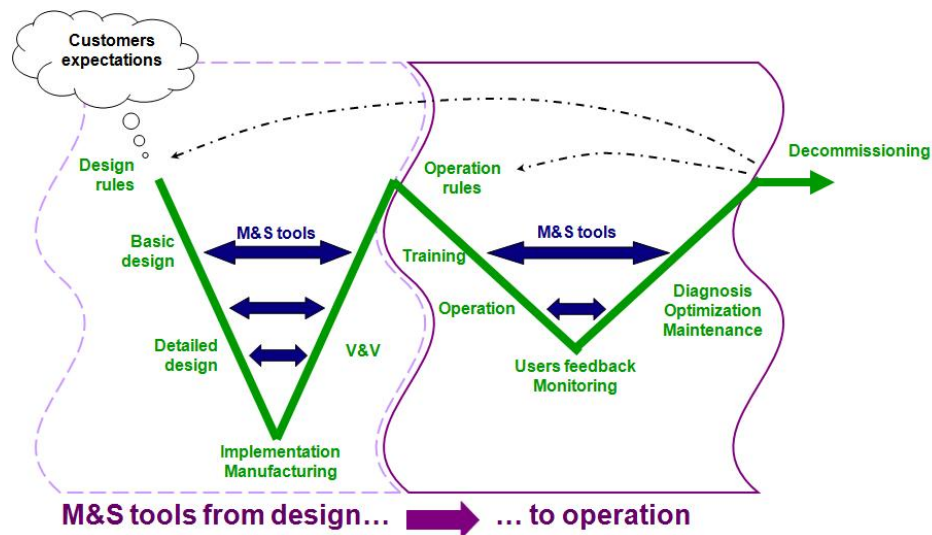




INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT



MODRIO

Deliverable 6.5.2 – M12

New version of the System Dynamic Tool

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Download



- New version of the tool can be downloaded from:
<https://www.simantics.org/simantics/download>

New Features

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- Simantics System Dynamics 1.7 – version number
- Forum
- Migration
- Text feed assistant
- OpenModelica
- Real-time display of errors/warnings
- Paste special
- Enumeration definitions for multiple variables
- Bug fixes

Simantics System Dynamics 1.7

.....

- Version number is 1.7, since the last version was 1.6
- Future versions will switch from numbers to names
 - Naturally version numbers will exist, but users do not need to see them
 - Changing a name will bring large and visible changes
 - Smaller changes are published with the same name

Simantics System Dynamics Forum

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- <https://www.simantics.org/sysdyn-forum/>
- No content yet :(

Migration

.....

- Models created with 1.6 version will migrate to 1.7 during model/module/function import

Text Feed Assistant

$\max(x, y)$
 $\max(e(i, \dots, j) \text{ for } i \text{ in } u, \dots, j \text{ in } v)$

Returns the largest element.

The first form returns the largest element of the scalars x and y.

The second form is a reduction expression and returns the largest value of the scalar expression $e(i, \dots, j)$ evaluated for all combinations of i in u, ..., j in v

Example:
 $\max(i^2 \text{ for } i \text{ in } \{3, 7, 6\}) // = 49$

- MyVariable
- minmax(expression, minimum, maximum)
- $\max(x, y)$
- $\min(x, y)$
- $\text{mod}(x, y)$
- $\text{matrix}(A)$
- $\max(A)$
- $\min(A)$
- $\text{MAX}(a, b)$
- $\text{MIN}(a, b)$
- $\text{MODULO}(a, b)$

