

The event model library

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Abstract

The event model library is intended to define reusable event definition on system components when working with Dysfunctional Analysis & Simulation (SD9).

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Main principles

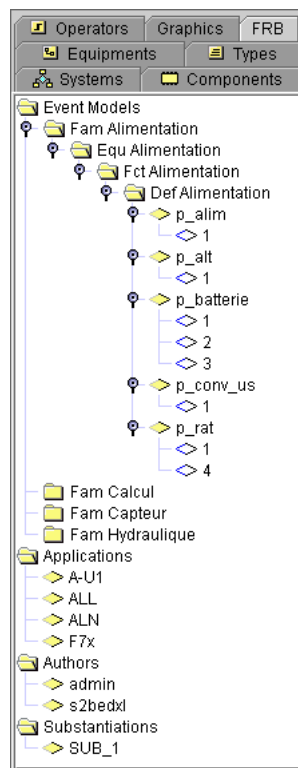
As the model libraries, the event model library allows the user to create generic event definitions that can be used by the events defined on component models.

Managing event models

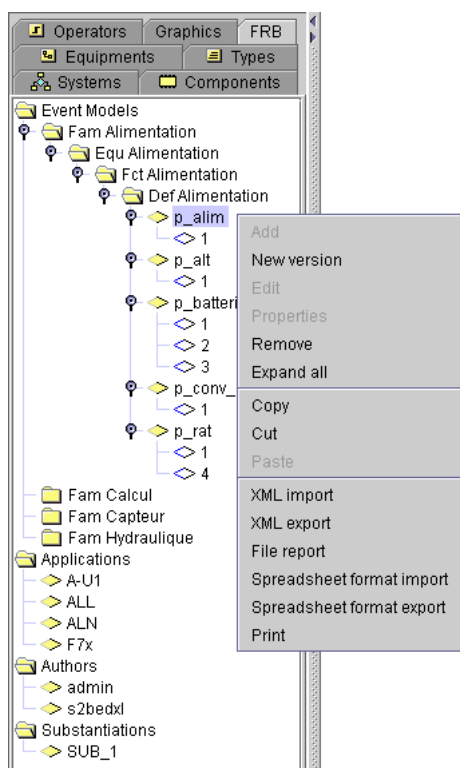
Navigating into event models tree manager

The event models are organized by family, then by equipment, by function and finally by defect. The event models are managed by the tree manager that is located in a tab of the pane containing the other libraries (component models, equipment models, etc.)

The event model tree manager appears as on the following figure:



The actions related to event models can be accessed from the tree manager popu menu as shown on the figure bellow:



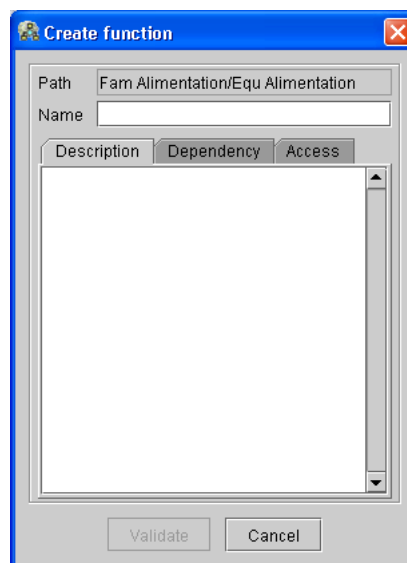
These actions are summarized in the following table:

Add	When selecting a node except an event model node	Create a data and add it to the tree
New version	When selecting an event model node	Create a new version of event model
Edit	When selecting a version node of an event model	Edit a version of an event model into the "Event Models" panel
Properties	When selecting a family, equipment, function, defect, version of event model, application, substantiation or author node	Display the selected data properties
Remove	When selecting family, equipment, function, defect, event model, version of event model, application, substantiation or author nodes - all nodes must be of the same type	Remove the selected data properties
Expand all	When selecting family, equipment, function, defect or event model nodes - all nodes must be of the same type	Expand the tree from the selected node
Copy	When selecting family, equipment, function, defect, event model, version of event model, application, substantiation or author node - all nodes must be of the same type	Copy the selected nodes and all their content

Cut	When selecting family, equipment, function, defect, event model, version of event model, application, substantiation or author nodes - all nodes must be of the same type	Mark the selected nodes and all their content as to be cut and moved
Paste	When selecting a family, equipment, function, defect node or the "applications", "substantiations" or "authors" node	Copy or move the previously selected data under the current selected node
XML import	Not sensitive to selection	Import XML data
XML export	When selecting nodes of the same types	Export the content under the selected nodes into an XML file
File report	When selecting nodes of the same types	Create a file report on the selected node data
Spreadsheet format import	Not sensitive to selection	import data from files containing tabulated data
Spreadsheet format export	When selecting nodes of the same types	Export selected node data to files using a tabulated format
Print	When selecting nodes of the same types	Print selected node data

Creating an event model class

In order to create a family, an equipment, a function or a defect, the user select the **Add** command on the event model tree manager popup menu. When selecting this command, the following dialog box appears:



The window title is dependent of the node selected by the user. Here the user selected an equipment node in order to create a function under it.

