

Stade des Alpes - Grenoble
Etudes et Techniques Internationales (ETI)

Tutorial

User-defined attributes

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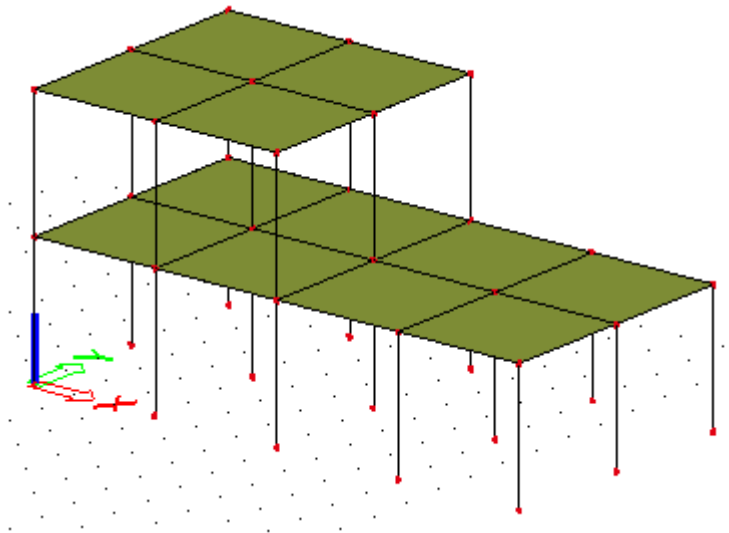
How to define User defined attributes and how to insert them to project

Your task:

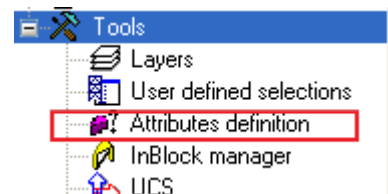
You will define Attributes for Colour and Level. The attribute for colour will be specified by parameter TEXT and the attribute for Level by parameter COMBOBOX. You will insert attributes on the structure and you will also adapt the contents of their Label.

Definition of attribute Colour with two parameters - colour and thickness:

- 1) Open the attached project – Attributes.esa. You can see a simple structure composed of beams and plates in two levels.

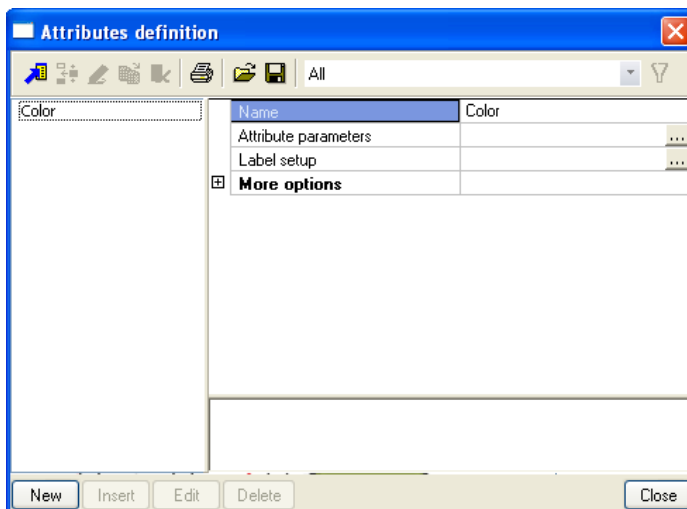


- 2) Find service Attribute definition in Tree menu service Tools.

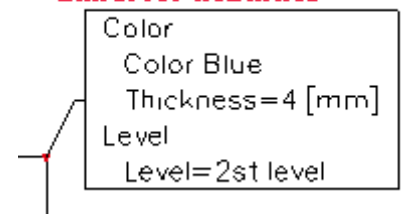



- 3) You must fill in the name and at least one parameter to define the “User defined attribute”. The name will be used for the Attribute service and the parameter is the value which we add to the member as a kind of additional information.

You must also use the Label setup to set the description inside the Label.



Label for attribute



- 4) Open Attribute parameters by  and then push the button “Add item”.
New item is added to the left side of the dialogue. On the right side you will specify the parameter type - TEXT.

- 5) In the first combobox choose type TEXT.

