

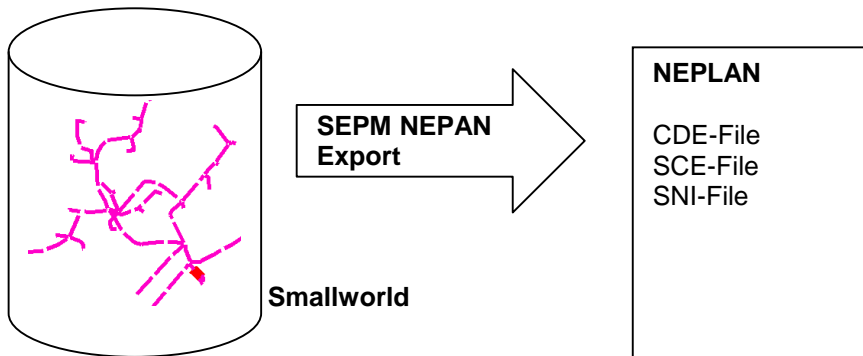


SEPM NEPLAN Interface

Export Smallworld data to NEPLAN®

The SEPM NEPLAN Interface exports data from Smallworld electricity applications to NEPLAN to use them for arbitrary network calculations for low or medium voltage networks:

- ❖ Calculation and approval of new or changed networks
- ❖ Simulation of the impact of local electricity producer on the medium tension network
- ❖ Short circuit and load flow calculations
- ❖ Selectivity analysis
- ❖ etc.



Example:

Smallworld	NEPLAN (MS/NS Export Mode)
<p>Define the export area in the GIS</p>	<p>The medium tension network is exported as 'Diagram 0'. For each transformer station, a partial network is placed on a separate NEPLAN-diagram for clarity At the transition medium voltage to low voltage a NEPLAN meter is generated.</p>

Functionality

+ Eliminate switches

If activated, objects between feeder and the busbar and between transformer and busbar are eliminated. An switches in this path are set as logical switch on the corresponding NEPLAN lines and transformers.

This feature significantly reduces the number of objects that are copied to NEPLAN and can be used to model the medium voltage network.

+ Busbar-Mode

Export busbars as a line (Busbar) or point (Node).

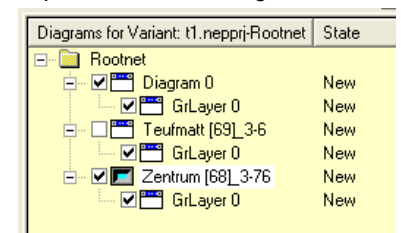
+ Combine spliced cables

Consecutive cables are combined into a line with associated line sections.

If the 'priority' is known for each cable type, then the weakest cable is determined and used for the line's cable type.

+ Internal diagrams

Internal diagrams can be 'projected' into the GIS view or exported as a separate NEPLAN diagram:



+ Settings

All algorithms and settings can be saved as a configuration for the SEPM Simple GUI.

+ Export Modes

The following export modes are available:

Export area + Predicates

Objekte innerhalb der Hilfslinie werden exportiert.

Abfragen können den Export einschränken.

Full database + Predicates

The complete database is exported (e.g. only medium voltage).

Network trace

For example all objects that are connected to a low voltage busbar..

MS/NS

Export area + network traces for all stations inside the export area. For each partial network a NEPLAN diagram is generated for clarity.



SEPM NEPLAN Import

The NEPLAN ASCII-Interface (CDE- and SCE-files) only covers basic information. **SEPM NEPLAN Import** is a NEPLAN extension to import arbitrary attributes of NEPLAN objects. The identifier of the NEPLAN-Objects is needed as well as the internal name of the attribute and new value:

As an example, the actual tap position of a transformer should be changed. The NEPLAN documentation identifies this attribute with the internal name 'Tapakt':

Tapmax	integer	Max. Tap position
Tapakt	integer	Actual tap position
Auswertung	integer	Evaluation according

```
SEPM_NEPLAN_IMPORT      1.0
UPDATE TRANSFORMER     TRA736 Tapakt Integer 2
```

When this SNI-file is imported with the *SEPM NEPLAN Import* the tap position of transformer TRA736 is set to '2'. This data path permits import of arbitrary data from GIS or asset management packages to NEPLAN.

SEPM NEPLAN Update

The **SEPM NEPLAN Update** is used to update an existing NEPLAN project with fresh data from the GIS.

The following workflow is supported:

- ❖ An initial export is done from the GIS to NEPLAN (for example the complete medium tension network)
- ❖ The GIS plays the role of the 'master': objects are inserted, changed or deleted
- ❖ In NEPLAN only the geometry is changed
- ❖ Regularly (e.g. monthly) the current data is exported from the GIS to the CDE-format. The *SepmNeplanUpdate.dll* NEPLAN extension is now used to update the NEPLAN project

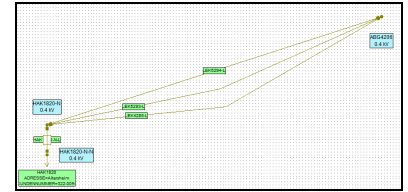
The following rules apply when updating a NEPLAN project:

- ❖ If the GIS object already exists, the attributes *Description*, *Un*, *Type* and *Length* are updated.
- ❖ If the GIS object does not yet exist, it is created in NEPLAN and placed at the edge of the diagram. The user can now drag it to a suitable position.
- ❖ If an object exists in NEPLAN, but not in the GIS, then it is shown in Log file. The user must now manually delete the object in NEPLAN.

Functionality (continued)

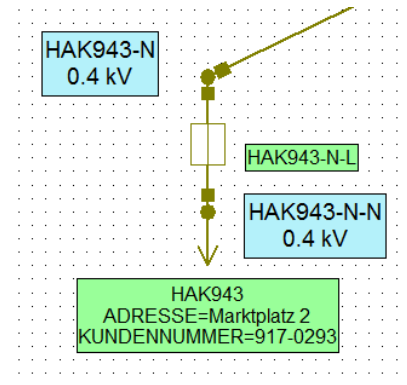
+ Parallel cables

Parallel cables are pulled apart to show them visually in NEPLAN.



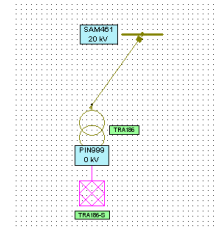
+ Fuses

Optionally fuses are generated at loads (for selectivity analysis).



+ Additional objects at transformers

Optionally additional feeders, loads and measurement devices are generated for transformers.



+ User Data

NEPLAN user data variables can be configured (for example to show the customer address at loads).

Supported Applications

NIS Strom 4.0 and 4.2

Selection of the objects

Through network tracing
Inside the trail
Through database queries
(e.g. only medium tension)

Prerequisites

Topologically correct network
Consistent capture of the status
Mapping of the GIS cable types to the NEPLAN cable types.

Please contact SEPM, if you would like to use the SEPM NEPLAN interface with another application!