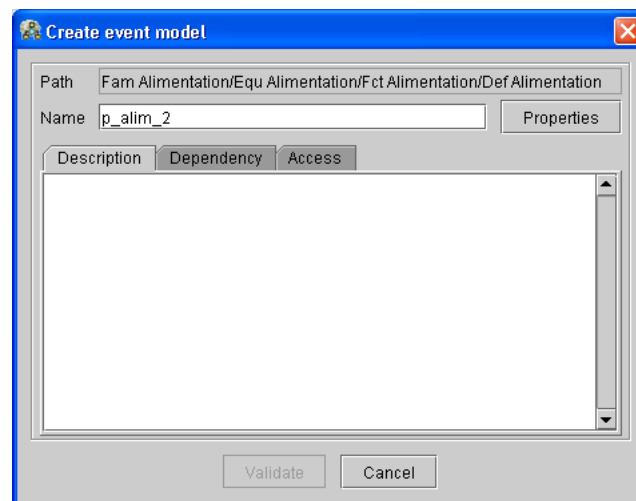
The first field named **Path** contains The path on where the new node will be created. The field **Name** contains the name of the new node.

The panel contains three tabs : **Description**, **Dependency** and **Access**. The **Description** tab allows the user put a description on the node. The **Dependency** tab allows the user to indicate which user and which group own the node. Finally, the **Access** allows the user to define the access rights on the node for users belonging to the group of the node as well as users of the other groups.

The two last tabs will be described in more details in the chapter concerning how to display event model class properties and event model properties.

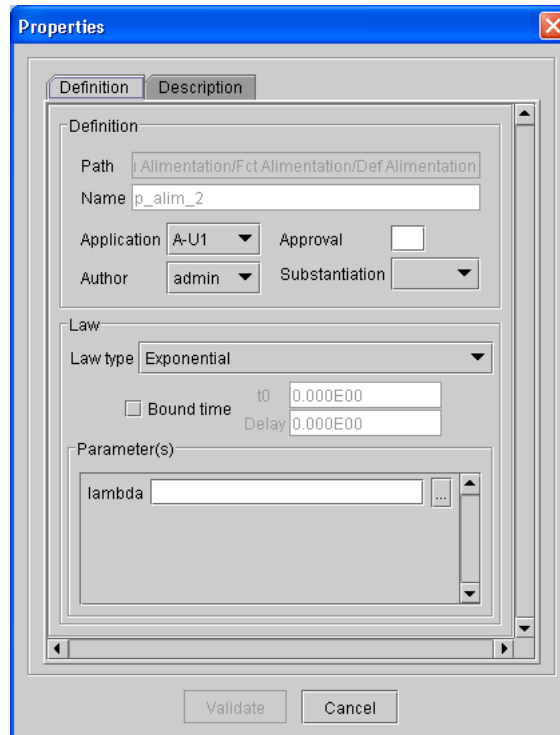
Creating an event model

In order to create an event model, the user select a defect node in the event model tree manager under which he want the event model to be created and then select the **Add** item in the popup menu. The following window then appears:



When the window appears, the field **name** of course does not contains a name. Here the user enter "p_alim_2" in the field. The window contains the same fields than the other levels of node except that for event model creation, the window contains a button **Properties** that allows to access and define the specific properties of the new event model.

When the user click on this button, the following window appears:



The image shows a 'Properties' dialog box with two tabs: 'Definition' and 'Description'. The 'Definition' tab is active. It contains the following fields and controls:

- Path:** A text field containing 'Alimentation/Fct Alimentation/Def Alimentation'.
- Name:** A text field containing 'p_alim_2'.
- Application:** A dropdown menu showing 'A-U1'.
- Approval:** A checkbox that is currently unchecked.
- Author:** A dropdown menu showing 'admin'.
- Substantiation:** A dropdown menu.
- Law:** A section containing:
 - Law type:** A dropdown menu showing 'Exponential'.
 - Bound time:** A checkbox that is unchecked.
 - t0:** A text field containing '0.000E00'.
 - Delay:** A text field containing '0.000E00'.
 - Parameter(s):** A list box containing 'lambda'.