Type	Number
Name	Number
Description	Text
Unit	Check-box
Value	0
<input type="checkbox"/> Range	
Use	<input type="checkbox"/>
Min	0
Max	0

- 6) Select value “Colour” as a name and description

- 7) As a Text – set Red

Type	Text
Name	Color
Description	Color
Text	Red

- 8) Click “Add item” one more time. You will see the next parameter in the right side of the dialogue. You will define the thickness of of lines to draw the structure.

- 9) This time you define the parameter type as NUMBER. Now you need to specify a new text string to define colour and thickness. To specify a new string use button “Define text strings”. Here you can see a simple table and you fill the empty row by name “Thickness”. There is a new text string in comboboxes from now on.

String database ✖

Language: Angličtina (Spojené státy)

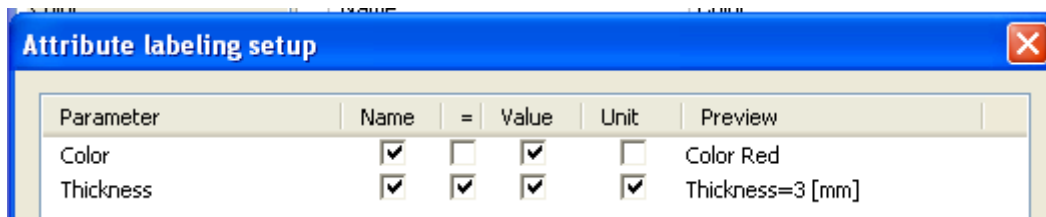
ID	Text
1	Input of Attribute Color
2	Color
3	Color
4	Description Color
5	Select entity to append attribute
6	Thickness
*	0

- 10) Fill in rest of the parameter specification according to the picture.

List of parameters ✖

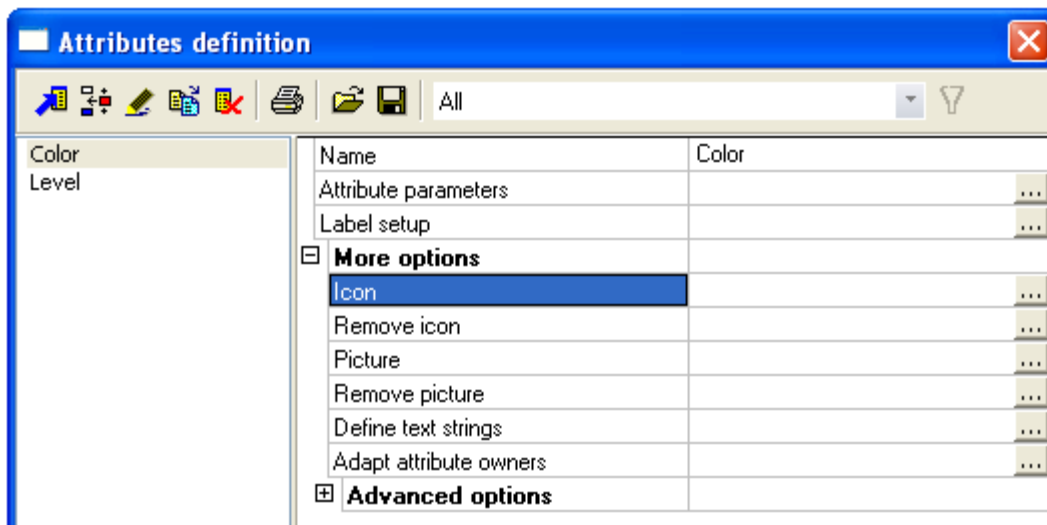
<ul style="list-style-type: none"> 1. Color <li style="background-color: #e0e0e0;">2. Thickness 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Type</td> <td>Number</td> </tr> <tr> <td>Name</td> <td>Thickness</td> </tr> <tr> <td>Description</td> <td>Thickness</td> </tr> <tr> <td>Unit</td> <td>mm (Length)</td> </tr> <tr> <td>Value [mm]</td> <td>3</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Range</td> </tr> <tr> <td>Use</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Min [mm]</td> <td>0</td> </tr> <tr> <td>Max [mm]</td> <td>0</td> </tr> </table>	Type	Number	Name	Thickness	Description	Thickness	Unit	mm (Length)	Value [mm]	3	<input type="checkbox"/> Range		Use	<input type="checkbox"/>	Min [mm]	0	Max [mm]	0
Type	Number																		
Name	Thickness																		
Description	Thickness																		
Unit	mm (Length)																		
Value [mm]	3																		
<input type="checkbox"/> Range																			
Use	<input type="checkbox"/>																		
Min [mm]	0																		
Max [mm]	0																		


- 11) Now you can return back to the main dialogue to define “Label setup”. This tool will define how the Label for Attribute looks like in the project. By checking the checkboxes you will change how the description is shown on the structure after inserting the attribute to the project.

