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& **P**roject **M**anagement

## **SEPM Products Release 2012-02**

**New Features**

## Document Data

Key	Value
Abstract	This Document describes new features in the SEPM products 2012-02
Version	2012-02 - June 2012

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# 1 Overview

This document describes new features and data models available in the products **SEPM X-Translator**, **SEPM X-Raster**, **SEPM X-Database** and **SEPM Interfaces** at version **2012-02**.

## 1.1 Changes Overview

### 1.1.1 SEPM X-Translator

The following functionality is new

- ❖ Improvements of the GUI; improvements in various formats
- ❖ Import of **DXF/DWG DIMENSION entities**
- ❖ **'Mapping Predicates'** can be used to load only a subset of the source data
- ❖ **German translations** in the X-Translator database
- ❖ New objects **'Export Area'** and **'Invalid Area'** in the X-Translator database

### 1.1.2 SEPM X-Raster

The class 'sepm\_tiff\_exporter' is now a part of SEPM X-Raster. This can be used to unload 8-Bit rasters stored internally as **ds\_grid\_pyramid** to TIFF files.

### 1.1.3 SEPM NEPLAN Interface

The following functionality is new

- ❖ A new **Combined 'Export-Area' / 'Trace'** Export Mode
- ❖ **Generic configuration** of the SEPM NEPLAN Import
- ❖ Small improvements and bug fixes

#### **1.1.4 SEPM SIA 405 Interface**

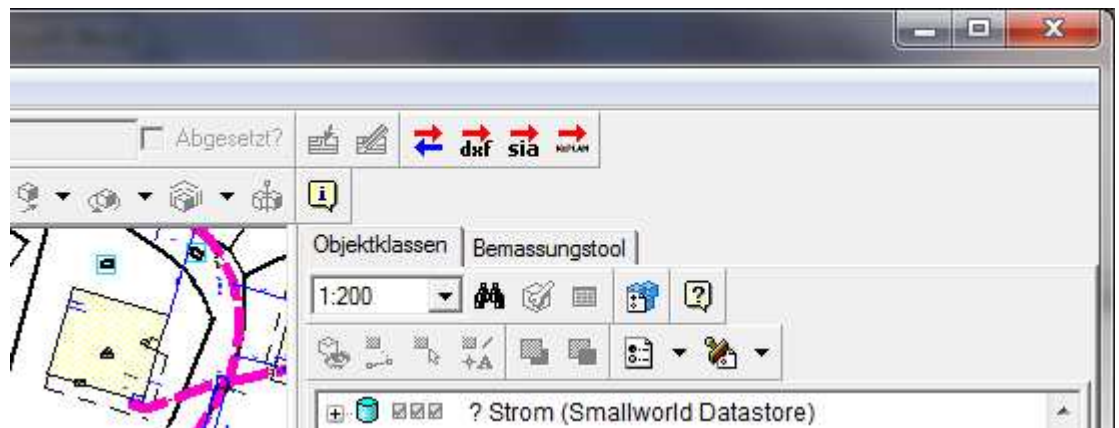
The following interface is now also part of this product:

- ❖ Export from NRM-Wastewater into the ***Sia405 Wastewater model 2008***

## 2 SEPM X-Translator

### 2.1 User Interface

#### 2.1.1 New Icons

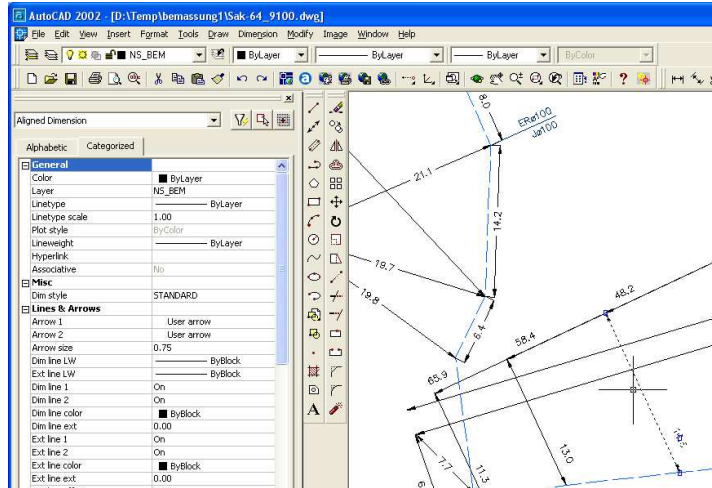


New icons are available to launch the **SEPM X-Translator** through a toolbar. It is also possible to define an icon per Simple-GUI-configuration. Icons for the SEPM Sia405 and NEPLAN interfaces have been created.