At the bottom of the dialog are two buttons: 'Validate' and 'Cancel'.

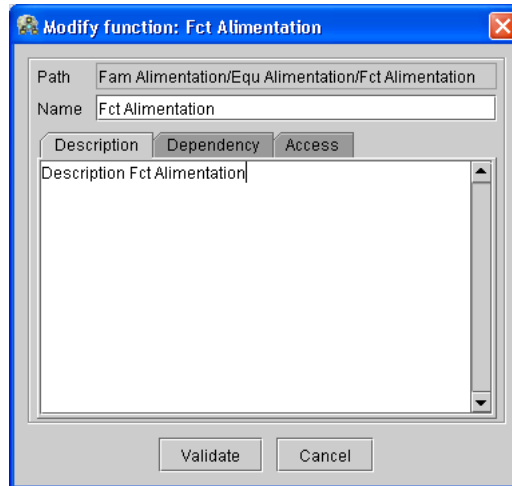
Each event model is affected to an application, an author and if necessary a substantiation. These data are defined under corresponding static nodes in the event tree manager so they must be created to be usable while defining the event model.

The bellow part of the panel is dedicated to the definition of the evet model aralia law. The user select the name of the law in the combo box and then fill in the fields corresponding to the parameters of this law. When he has finished, he press the **Validate** button to return to the creation window.

When all fields are filled in, the user confirms the creation by pressing the **Validate** button. The window disappears and a new node appears under the selected one in the event model tree.

Displaying event model class properties and event model properties

If the user wants to display and or modify data properties, he select the **Properties** command in the event model tree manager. The following window appears:

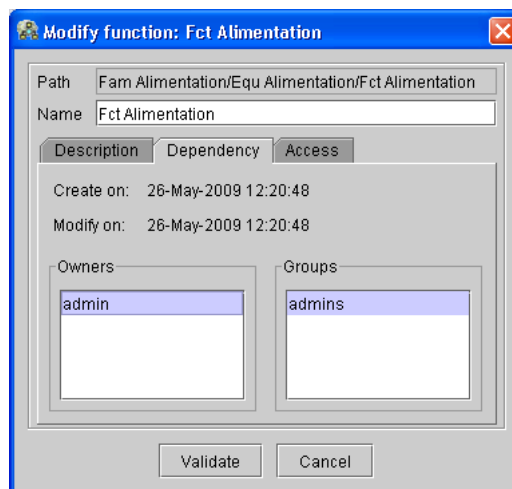


If the user wants to change the name of the edited node, he change the text of the **Name** field.

As for the create function dialog box, the **Properties** window contains three tabs.

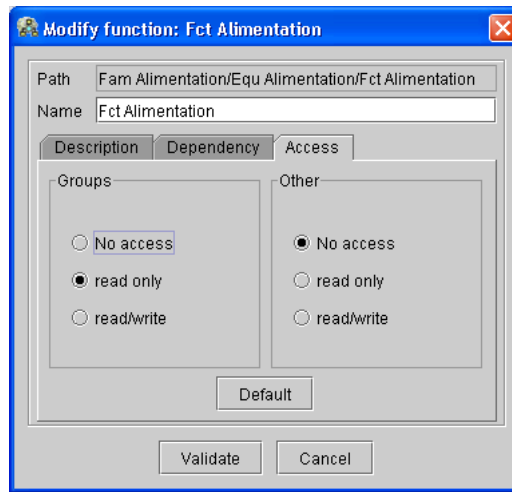
The first tab allows the user to modify the node description.

The second tab appears as on the following figure:



This tab shows the creation date and last modification date of the node. In the left list are presented the users declared in the database and in the right list are presented all the groups that contains the user selected in the left list. In order to set the owner and group owner to the node, the user first select a user in the left list and then a group in the right list.

The third tab appears as on the following figure:



This tab shows the access rights set to the group owner of the node on the left part and to the other groups on the right part. To change an access right, the user simply click on the corresponding radio button. If the user click on the **Default** button, the access rights are set by default to 'read only' for the owner group and to 'No access' for the other groups.

The user confirm all its modifications done into the **Properties** window by pressing the **Validate** button or cancel them by pressing the **Cancel** button.

Using event models

The event models contains generic definition and can be used by several data on Dysfunctional Analysis & Simulation (SD9). The event models are referenced by the events defined on components on Dysfunctional Analysis & Simulation (SD9). The way used to define these associations is described in the BPA DAS user guide.