

Usability analysis of previous team

(TINF21C, SWE)

Project: Modelling Wizard Improvements

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Change History

Version	Date	Author	Comment
0.1	16.03.2023	Nils Hoffmann, Sophie Kirschner	Initial Setup

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1. Introduction

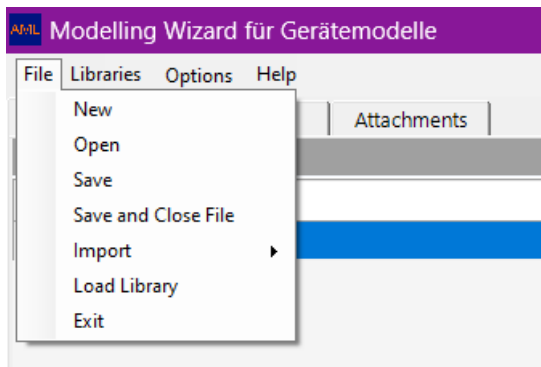
The analysis was based on the DIN EN ISO 9241 guidelines with a special focus on part 110 – “Grundsätze der Dialoggestaltung”. In this, there are seven principles that play a key role in ensuring usability: Task appropriateness, self-descriptiveness, conformity to expectations, controllability, individualizability, conduciveness to learning, error tolerance.

This usability analysis was created by using the methods of “Thinking Aloud” and a question sheet. The sheets are available at:

<https://github.com/users/robinziegler/projects/1?pane=issue&itemId=13232065>

The issues with the previous Software are summarized in the following.

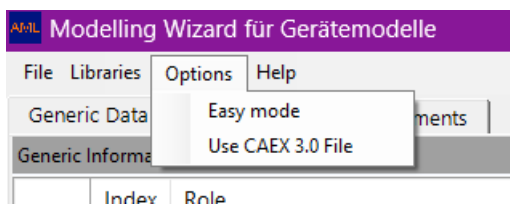
2. Navigation Bar



Issue 1: “Save and Close File” unnecessarily redundant

Issue 2: “Open” and „Import” provide the same feature

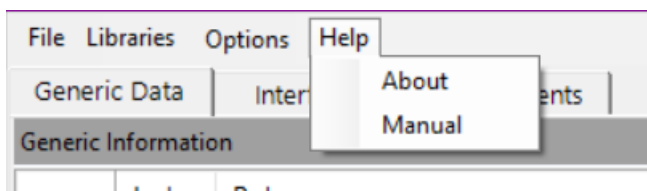
Issue 3: “Load Library” fits better in “Libraries” menu



Issue: No indicator, which mode/file is currently active (no self-descriptiveness)

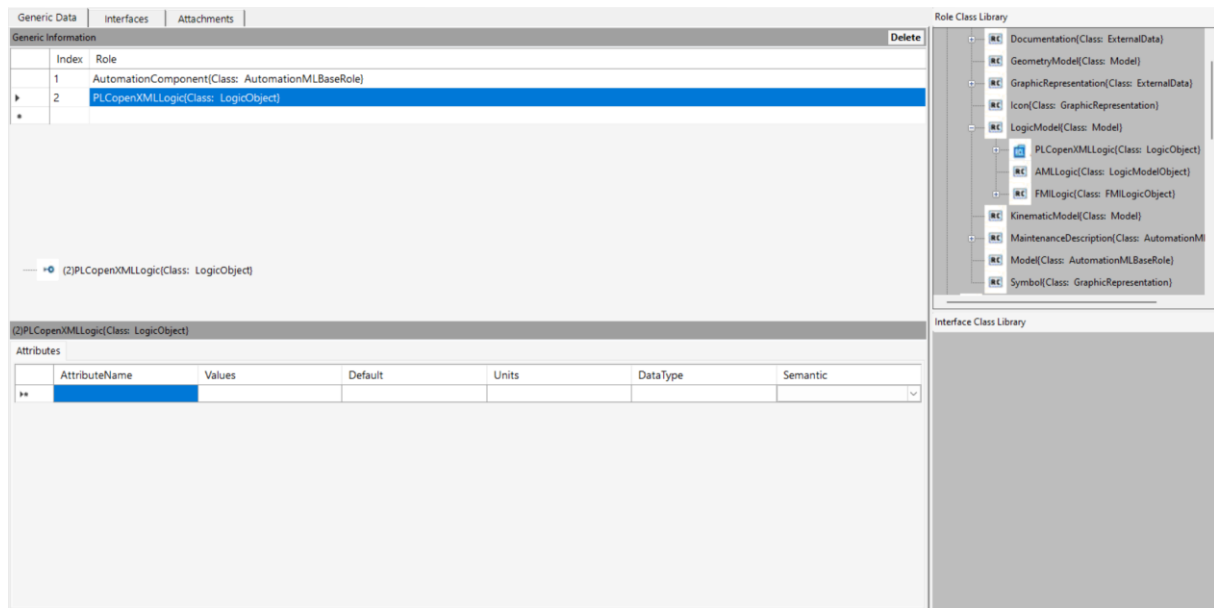
Device Name: Vendor:

Issue: Unnecessary function in navigation bar, confusing for user



Issue: “About” doesn’t suit the term “Help”

3. Generic Data



Issue 1: User has to click on additional button to expand prefilled “Attributes” sheet