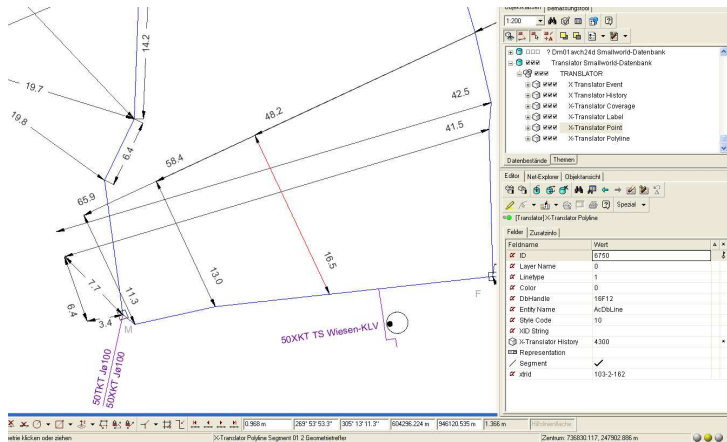
## 2.2 DXF/DWG

### 2.2.1 Import of DXF/DWG Dimensions

Import of DIMENSION entities is now supported.



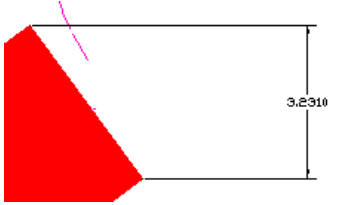
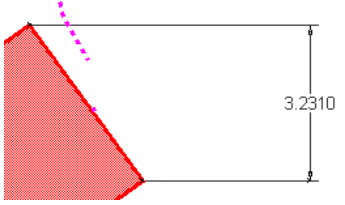
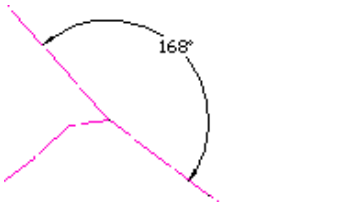
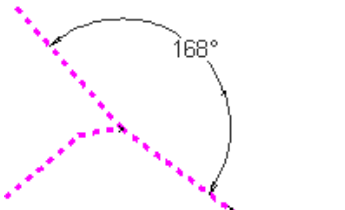
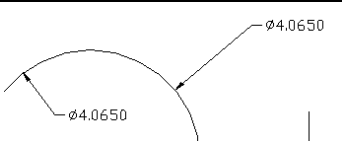
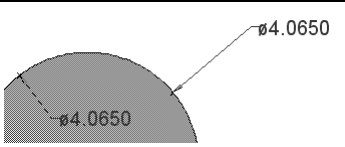
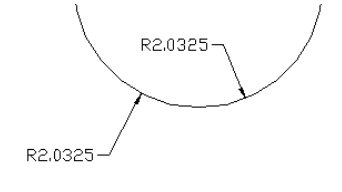
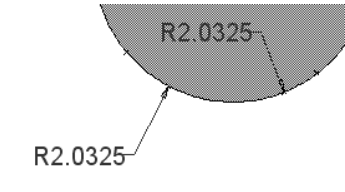
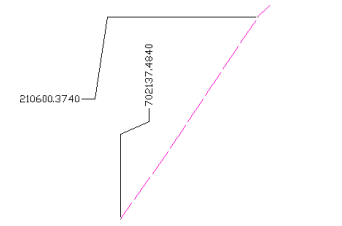
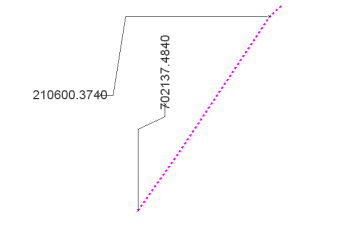
*DXF with dimensions...*



