Customer Requirements Specification

(Lastenheft)

(TINF19C, SWE I Praxisprojekt 2020/2021)

Project: *Modelling Wizard*

Customer: *Rentschler & Holder*
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Version	Date	Author	Comment
0.1	28.10.2020	Timo Zaoral	created
0.2	06.11.2020	Timo Zaoral	General overhaul after review
1.0	11.05.2021	Timo Zaoral	Completion

CONTENTS

1. Goal

An application is to be further developed that allows the creation of a device and the addition of device interfaces (e.g. physical ports) and File attachments [1][2]. A device can be created manually, but also by reading in existing device description files with the aid of the DD2AML converter [3]. The output is an AutomationML-Package that complies with the rules for AML-DDs [4].

In Figure 1 you can see the existing GUI which should be improved by a usability concept.

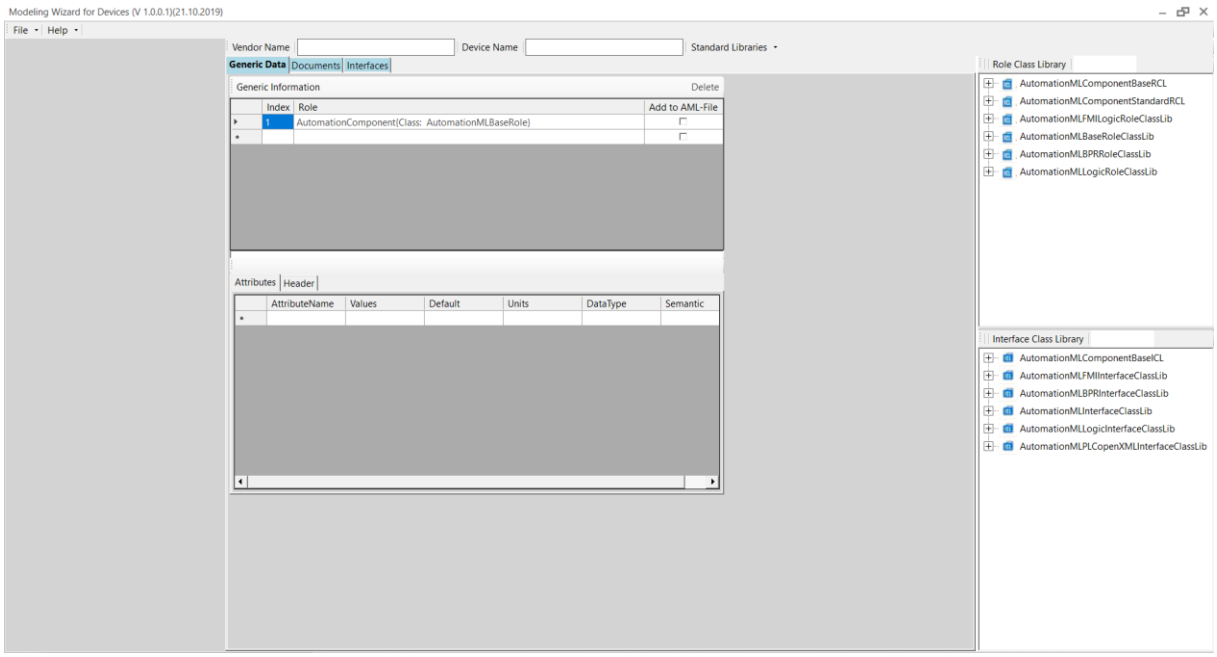

Figure 1 GUI

2. Requirements

2.1. /R10/ Usability Concept

A new usability concept should be created for the already existing GUI in order to facilitate the work with this plugin. In particular, the main functions of the plugin should be easier to understand and use.

2.2. /R20/ GUI Design

From the requirements of the usability concept a suitable GUI should be designed. The main aim is to improve the uniform appearance. In addition, the overview in the plug-in should be facilitated and better displayed. In addition, it is also important to use the entire space of the GUI. By clever use of simple colour tones, which are known from the AutomationML Editor, the control elements should be better visible. Another point is to remove unnecessary controls to make the operation easier.

2.3. /R30/ CAEX 2.15 & CAEX 3.0 Output

For the plug-in it should be possible to output the created AML device with the two formats CAEX 2.15 or CAEX 3.0.

2.4. /R40/ Parameter Requirements

The minimum input parameters required according to the rules for AML-DDs should be clearly displayed. In addition, this minimum number of parameters should be checked during the creation of the tool before it is output. If these have not been filled in, the user should be informed and requested to fill them in.

2.5. /R50/ Mechanical and Hydraulic Interfaces

In addition to the electrical interfaces, the other connectors and interfaces of AutomationMLComponentStandardRCL and AutomationMLComponentBaseICL should also be available for selection, e.g. mechanical and hydraulic. So that the user can not only add electrical interfaces to the AML device. For this purpose, a general interface for adding interfaces should be available.

2.6. /R60/ Electric Interface Test

A test is to be carried out to check whether the use of the AML interface library can be selected for electrical interfaces. So that the user can add all available electrical interfaces from the library to his AML device.

2.7. /R70/ User Documentation

For a better understanding of how to use the plugin with the new operating concept and GUI, user documentation must be created. In this user documentation, the installation of the plug-in and its exact use will be explained step by step. This documentation should also be accessible via a tab in the plug-in.

3. Figures

4. References

[1]https://github.com/Rajkumarpulaparthi/ModellingWizard
[2]https://github.com/tinf17c/ModellingWizard
[3]https://github.com/WAntonia/TINF19C_Team_3_DD2AML-Converter
[4]https://www.automationml.org/o.red.c/dateien.html?cat=1