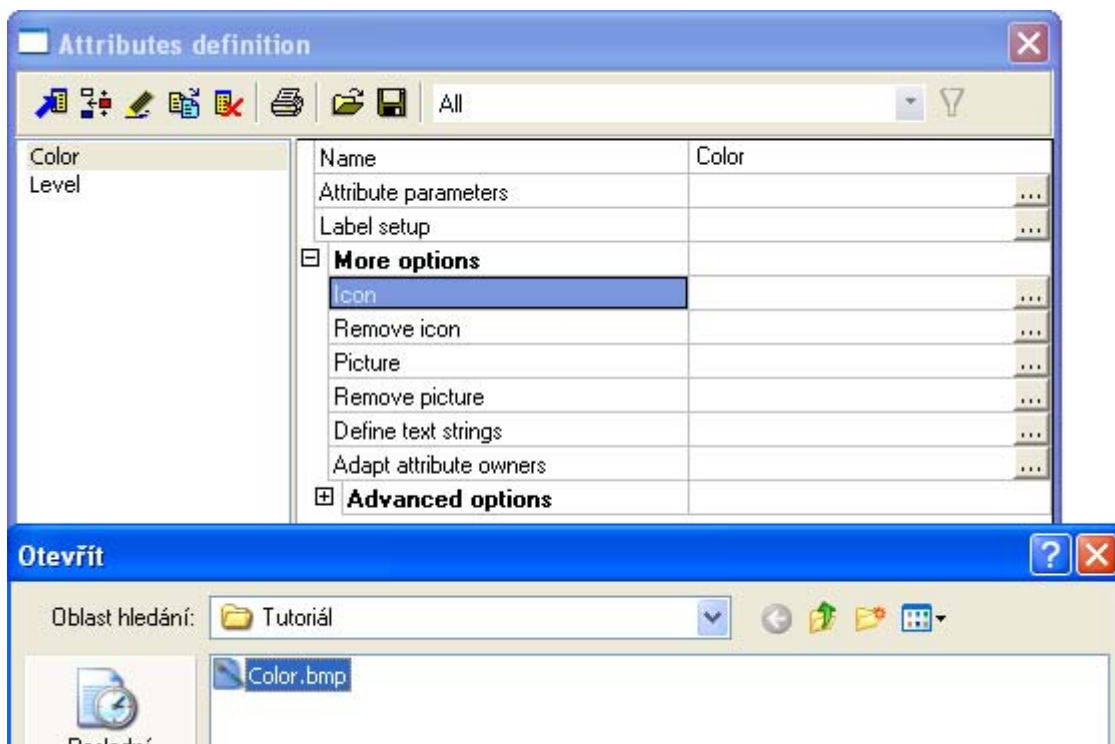


You can see exact text for Label in column Preview.

- 12) You will add icon for Colour to see some advanced options for the definition of Attributes. This feature is under “More option” in the main dialogue.