*...imported into the SEPM X-Translator database*

Dimension Type	Representation in AutoCAD	Imported in the X-Translator DB
Aligned Dimension		



Rotated Dimension		
Angular Dimension		
Diametric Dimension		
Radial Dimension		
Ordinate Dimension		

Dimensions are hold in a DXF file redundantly: Once as entity DIMENSION with the actual dimensioning data, then as associated blocks covering the graphic representation of the dimension.

The SEPM X-Translator maps the graphic data of the associated blocks to simple area-, line- and text-geometries. This method leads to a similar representation of the dimensions in the X-Translator database when compared to the original.

A semantic transfer of the DXF-dimensions is not possible, however (e.g. import of DXF-dimensions to Smallworld-dimensions).

### 2.2.2 Evaluation of 'Attribute is invisible'

When block attributes are imported, the DXF group code 70 is now evaluated so that the value "1" (meaning "Attribute is invisible - does not appear") no text geometries are created.

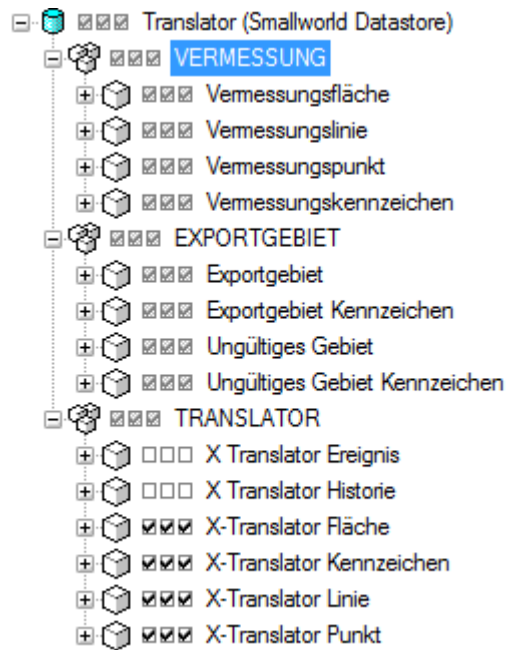
## 2.3 X-Translator Database

### 2.3.1 New Objects 'Export Area' and 'Invalid Area'

The new collection **Export Area** can be used to implement a **Multi-Export-Functionality**.

The collection **Invalid Area** is available for the use case to flag certain areas as 'invalid' in the scope of a query application.

### 2.3.2 Translations



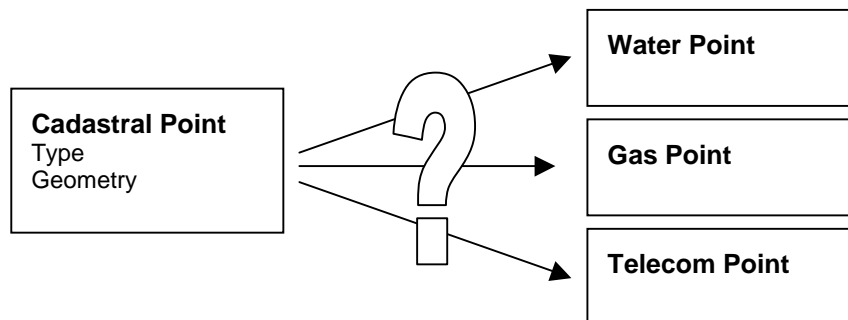
German translations (files with a \*.trn extension) are now included in the module **x\_translator\_dm**.