Stock/M

=

0,75 0,80 0,85 0,90 0,95 1,00 1,05

Equation Indexes Additional Information

ables Functions

Variable

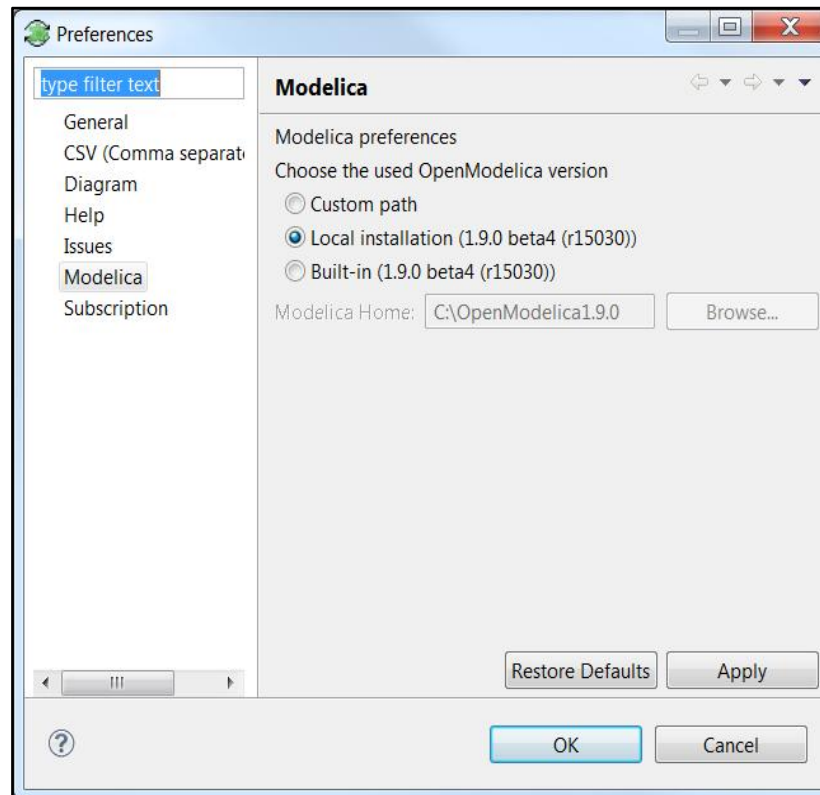
ck

Valve

time

OpenModelica

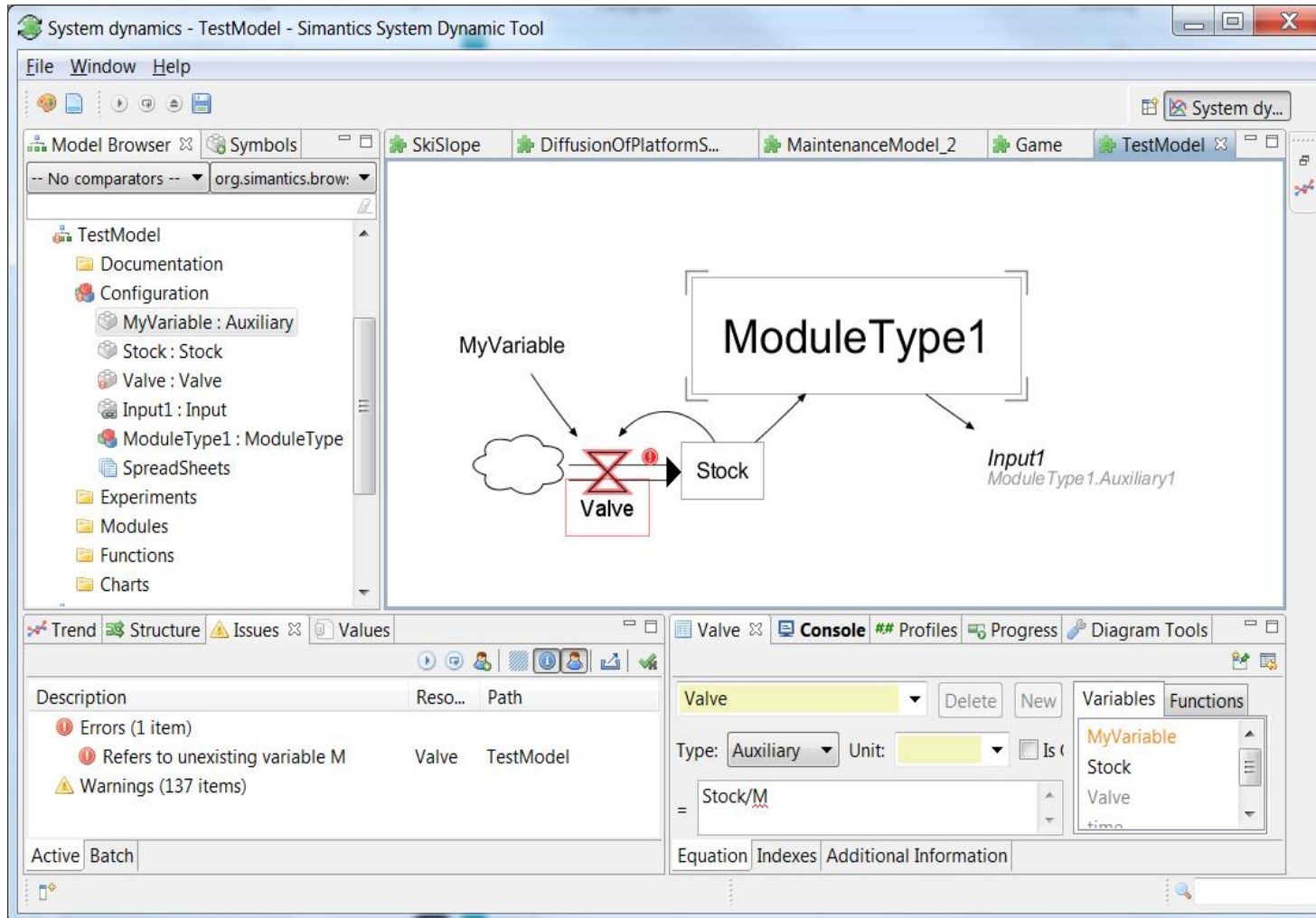
- Included version updated to OpenModelica 1.9 Beta 4
 - Performance improvements
- Preferences page for selecting desired OpenModelica version



