Custom metrics
  - Coverage by design
  - Coverage by test cases
Value propositions

- New Web Portal
Process portal works in the new BMW 535 😊
NEW GLOSSARY SUPPORT
Glossary

- Define your terms in one place and later use them consistently in your project

<table>
<thead>
<tr>
<th>#</th>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Author</td>
<td>A user who has committed a new project version.</td>
</tr>
<tr>
<td>2</td>
<td>Comment</td>
<td>Optional description of changes in the committed version.</td>
</tr>
<tr>
<td>3</td>
<td>Project</td>
<td>A physical working unit that consists of model, model visualizations (diagrams, tables, matrices, etc.), configuration data, and references to other elements residing in modules.</td>
</tr>
<tr>
<td>4</td>
<td>Project category</td>
<td>Project category concept which enables visual grouping of projects in Teamwork Server repository.</td>
</tr>
<tr>
<td>5</td>
<td>Repository</td>
<td>A storage place for projects and their versions managed by the Teamwork Server.</td>
</tr>
<tr>
<td>6</td>
<td>Version</td>
<td>A unique number assigned to the committed project. Project version numbers begin at zero (for the initial version) and increase with every new project version.</td>
</tr>
</tbody>
</table>
A NEW APPROACH FOR MANAGING METRICS
New metrics support

With this new approach you can:

• Create metric suites
• Track your metrics over time
• Use parameters to calculate metrics
• Easily customize the presentation of the metrics in the Metric Table
Create custom Metric Tables

- Select "Analysis" from the top menu.
- Expand the "Containment" node in the tree view.
- Click on "Metrics" under the "Tools" menu.
- Choose "New Metric Table".
- Name the metric table "HSUVMetric Table".
- Set the metric table owner to "HSUVMetric".
- Select "Metrics Suites".
- Add "Reqs Satisfied by Blocks" with true.
- Add "Reqs Verified by TestCases" with false.
- Click on the metric table to view metrics.

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Scope</th>
<th>Requirements Count</th>
<th>Requirements Covered By Block Count</th>
<th>Requirements Covered By Block Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2014.02.05</td>
<td>HSUVM</td>
<td>18</td>
<td>1</td>
<td>5.56</td>
</tr>
<tr>
<td>2</td>
<td>2014.02.06</td>
<td>HSUVM</td>
<td>18</td>
<td>1</td>
<td>5.56</td>
</tr>
<tr>
<td>3</td>
<td>2014.02.06</td>
<td>HSUVM</td>
<td>18</td>
<td>2</td>
<td>11.11</td>
</tr>
</tbody>
</table>
Easy metrics definition
INTERFACE ENHANCEMENTS
Interface Enhancements

- Path layout
- Tab Browsing
- Creating diagrams
- Using shape compartments
- Shortcut menus
- Managing symbol properties
- Displaying inherited properties
- New Instance tables
- Improved support for scripting languages
- Document Modeling plugin
Path layout improvements

- Paths now avoid overlapping other symbols, substantially reducing the diagram editing to clean up the paths.
- Future enhancement to redraw paths when changing the size one of the connected shapes.
Tabbed browsing: analyze different aspects of the system in separate tabs

1. Open separate specification aspects of the system in separate tabs

- Domain Model
- Architecture
- Deployment

2. Double-click to navigate to the deeper structure - the diagram will open in the same tab

3. Navigate back or forward in each tab separately
Tabbed browsing: compare separate views of the system side-by-side

1. Compare separate views of the system side by side

Domain Model

Architecture

2. Double-click to navigate to the deeper structure - the diagram will open in the same tab
Tabbed browsing: smooth work with multiple screens

Double-click to navigate to the deeper structure - the diagram will open in the same screen.
Quick diagram creation

1. Click Create Diagram
2. Type text and press Enter
3. Choose the package that will own the diagram
Redesigned shape compartment management (1)
Redesigned shape compartment management (2)
Simplified shortcut menus

In earlier versions

- Specification Enter
- Symbol(s) Properties... Alt+Enter
- New Diagram
- Go To
- Refactor
- Tools
- Related Elements
- Select in Containment Tree Alt+B
- Stereotype
- Presentation Options
- Make Sub Tree
- Insert New Attribute Ctrl+Alt+A
- Insert New Operation Ctrl+Alt+O
- Insert New Signal Reception Ctrl+Alt+R
- Insert New Port

In 18.0

- Specification Enter
- Symbol Properties Alt+Enter
- New Diagram
- Go To
- Select in Containment Tree Alt+B
- Related Elements
- Refactor
- Tools
- Stereotype

No Magic

The Truth is in the Models™
Redesigned Symbol Properties (1)

Set individual element display options and/or
Specify the shape or path symbol properties. Also apply a style for the selected element(s). Choose the Expert or All options from the Properties drop-down list to see more properties.

Click to change properties visibility settings
Redesigned Symbol Properties (2)
Display of inherited members

• All inherited members, such as attributes and operations can be easily identified on an element's shape using the caret "^" notation.
**Instance tables**

Here is a table showing instances of different classifiers:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WN234CD</td>
<td>Boat</td>
<td>1999</td>
<td>Calbaria</td>
<td>8.7&quot;</td>
<td>M3060</td>
<td>1962</td>
</tr>
<tr>
<td>2</td>
<td>WN123AB</td>
<td>Boat</td>
<td>1977</td>
<td>Hanter</td>
<td>8&quot;</td>
<td>C1075</td>
<td>1975</td>
</tr>
<tr>
<td>3</td>
<td>Mark30</td>
<td>Engine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>K90</td>
<td>Engine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>350MagMPI</td>
<td>Engine</td>
<td></td>
<td></td>
<td></td>
<td>M30099</td>
<td>1999</td>
</tr>
</tbody>
</table>

- Non-editable cell represents intersection between instance and inappropriate column.
- Instances of different classifiers.
- Columns determined by different classifiers, for editing slot values.
Improved support for scripting languages

- Customizations can be defined in any of these scripting languages
  - JavaScript
  - Jython
  - JRuby
  - Groovy
  - BeanShell
- Use the languages for validation rules, derived properties, queries for smart packages, metric definitions, criteria for dependency matrices, and more.
The Document Modeling plugin is a technology preview.

We are soliciting feedback on the plugin.

Please contact us to share your insights.
No Magic, Inc.
The Truth is In The Models!