## 2.4 Mapping Predicates

### 2.4.1 Description

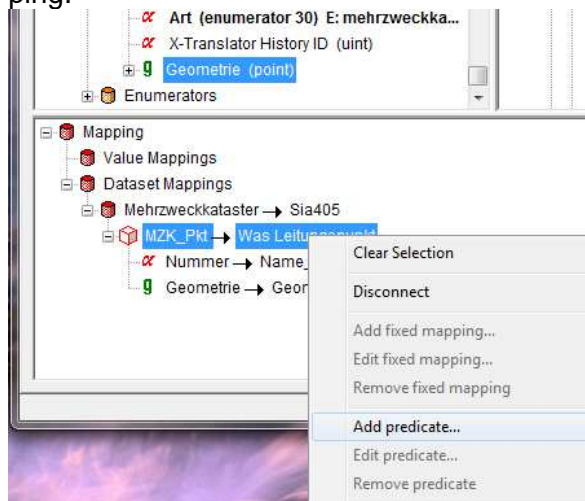
'Mapping Predicates' can be used to load only a subset of the source data. They must be applied to an existing collection mapping.

As an example, from the source collection **Cadastral Point** only those objects should be loaded into the target collection **Water Point** that have a certain value in the source attribute *Type*:

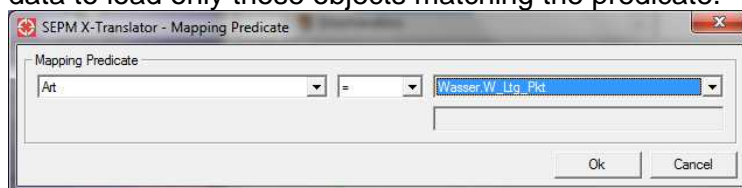


The commands **Add Predicate...**, **Edit Predicate...** and **Remove Predicate** are used to formulate such restrictions. The following steps are required:

- ❖ Create the collection mapping as usual
- ❖ Select **Add Predicate...** with the right-mouse-menu on the collection mapping:



- ❖ The *Mapping Predicate* window now lets you define queries on the source data to load only those objects matching the predicate.



The following operators are available:

Operator	Description
=	equal
!=	not equal
>	greater than
>=	greater or equal than
<	smaller
<=	smaller or equal than
matches	Source attribute is converted to a string and then matched to the given test string. Use '*' for wildcards, e.g. Water*

If more than one mapping predicates are defined, they are interpreted as logical 'or', so that any object matching at least one of the predicates are imported.

## 2.4.2 Example

Objects in the INTERLIS model below should imported into different target collections in the **SEPM X-Database SIA 405**:

