# *Usage and Empirical Results*

# *Usage details*

This chapter explains how to use the tool CIM To MODelica Factory

Make sure you have the latest JAVA runtime installed (JAVA 1.6 or later). Then, create a working folder where to download and place the following required files:

The cim2modelica.jar (It contains the necessary libraries to run the code)

As input files, within the same location as the .jar file create a ***./res*** folder containing two subfolders:

* A subfolder ***./res/map*** containing the mapping rules for populating the CIM values into the Modelica component instances of the model
* A subfolder ***./res/network*** containing the CIM files of the network model

Using the tool in command line

**java -jar cim2modelica.jar folder\_name model\_given\_name**

Make sure that within the ***folder\_name*** there are the following CIM profiles’ files:

* *xxx\_EQ.xml*– CIM equipment profile file
* *xxx\_TP.xml*– CIM Topology profile file
* *xxx\_SV.xml*– CIM state variable profile file
* *xxx\_DY.xml* – CIM dynamics profile file

**model\_given\_name** - name for the resulting Modelica model

As output files, the cim2modelica tool will create a folder with the name ***./model***, where the tool will save the generated Modelica files



Figure 1 Detail of the resulting IEEE\_9Bus model from CIM profiles. Machines with controllers are modeled in the .mo files under the ./PowerPlant folder.

# B- Required Metadata

# B1 Current executable software version

# *Ancillary data table required for sub version of the executable software: (x.1, x.2 etc.) kindly replace examples in right column with the correct information about your executables, and leave the left columns as they are*

# *Table 1 – Software metadata*

|  |  |  |
| --- | --- | --- |
| **Nr** | **(executable) Software metadata description** | ***Please fill in this column*** |
| S1 | Current software version | *for example 1.1, 2.4 etc.* |
| S2 | Permanent link to executables of this version | *example : https://github.com/combogenomics/DuctApe/releases/tag/DuctApe-0.16.4* |
| S3 | Legal Software License | *List one of the approved licenses* |
| S4 | Computing platform / Operating System | *for example Android, BSD, iOS, Linux, OS X, Microsoft Windows, Unix-like , IBM z/OS, distributed / web based etc.* |
| S5 | Installation requirements & dependencies |  |
| S6 | If available Link to user manual - if formally published include a reference to the publication in the reference list | *Example http://mozart.github.io/documentation/ or* |
| S6 | Support email for questions |  |

# B2 Current code version

# *Ancillary data table required for subversion of the codebase. Kindly replace examples in right column with the correct information about your current code, and leave the left columns as they are*

# *Table 2 – Code metadata*

|  |  |  |
| --- | --- | --- |
| **Nr** | **Code metadata description** | ***Please fill in this column*** |
| C1 | Current Code version | *For example v42* |
| C2 | Permanent link to code / repository used of this code version | *For example : https://github.com/mozart/mozart2* |
| C3 | Legal Code License | *List one of the approved licenses* |
| C4 | Code Versioning system used | *For example svn, git, mercurial, etc. put none if none* |
| C5 | Software Code Language used | *For example c++, python , r, etc.* |
| C6 | Compilation requirements, Operating environments & dependencies |  |
| C7 | If available Link to developer documentation / manual | *For example : http://mozart.github.io/documentation/* |
| C8 | Support email for questions |  |