Real-time Display of Errors and Warnings

Name of the event – Location

MODRIO
Month xxth 2012

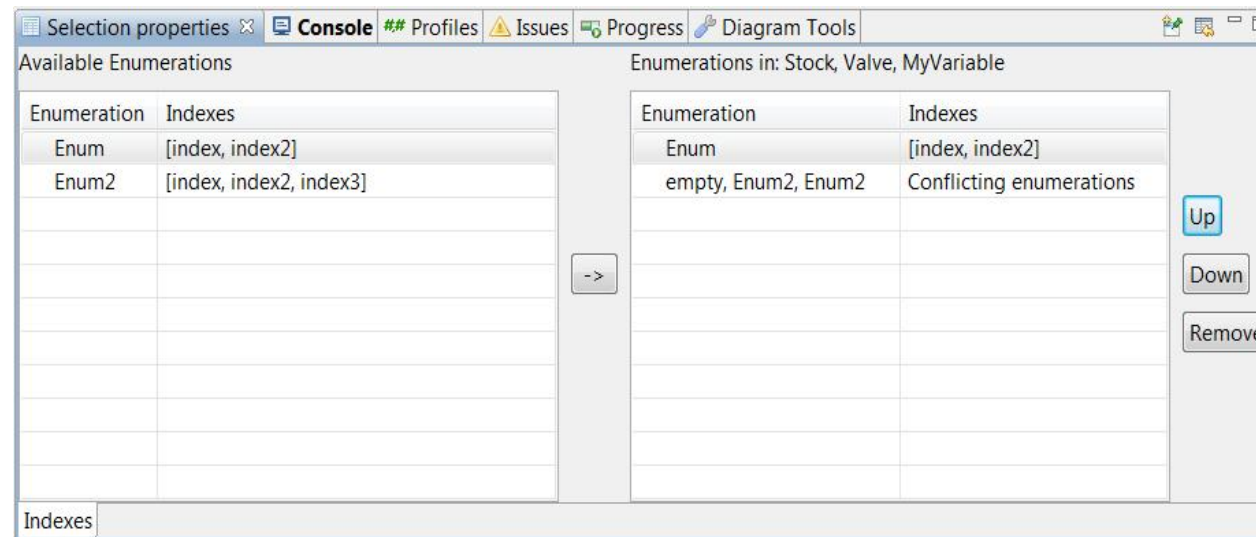


Paste Special

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- Paste 1-n variables to a diagram with the same suffix or prefix.
 - Auxiliary -> MyAuxiliary
 - Stock -> MyStock
 - ...
- No need to append numbers to variable names

Enumeration Definitions for Multiple Variables



The screenshot displays the MODRIO software interface with the following components:

- Toolbar:** Selection properties, Console, Profiles, Issues, Progress, Diagram Tools.
- Available Enumerations:**

Enumeration	Indexes
Enum	[index, index2]
Enum2	[index, index2, index3]
- Enumerations in: Stock, Valve, MyVariable:**

Enumeration	Indexes
Enum	[index, index2]
empty, Enum2, Enum2	Conflicting enumerations
- Buttons:** Up, Down, Remove.
- Bottom Tab:** Indexes.

Most Notable Bug Fixes

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- Ctrl+C now works in the equation editor
- Variable mapping does not break after a variable has been deleted
- Diagram does not lose key bindings (e.g. delete) after modelling a while