Issue 2: Display of “Role Class Library” unnecessary for basic usage

Issue 3: Display of “Interface Class Library” unnecessary for “General Data” tab, because it provides no purpose at this position

Issue 4: No explanation on the usage of libraries for inexperienced users (adding a library to the table with the drag and drop system is unexplained and difficult to utilize; no self-descriptiveness and learning facilitation)

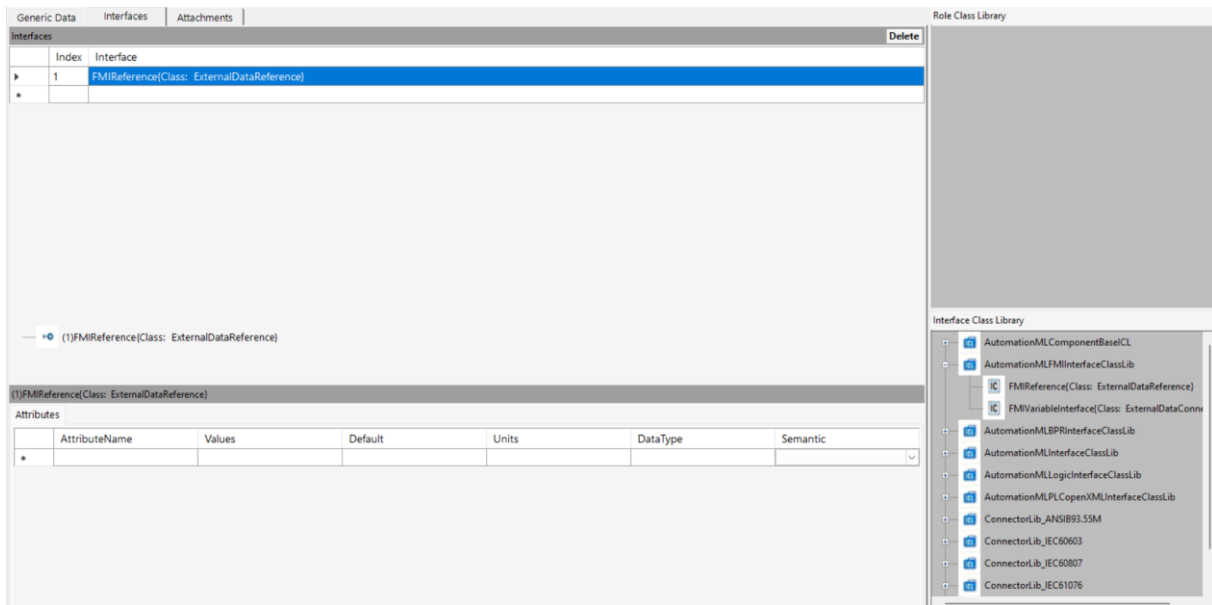
Issue 5: No purpose of first column in “Generic Information” table

Issue 6: Display of selected table entry below the table unnecessary (redundant)

Issue 7: “Attributes” sheet in advanced mode: “DataType” unrestricted editing through the user can cause problems (no preventive error tolerance)

(1)AutomationComponent(Class: AutomationMLBaseRole)						
Attributes						
	AttributeName	Values	Default	Units	DataType	Semantic
	ProductCode				xs:string	
	ManufacturerPID				xs:string	
	ParameterData				xs:string	
	Website				xs:string	
	Keyword				xs:string	
	ContactMail				xs:string	
	ContactPhone				xs:string	
	City				xs:string	
	Country				xs:string	
	ZipCode				xs:string	
	Address2				xs:string	
	Name				xs:string	

4. Interfaces



Issue 1: User has to click on additional button to expand prefilled “Attributes” sheet

Issue 2: Display of “Interface Class Library” unnecessary for basic usage

Issue 3: Display of “Role Class Library” unnecessary for “Interfaces” tab, because it provides no purpose at this position

Issue 4: No explanation on the usage of libraries for unexperienced users (adding a library to the table with the drag and drop system is unexplained and difficult to utilize; no self-descriptiveness and learning facilitation)

Issue 5: No purpose of first column in “Interfaces” table

Issue 6: Display of selected table entry below the table unnecessary (redundancy)

Issue 7: “Attributes” sheet in advanced mode: “DataType” unrestricted editing through the user can cause problems (no preventive error tolerance)

5. Attachments

The screenshot shows a software application window with a menu bar (File, Libraries, Options, Help) and a toolbar. The 'Attachments' tab is selected. Below the toolbar, there is a section for 'AutomationML Role' with an 'Add +' button. To the right, there are input fields for 'Device Name' and 'Vendor'. Below these, there are buttons for 'Select File' and 'Add Path'. A table titled 'Attachables Information' is visible, with columns 'Element Name' and 'File Path'. To the right of the table is a 'Delete' button. On the far right, there are two empty panels labeled 'Role Class Library' and 'Interface Class Library'.

Issue 1: Display of “Role Class Library” and “Interface Class Library” unnecessary for “Attachments” tab, because it provides no purpose at this position

Issue 2: The form for adding attachments is not user-friendly. To activate the form, the add button must be pressed, which is not communicated

Issue 3: No purpose of first column in table

6. General Issues

Issue 1: No dark mode and individual sizing option (no individualizability)

Issue 2: Unattractive color theme and no clear marking of which tab you are in (Generic Data, Interfaces or Attachments)

Issue 3: Generally old look and feel