To create a new component, the CmpTemplateEmpty component can be used as a starting point. The CmpTemplateEmpty is included in the runtime system delivery.

To copy and rename the files, you have two possiblities:

1) (recommended method): you can use the Python script gen\_cmp\_from\_temp.py. To run the script, you need Python installed. The script can be used like this:

gen\_cmp\_from\_temp [-h] [-t TEMPLATE] [-c CMPNAME] [-a TRGARCH]

TEMPLATE is the template component name which is used for generating component/driver.

CMPNAME is the name for the target component

TRGARCH is the target architecture, options (only capital letter): X86 | PPC | ARM | CORTEX.

• Open a command prompt (DOS/shell) and go to the runtime Templates folder (e.g. D:\SVN\CodesysSpV3\trunk\CodesysSpV3\Templates)

• Run >gen\_cmp\_from\_temp -t CmpTemplateEmpty –c CmpTest

This will create a new folder with the given name.

2) copy and rename the files by hand, please follow these steps:

• Copy the CmpTemplateEmpty folder and rename the folder to the new component name.

Delete all files from your component folder, except: CmpTemplateEmpty.c CmpTemplateEmptyDep.m4

CmpTemplateEmptyItf.m4 CmpTemplateEmptyItf\_m4.bat

CmpTemplateEmptyItf\_m4.bat

• Rename all files to the new component name (e.g. CmpTest): CmpTemplateEmpty.c -> CmpTest.c CmpTemplateEmptyDep.m4 -> CmpTestDep.m4 CmpTemplateEmptyItf.m4 -> CmpTestItf.m4 CmpTemplateEmptyDep\_m4.bat -> CmpTestDep\_m4.bat CmpTemplateEmptyItf\_m4.bat -> CmpTestItf\_m4.bat

• Open the CmpTestItf\_m4.bat file and replace the CmpTemplate component name with the new component name. If you have changed the directory structure, you have to adapt the path to the m4 build utils in the \*.bat files, too. **Note:** If you change the path to the “BuildUtils”, make sure to be aware of the two different kind of slashes (‘/’ and ‘\’) which are used. If you are using absolute paths, you can use syntax like this for the paths with the forward slashes: d:/CODESYSSpV3/BuildUtils/.../...

**Note:** The M4 tools need an empty directory named “etc” in “BuildUtils/msys/etc”. If this doesn’t exist, you need to create it.

Now, execute the modified CmpTestItf.bat file. This will generate a new, non-empty \*Itf.h file. If there is now new \*Itf.h file or the file is empty, the component name or the path to the m4 build utils is not correct.

• Do the same with the CmpTemplateDep\_m4.bat file. If everything is correct, you will get a new \*Dep.h and a new \*.cpp file. Both files must not be empty.

• Change the Component Information in \*Dep.m4: a. Set the new component name in the SET\_COMPONENT\_NAME macro.

b. Set the name of the c file in the COMPONENT\_SOURCES macro. List all c files separated with commas.

c. Set the component version in the COMPONENT\_VERSION macro.

d. Set the component vendor ID -》 0x1644.

**Note:** Every vendor gets an ID from 3S. The value 0x0000 is the 3S vendor Id and should not be used.