### Model:

```

TOPIC Mehrzweckkataster =

  DOMAIN
    MZK_Art = (
      Wasser
        (W_Ltg_Pkt, W_Schieber, W_Schieber_Schacht, W_Hydrant, W_Hydrant_Unterflur),
      EW
        (E_Ltg_Pkt, E_Schacht, E_Mast, E_Verteiler_Pkt, E_Beleuchtung),
      ... );

  TABLE MZK_Pkt =
    Nummer: TEXT*12;
    Geometrie: LKoord;
    HoeheGeom: OPTIONAL Hoehe;
    Qualitaet: Qualitaetsstandard;
    Art: MZK_Art;
  IDENT Nummer, Geometrie;
  END MZK_Pkt;

END Mehrzweckkataster.

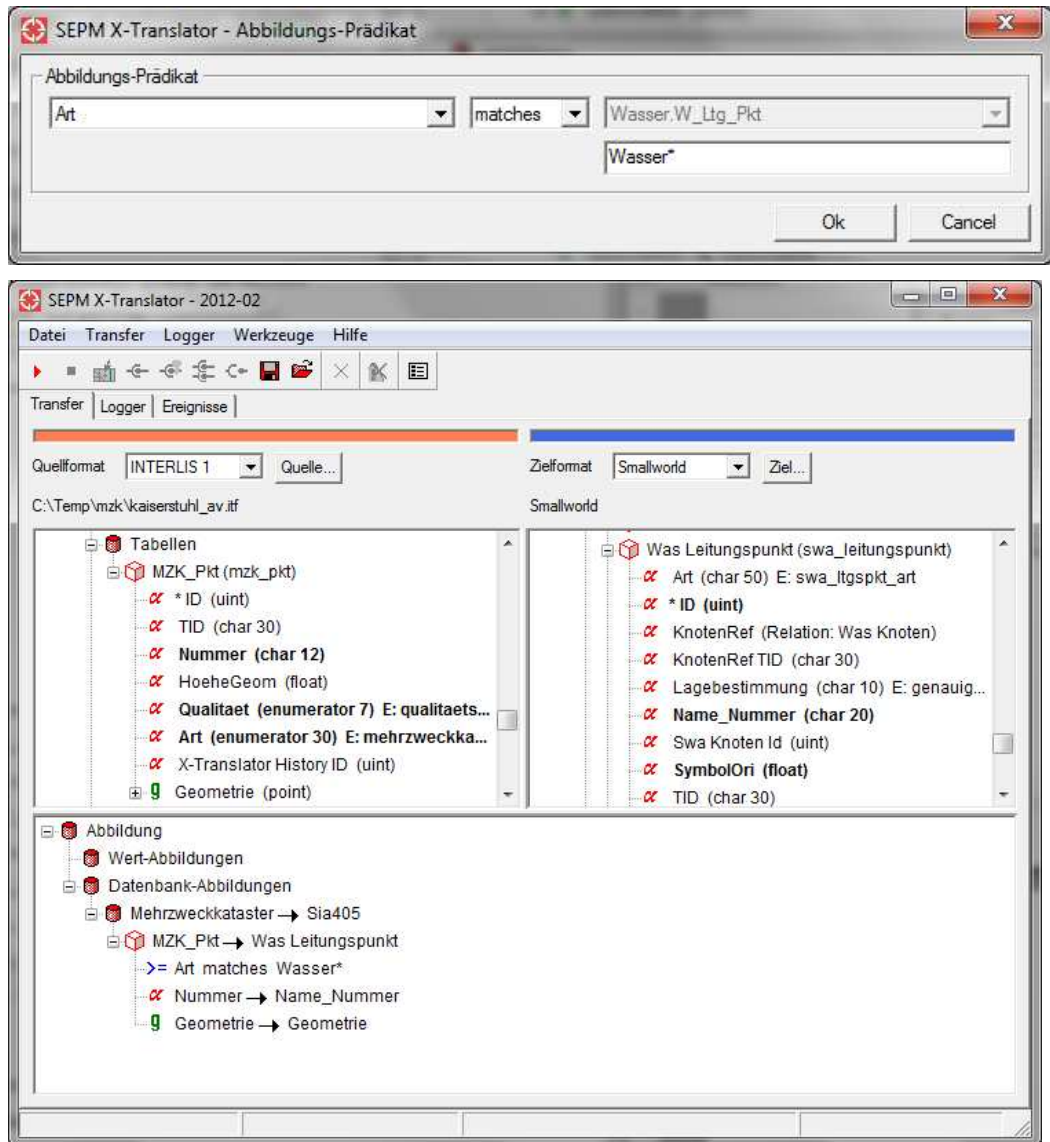
```

### Data:

```

TOPI Mehrzweckkataster
TABL MZK_Pkt
OBJE 144000001 808500106 673741.611 268896.952 @ 0 8
OBJE 144000002 808500107 673741.129 268897.215 @ 0 8
OBJE 144000003 808500108 673740.361 268895.812 @ 0 8
OBJE 144000004 808500109 673740.844 268895.548 @ 0 8
OBJE 144000005 808500006 673582.138 269081.956 @ 0 12
OBJE 144000006 808500007 673590.815 269079.221 @ 0 12
OBJE 144000007 808500040 673732.672 269177.927 @ 0 12
OBJE 144000008 808500050 673762.750 268743.847 @ 0 12
...

```



With these configurations only those objects of the source 'MZK\_PKT' collection are imported that match the attribute *Art* to the string *Water\**

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## 3 SEPM X-Raster

### 3.1 Raster Export

#### 3.1.1 TIFF Export

The class 'sepm\_tiff\_exporter' developed by SEPM is now part of the product **SEPM X-Raster**. This can be used to unload 8-Bit rasters stored internally as *ds\_grid\_pyramid* to TIFF files.