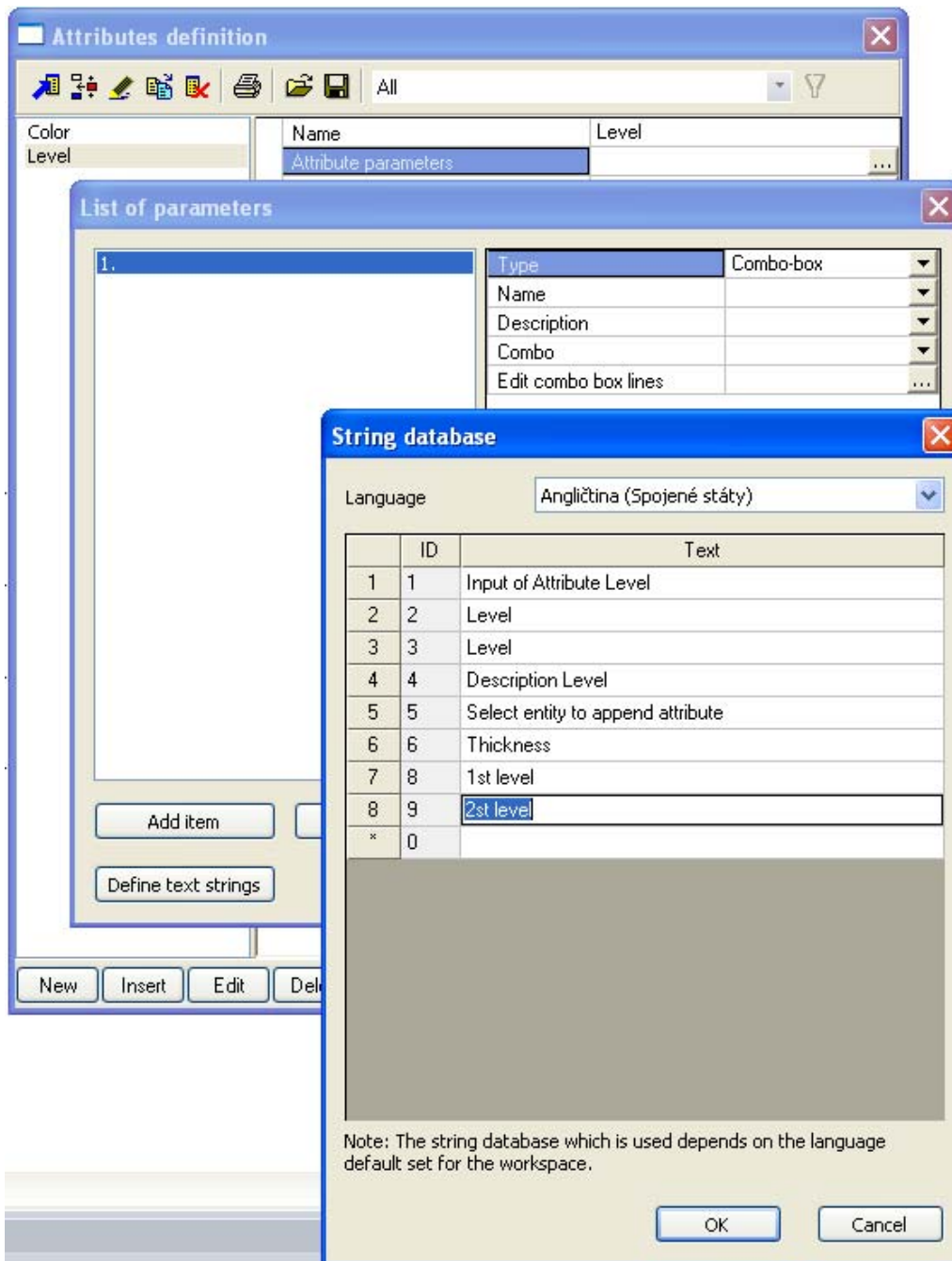


- 13) You will define the path to the attached icon Color.bmp by .

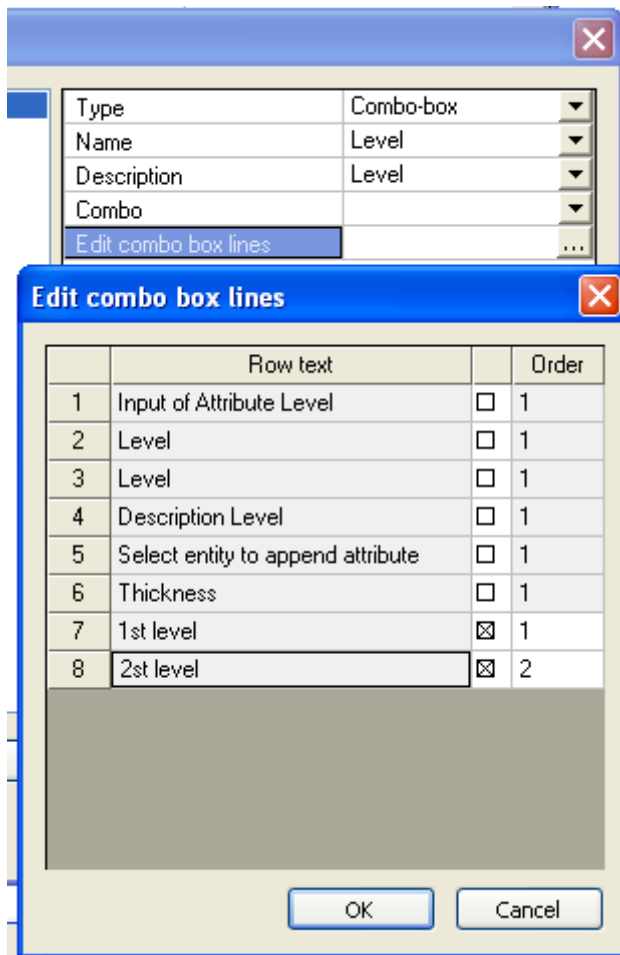


Definition of Attribute Level with one parameter - level:

