

Usability analysis of previous team

(TINF21C, SWE)

Project: Modelling Wizard Improvements

Customer: Markus Rentschler

Christian Holder

Team:

Project Manager	– Robin Ziegler (inf21100@lehre.dhbw-stuttgart.de)
Developer	– Nils Hoffmann (inf21194@lehre.dhbw-stuttgart.de)
Test Manager	– Michael Grote (inf21111@lehre.dhbw-stuttgart.de)
System Architect	– Fabian Kreuzer (inf21106@lehre.dhbw-stuttgart.de)
Tech. Documentation	– Dana Frey (inf21099@lehre.dhbw-stuttgart.de)
Product Manager	– Maximilian Trumpp (inf21123@lehre.dhbw-stuttgart.de)
Graphical Designer	– Sophie Kirschner (inf21083@lehre.dhbw-stuttgart.de)

Change History

Version	Date	Author	Comment
0.1	16.03.2023	Sophie Kirschner	Initial Setup
1.0	04.05.2023	Sophie Kirschner	Improvements

Table of Contents

1. Introduction	1
2. Navigation Bar	2
2.1 File Menu.....	2
2.2 Options Menu	2
2.3 Input Fields.....	2
2.4 Help Menu	3
3. Generic Data	4
4. Interfaces	5
5. Attachments	6
6. General Issues	7

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.

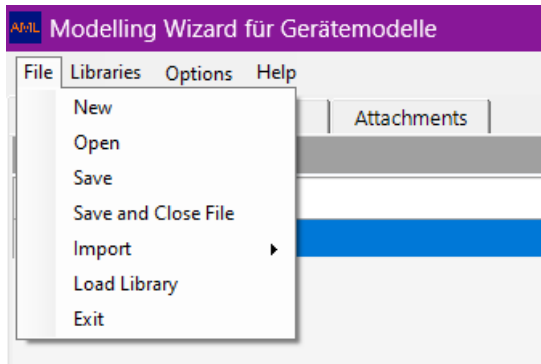
This usability analysis was created by using the methods of “Thinking Aloud” and a question sheet. The sheets are available at:

<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

2.1 File Menu



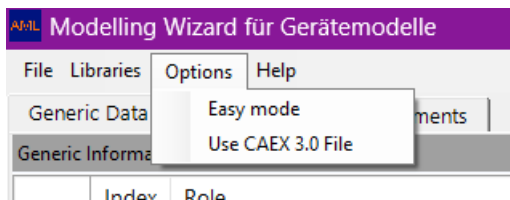
Picture 1: File Menu

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

2.2 Options Menu



Picture 2: Options Menu

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

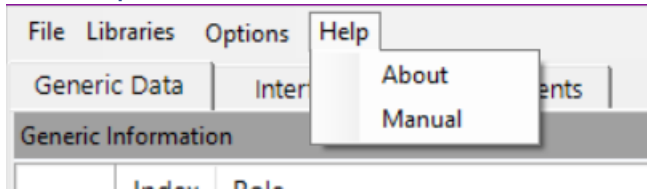
2.3 Input Fields

Device Name:	<input type="text"/>	Vendor:	<input type="text"/>
--------------	----------------------	---------	----------------------

