

4.9.4

Applicable User Manual:

- Power User Manual v4.9.3

No modification

4.9.3

Applicable User Manual:

- Power User Manual v4.9.3

Modifications:

- Fixed a bug for "Diff" and "Division" components. Connectors were reversed if not connected in the right order.
- Powcmp directory can be defined with a Systema setting
- TRANS_UT solver fixed to update the temperature at the last iteration

4.9.2P2

Applicable User Manual:

- Power User Manual v4.9.2

No modification

4.9.2P1

Applicable User Manual:

- Power User Manual v4.9.2

No modification

4.9.2

Applicable User Manual:

- Power User Manual v4.9.2

Modifications:

- A new python method (checkSchematicNodeNumbers) to perform node number checks is available. This aims at testing the uniqueness of electrical and thermal node numbers in the whole model (meshing + schematic). The method reports all numbering errors found. Here is an example to use this method from the GUI:

```
from syslib import *
meshingFile = getCurrentMeshingFile()
schematicFile = getCurrentSchematicFile()
thermalNodeErrors, electricalNodeErrors = checkSchematicNodeNumbers(schematicFile, meshingFile)
if len(thermalNodeErrors) > 0 or len (electricalNodeErrors):
    if len(thermalNodeErrors) > 0:
        print "Thermal nodes not found in the meshing file :"
        print thermalNodeErrors
    if len(electricalNodeErrors) > 0:
        print "Electrical nodes found in the meshing file :"
        print electricalNodeErrors
else :
    print "No numbering error found"
```

- Solar Array component: it is now possible to use "Tfront" in the flux formula to refer to the thermal node number of the solar panel. The default formula "(QS:Tfront + QA:Tfront) / A:Tfront / ALP:Tfront" will be correctly interpreted by the solver without having to replace the substring "Tfront" with the corresponding thermal node number. It is also possible to use "Tfront" in the Panel Area field. The default value is "A:Tfront".
- A new Thermisol variable (UCSV_FREQ) is now available to change the frequency at which the power report is written in the csv control file.
- It is now possible to export advanced variables defined in a schematic diagram to the pow.nwk file (see Power User Manual for more details)
- Temperature port of components now allows to define temperature value as variable. It is now possible to enter a string instead of a value for the temperature and capacitance parameters. Please, note that the down compatibility of python script is not ensured. Python scripts that accessed to these properties must be modified. The following code shows how to get/set this parameter whatever its type (so to have a python script compatible with old and new versions):

```
try :
    val = parameter.getValue(categoryName, "Temperature")
except ValueError:
    val = parameter.getString(categoryName, "Temperature")
try :
    parameter.setValue(categoryName, "Temperature", value)
except ValueError:
    parameter.setString(categoryName, "Temperature", str(value))
```

- Component errors occurring during Thermisol computation are now better reported in the GUI console.
- The management of the tracability of components is improved. A new python script is available to make the copy of a schematic file and all related files (.powcmp, .sysapp and .jpg files) in a given folder. This will help to provide a schematic file with the appropriate dependencies.

Corrections:

- Fixed a crash of Pre-processing when Tfront is not defined in the schematic. Now an error is raised.

4.9.1

Applicable User Manual:

- **Power User Manual v4.9.1**

Modifications:

- Release of BCR BDR component
- Standard battery : Fix of an issue about the SoC so that it is consistent with the sign of the current
- Standard battery : Computation of Vbat fixed

4.9.0

Applicable User Manual:

- **Power User Manual v4.9.0**

New features:

- Release of a new commercial library of components (primary and secondary sources, regulator and basic components like resistance, diode, etc ...)
- Possibility to use a txt file as input of a component for time dependent parameters (example : time dependent power profile as input of the Power Load component)

4.8.3P1

Applicable User Manual:

- **Systema User Manual v4.8 (for the schematic)**
- **Thermisol User Manual v4.8 (for the solver)**

Correction:

- Correction of a bug when using the OUTINT variable and the \$OUTPUT paragraph with the TRANS_UT solver: the storage frequency in the H5 file was not the right one.
- Bug fix in the SDS/HDF5 library (h5 close on Windows)

4.8.3

No modification between v4.8.2 and v4.8.3 for the Power application.

4.8.2

Correction:

- Correction to avoid cyclic IN/OUT connection errors. For example, it is now possible to connect a Linear regulation box to two MMPT (MEA connector) without error.

4.8.0

First POWER V4 release

Based on the **Systema V4** framework, Airbus DS has developed an application for solving power systems. This application is based on the Thermisol solver and on a new Systema tab for the design of the schematic.