- 1) The start is quite the same as for Colour. You will set the definition of parameter type COMBOBOX. This type needs more text strings in the "String database". Define the text strings according to the picture.

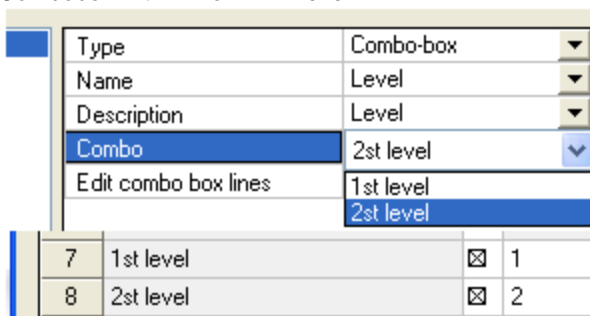


- 2) You will add two new rows in the String database – 1st level and 2nd level
- 3) Now you can fill in the Name and Description as you did in the first case, but now you use text strings for Level.
- 4) You need to fill in the "Edit combo box" according to the first picture.

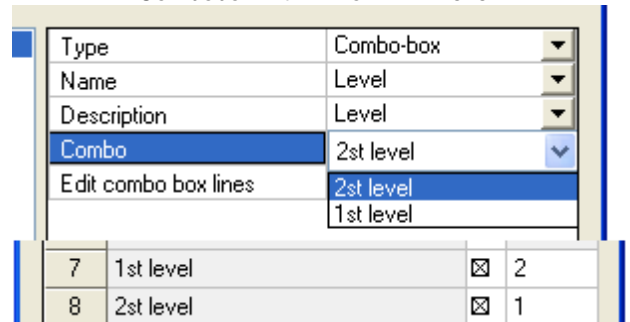


You must check which text strings you want to use in the combobox "Combo" and define their order. The order is defined by the number placed next to the checkbox. This order can be arbitrary. See the picture below.

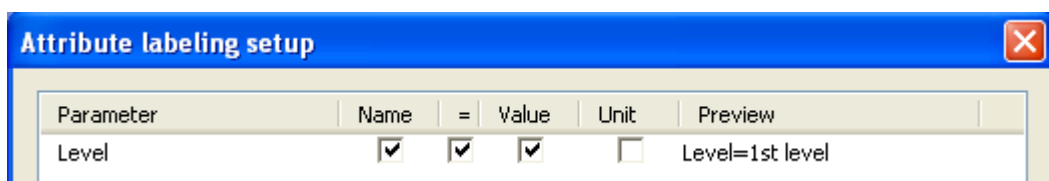
Combobox with 1st row – 1st level:



Combobox with 1st row – 2nd level:

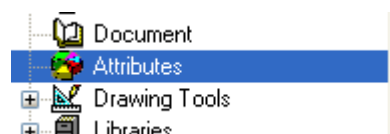


- Now you can also return to the main dialogue and define the "Label setup".



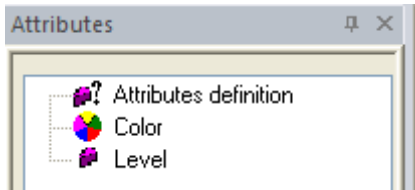
Now you have both attributes defined and it is possible to set them to the project. There is a new service for inserting the User defined attributes to the project in the Main tree menu. It is named Attributes.

Process of inserting is shown in the next chapter.