## 4 SEPM NEPLAN Interface

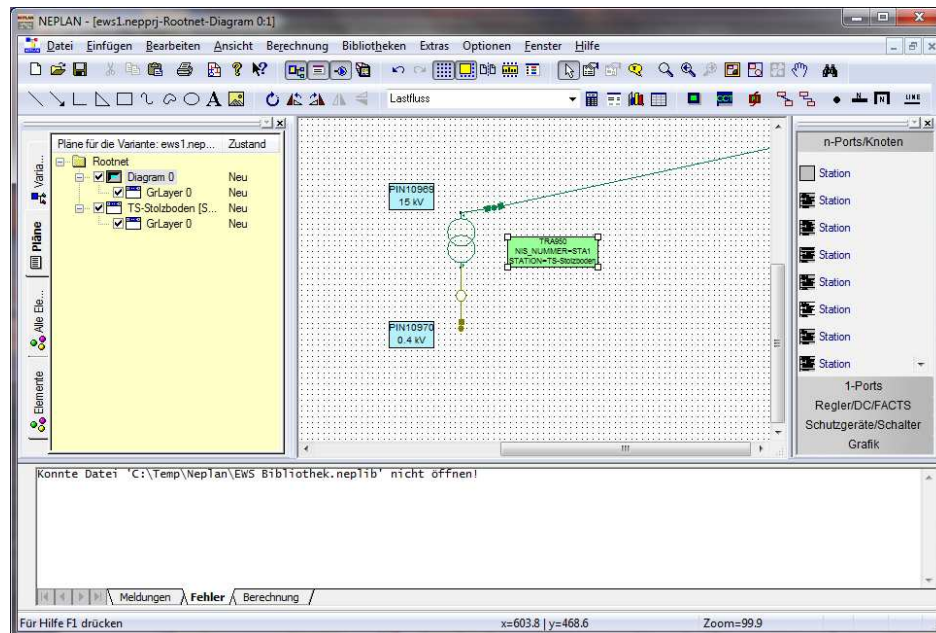
### 4.1 Combined 'Export-Area' / 'Trace' Export Mode

#### 4.1.1 Overview

This new export mode works in two steps:

1. First objects inside the export area are collected.
2. If there are any transformers, a tracing is performed on the secondary side; all objects found are then associated to a separate NEPLAN Diagram.
3. At the transition from medium voltage to the distribution network a NEPLAN Measurement object is created.

#### 4.1.2 Example



'Diagram 0' contains the medium voltage network; the distribution network connected at the transformer's secondary side is contained in the diagram 'TS-Stolzboden'.

## 4.2 'SEPM NEPLAN Import' Configuration

### 4.2.1 Overview

The **SEPM NEPLAN Import** can now be configured for arbitrary variables accessible through NPL (NEPLAN Programming Library). This can be used to load almost any kind of the data into a NEPLAN project, even such data that is not covered by the NEPLAN-GIS-interface.

This functionality requires a NEPLAN NPL license.

### 4.2.2 Example 'Transformer' - 'Actual tap position'

The NEPLAN documentation specifies the *Actual tap position* variable for the electric transformer:

Tapmax	integer	Max. Tap position
Tapakt	integer	Actual tap position
Auswertung	integer	Evaluation according to (0:Current, 1:Power)

*NEPLAN Documentation*

```

_pragma(classify_level=advanced,topic={x_translator},usage=redfinable)
_method nis_el_int_transformer.neplan_tapakt
    ## Parameters :
    ## Returns   :
    ## Function  :

    _return _self.kf_tapakt
_endmethod
$

```

You can now capture this value in the GIS and export it to SNI files with the SEPM NEPLAN interface. Now they can be loaded into NEPLAN with the SepmNeplanImport.dll.

## 4.3 'SEPM NEPLAN Update' Documentation

### 4.3.1 Overview

The **SEPM NEPLAN Update** allows updating a NEPLAN project with fresh data from the GIS. The implemented algorithm is now documented in detail. Examples for all use cases have also been created.