Picture 3: Input fields in navigation bar

Issue: Unnecessary function in navigation bar, confusing for user

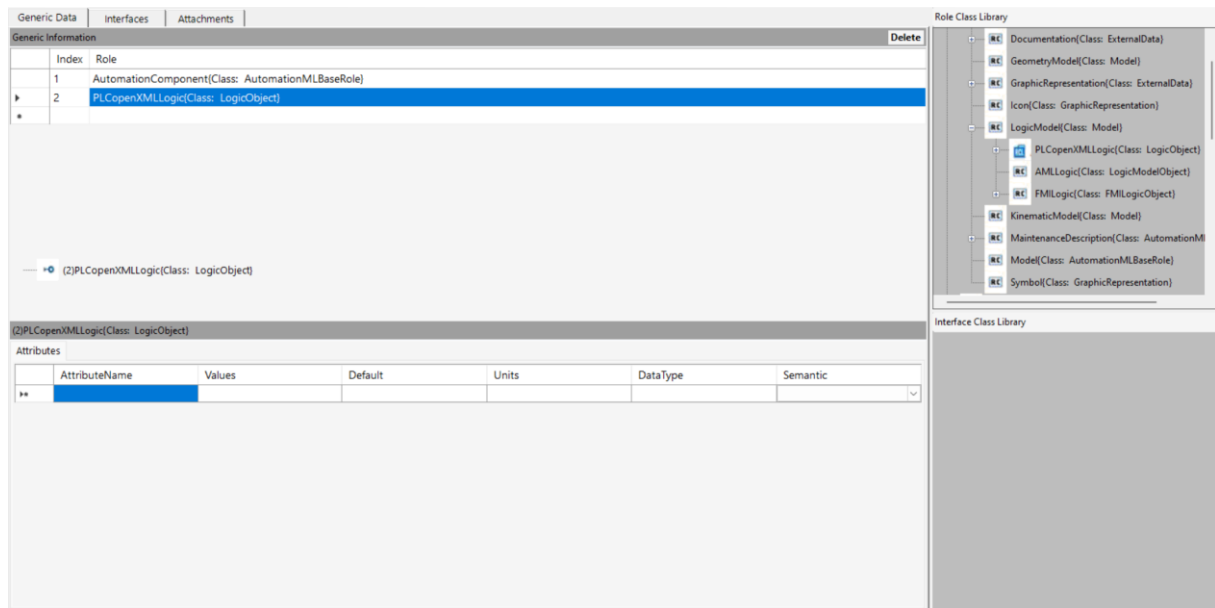
2.4 Help Menu



Picture 4: Help Menu

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

3. Generic Data



Picture 5: Generic Data Overview

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

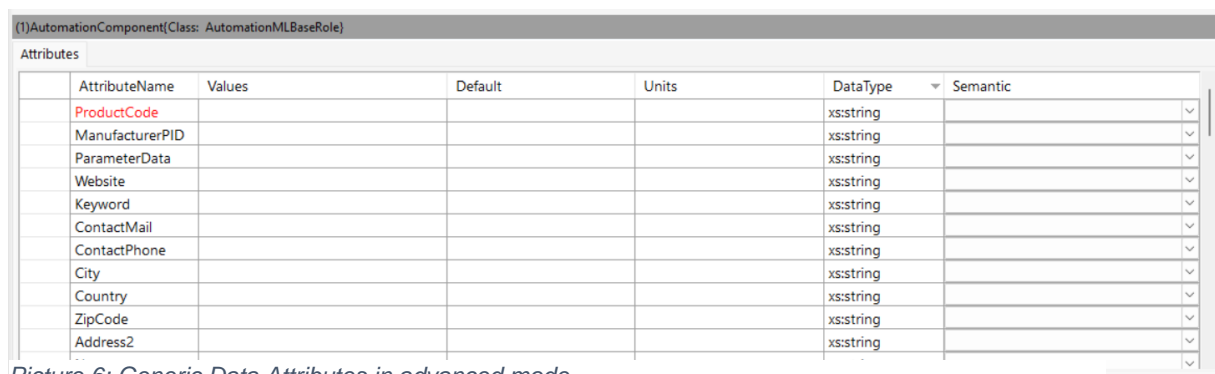
Issue 2: Display of “Role Class Library” unnecessary for basic usage

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

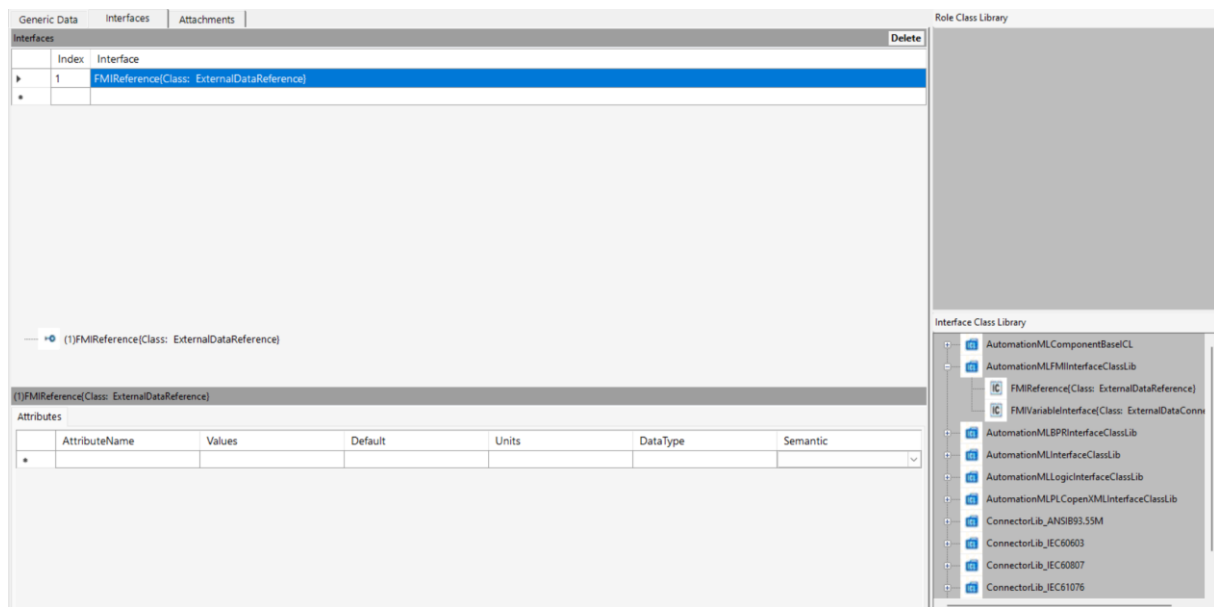
Issue 6: Display of selected table entry below the table unnecessary (redundant)



Picture 6: Generic Data Attributes in advanced mode

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

4. Interfaces



Picture 7: Interfaces Overview

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 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 “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 interface with a menu bar at the top containing 'File', 'Libraries', 'Options', and 'Help'. Below the menu bar, there are tabs for 'Generic Data', 'Interfaces', and 'Attachments'. The 'Attachments' tab is currently selected. To the right of the tabs, there are input fields for 'Device Name' and 'Vendor'. Below the tabs, there is a section for 'AutomationML Role' with an 'Add +' button and a dropdown menu. To the right of this section, there are buttons for 'Select File' and 'Add Path'. Below these buttons, there is a section titled 'Attachables Information' with a 'Delete' button. This section contains a table with two columns: 'Element Name' and 'File Path'. The table has one row with a bullet point in the 'Element Name' column. To the right of the main interface, there are two large gray rectangular areas labeled 'Role Class Library' and 'Interface Class Library'.

Picture 8: Attachments Overview

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