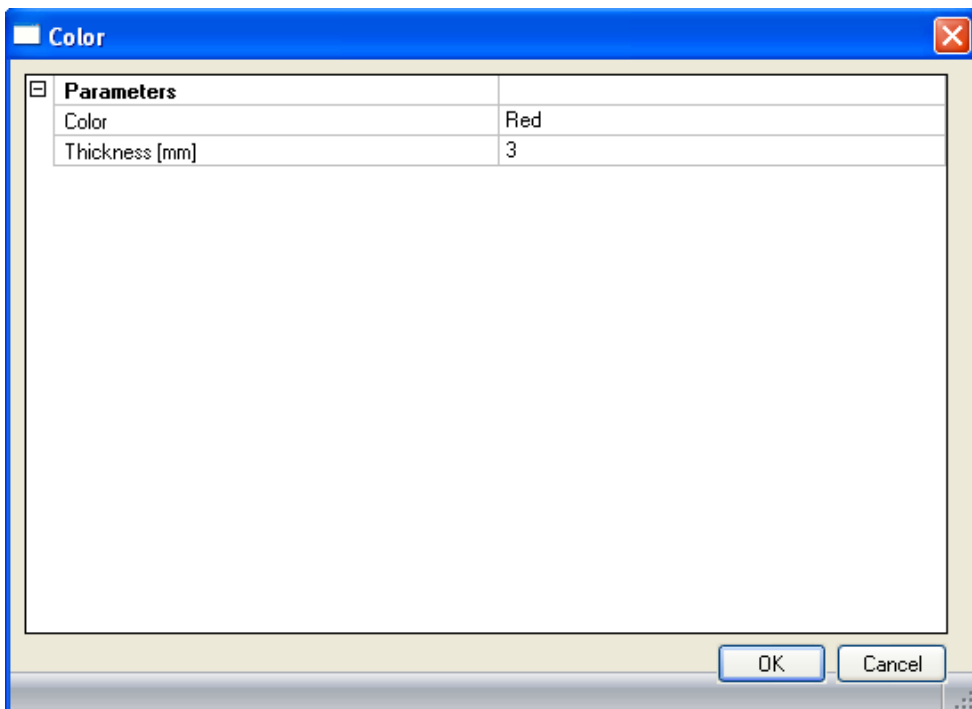
Inserting Attributes to project:

- 1) Open service Attributes. You can find two predefined “User defined attributes” which can be inserted to the project.

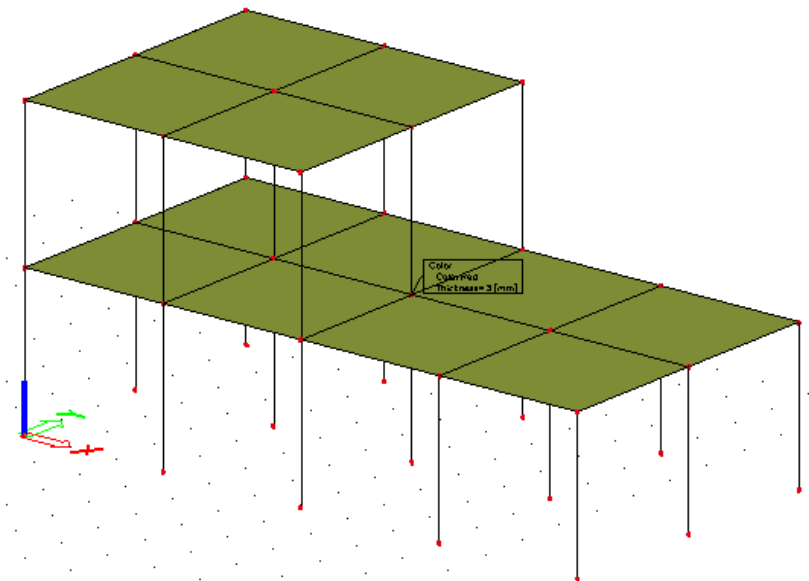


The selected icon is used for the Colour attribute and a default icon for the Level attribute. Also “Attribute definition” is available which can be used to change or define attributes..

- 2) Select Attribute Colour and check values in the dialogue. You will insert this on the plate on 1st level – S1.



Push the OK button and select the plate in the project. Confirm selection by ESC.



The attribute Colour is now inserted on plate S1.

