

Manual Restart.pl

General description:

The script 'restart.pl' is a script for creating restart simona input files and a runscript. The created restart Simona input files are based on a template Simona input file which contains fields that are filled with values from the base Simona input file.

For each restart time in the base Simona input file a restart Simona input file is created by 'restart.pl'.

The script 'restart.pl' also creates a runscript 'restart.run' with which the waqua pre-processor, obs2sds and the waqua processor can be started for each created Simona input file.

Working order

Below the steps to use the 'restart.pl' script:

- To start you need a base Simona input file, a file with observations and a template Simona input file.
- Start the script 'restart.pl' and specify the base Simona input file, Simona input template file, the file with observed data and the simulation time for restart experiments.
- Adapt the created runscript 'restart.run' if necessary.
- Start the runscript 'restart.run'

Running restart.pl

The 'restart.pl' script is started from the command line. At the command line four parameters can be defined. To start 'restart.pl' type:

```
restart.pl -input <base siminp file> -obsfile <observation file> -template <template file> -  
simtime <integer value>
```

parameters:

name	type	description
• input	File	The base Simona input file.
• obsfile	File	The file with the observed data.
• template	File	The template for the restart Simona input files
• simtime	integer	Simulation time for restart simulations. The value is the time in minutes between TSTART and TSTOP.

When a parameter is not defined at the command line or has an illegal value, 'restart.pl' will ask for it. 'restart.pl' will ask for a parameter until it has a legal value.

Remark: the value of "simtime" will be limited in a restart simulation input file in order to not exceeding the original TSTOP value in "input".

Running the runscript 'restart.run'

The runscript is started at the command line by typing:

```
restart.run
```

Adapting the runscript 'restart.run'

The runscript 'restart.run' contains a section where variables are defined. The behaviour of the runscript can be changed by changing the values of these variables. This section contains the following variables:

- Runid The runid of the base Simona input file
- obsfile The name of the file with observation data
- tfrestart With tfrestart the restart Simona input files can be specified which will be processed by the runscript. With tfrestart the lower boundary is specified.
- tirestart Tirestart contains the interval between two restart Simona input files. By changing the value of tirestart you can make the runscript skip restart

- `tlrestart` Simona input files. With `tlrestart` the restart Simona input files can be specified which will be processed by the runscript. With `tlrestart` the upper boundary is specified.
- `init` The variable `init` specifies if the base simulation must be run or not. When it has value "Y" the base simulation is run. When it has another value the base simulation will not be run.
- `debufsize` Variable `debufsize` contains the (default) buffersize with which the pre-processor and processor will run.

Names of files

There is a system in the names of the Simona input files and the corresponding SDS files. The script 'restart.pl' starts with the base Simona input files, which filename it divides into two parts:

`<name>.<runid>`.

The name part are the characters before the last dot, the `runid` part are the characters after the last the dot. This `runid` part is reused for the files that are created by the script 'restart.pl' and runscript 'restart.run'.

The script 'restart.pl' makes a copy of the base Simona input file which will have the name: `siminp.<runid>_init`.

The SDS file created from this file gets the name:

`SDS-<runid>_init`

The restart Simona input files get the name:

`siminp.<runid>_<restart time>`

The SDS files created from these files get the name:

`SDS-<runid>_<restart time>`.

Creating a template Simona input file

A template Simona input file is a normal Simona input file, except that it contains fields instead of values at some places. These fields will be filled by 'restart.pl'.

A field in a template Simona input file looks like this: `<FIELDNAME>`.

The following fields can be used for constructing a template Simona input file:

- `<SDS>` The SDS file the restart information comes from.
- `<EXP_RESTART>` The name of the experiment the restart information comes from.
- `<EXPERIMENT>` The name of the experiment. The value of the field is the extension part of the filename of the corresponding restart Simona input file.
- `<TSTART>` The value of TSTART of the restart experiment. This value is a restart time from the experiment with restart information.
- `<TSTOP>` The value of TSTOP of the restart experiment. The value of `<TSTOP>` is the value of `<TSTART>` plus the value of command line parameter 'simtime'

The place to use the fields `<SDS>` and `<EXP_RESTART>` is at the keyword 'RESTART'.

Example:

```
RESTART
    EXP_restart = <EXP_RESTART>
    SDS_restart = <SDS>
```

The place to use the field `<EXPERIMENT>` is at the keyword 'IDENTIFICATION'.

Example:

```
IDENTIFICATION
    EXPERIMENT = <EXPERIMENT> OVERWRITE
```

The place to use the field `<TSTART>` and `<TSTOP>` is at the keyword

'FLOW/PROBLEM/TIMEFRAME'

Example:

FLOW

PROBLEM

TIMEFRAME

DATE='13 dec 1997' , TSTART=<TSTART> , TSTOP = <TSTOP>

Except for the fields, the template Simona input file is a normal Simona input file. When you create a template Simona input file, it must be a correct Simona input file.

Files involved in schematic form