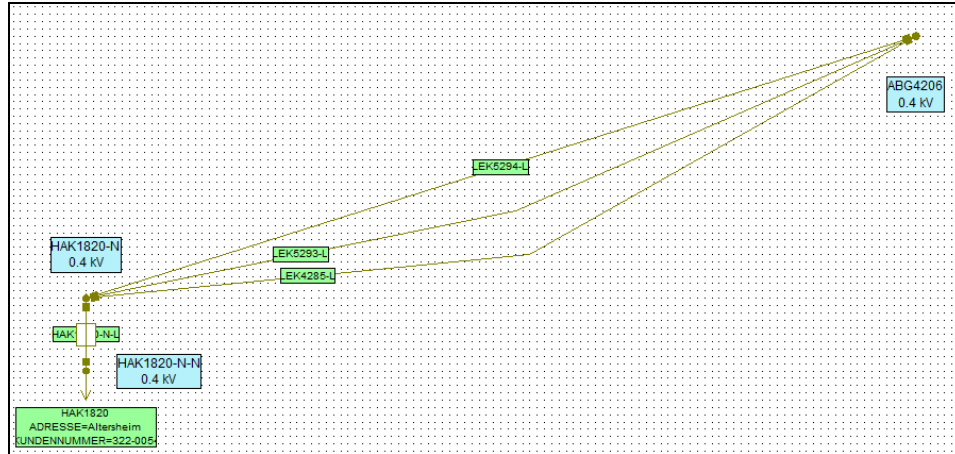
This functionality requires a NEPLAN NPL license.



## 4.4 Other new Features

### 4.4.1 Parallel Lines

Parallel Lines connecting the same nodes now are no longer positioned one over each other, but are separated visually.



*Three Lines go from ABG4206 to HAK1820*

### 4.4.2 Improved Configuration

The configuration has been improved in the following areas:

- ❖ Paths for additional NEPLAN libraries can be configured, for example the path to protection data (PROTECTION\_LIB).
- ❖ Tracing options can be configured.
- ❖ Predefined predicates have been defined ('ms', 'ms1', 'ns', 'ns1') to simplify the configuration of sets of voltage levels for export configurations.

---

## 5 SEPM SIA 405 Interface

### 5.1 User Interface

#### 5.1.1 OID Prefix

Some authorities ask for a separate OID prefix (see Web-Service on [www.interlis.ch](http://www.interlis.ch)) per data transfer.

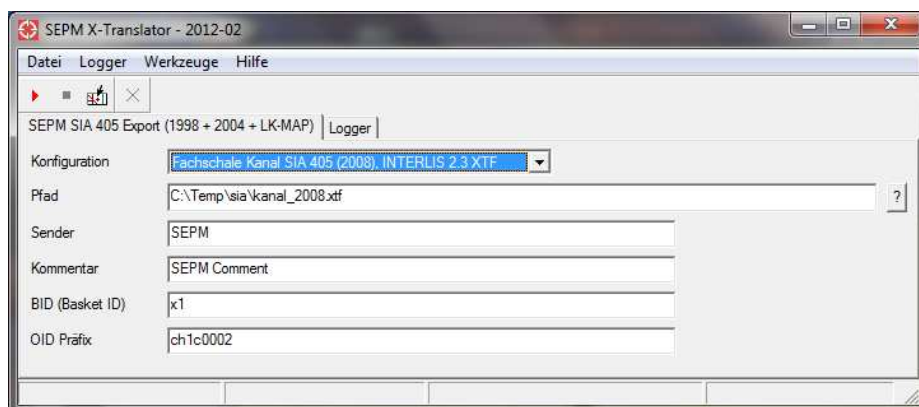
It is now possible to enter this prefix in the SEPM Simple GUI.

### 5.2 NRM Wastewater

#### 5.2.1 New export to the "SIA405 Wastewater 2008" model

The SEPM **SIA 405 Export Interface** now contains an export configuration for the application NRM Wastewater for the *SIA Abwasser Modell2008 in INTERLIS 2.3 (SIA405\_Abwasser\_2008\_2\_d.ili)*.

The mapping covers the required network topology through the tables *Haltung*, *Haltungspunkt* and *Abwasserknoten* and also includes the objects *Normschacht*, *Kanal* and *Spezialbauwerk*.



Simple GUI configuration for NRM Wastewater