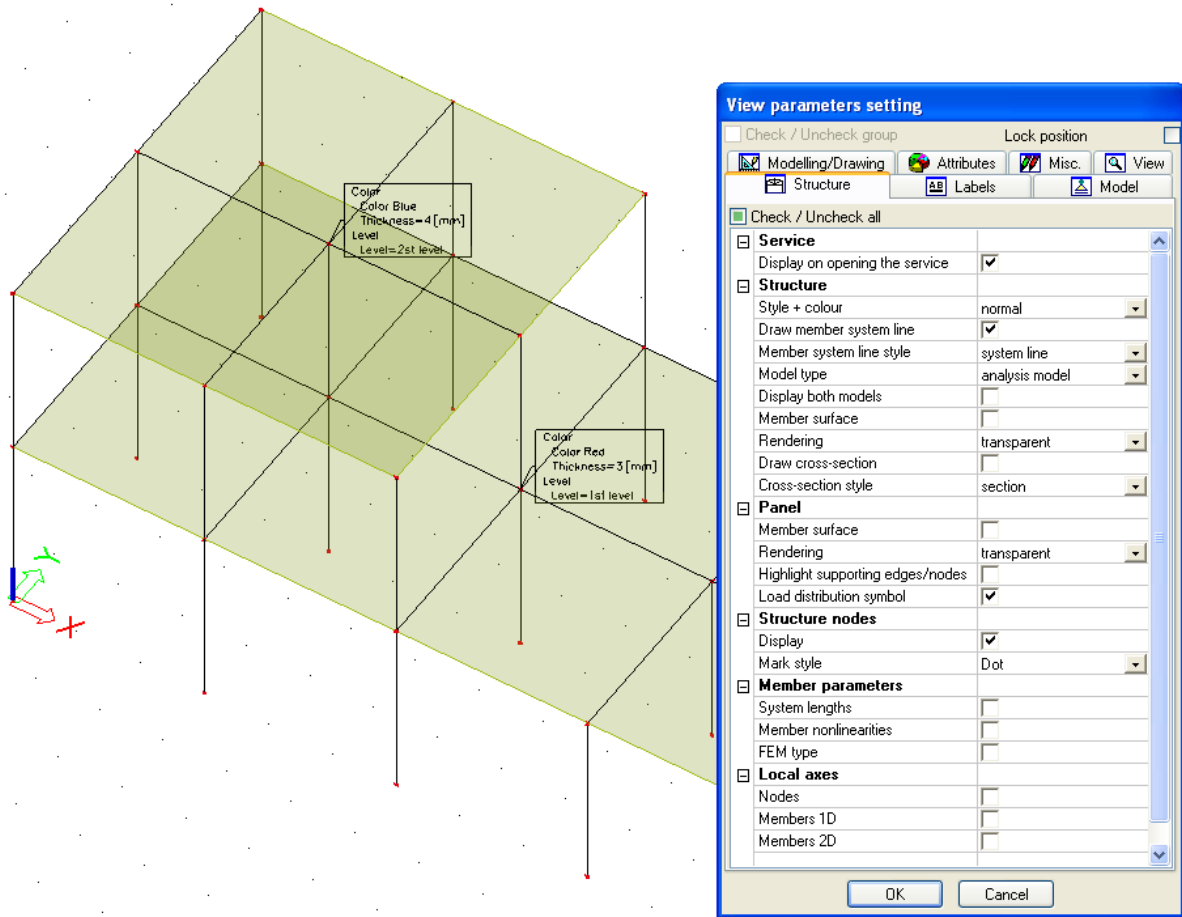
- Use the same procedure to set the second attribute Colour on plate on 2nd level – S2. Change colour to “Blue” and thickness to “4” in the dialogue.

Parameters	
Color	Blue
Thickness [mm]	4

Insert it on plate S2.

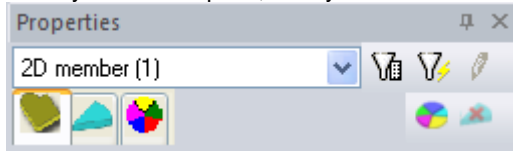
Now if you will review the inserting dialogue for Colour again, you will see that the changed values stay for next inserting – values “Blue” and “4”.

- Inserting of the attribute Level is the same. Select Level in the Attributes menu, select the right description in the combobox and insert it on plates. S1 will have Level label with description 1st level, S2 with description 2nd level.
- Use View parameters and set “Rendering” to “Transparent” to see the whole Label.



- Now you have both plates with two Attributes – Colour and Level. You can select them separately in Label and then you can edit them in the properties. Attributes have the same behaviour as a member or a plate.

When you select a plate, then you will see also Attributes in properties on different tabs.



Here you can switch between the Member (Owner) and connected Attributes to see the properties.

The final project with inserted Attributes is also attached – final_attributes.esa