ISY CAD

Export PDMS

For Inventor

User's manual

Versjon 1.X.X

Norconsult Informasjonssystemer

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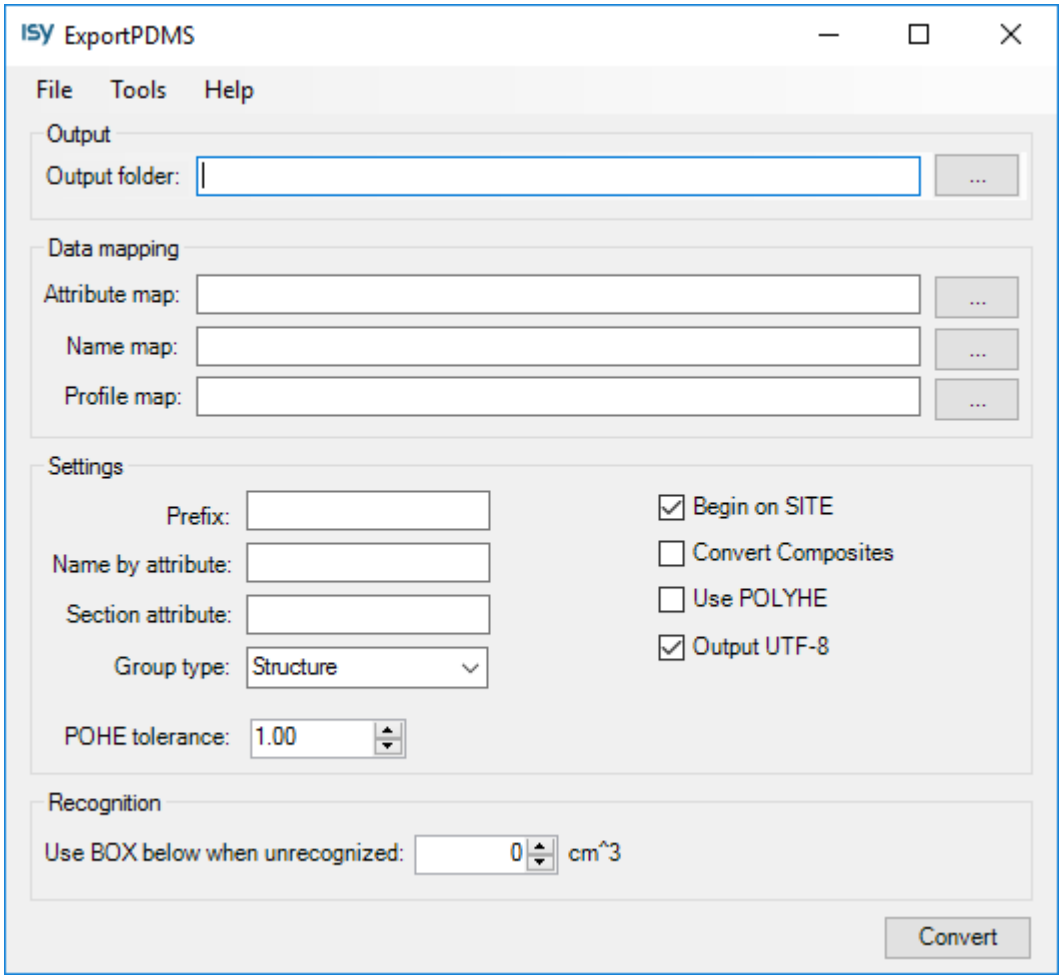
Content

1 Introduction

1.1 General



Export PDMS is a plug-in for Inventor (2014-2017).

The application converts Inventor assembly and part files into the PDMS DataL Macro file format.

1.2 Export PDMS element mapping

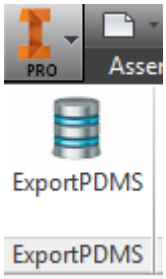
Inventor object types	PDMS object types
Assembly files	Assembly files are converted to PDMS ZONE or STRU elements, and named by the source assembly files.
Part files	Part files referenced in the assembly file are converted to PDMS STRU or SUBS elements and named by the source part files.
Beams and Columns	Beams and Columns can be converted to PDMS SCTN elements by using profile mapping
Any 3D solid	Basic PDMS primitives (BOX/CYLI/EXTRU/etc)

1.3 Settings

Prefix	Adds a prefix in front of all names
Name by attribute	Overrides the name of an element if any value exist in the defined attribute
Section attribute	Selects which iProperty that contains the section attribute value
Group type	Choose the PDMS group type (EQUIPMENT/STRCUTURE)
Begin on SITE	The first PDMS element created is a SITE, if not a ZONE.
Convert Composites	Switch to toggle conversion of composites (surface elemnts) in addition to Solids
Use POLYHE	Writes both a POLYHE and POHE elements to the MAC file. When imported to PDMS only one of the types will be imported. Preferably POLYHE.
Output UTF-8	Outputs MAC file on the UTF-8 format.
POHE Tolerance	A lower number increases the number of triangles used in POHE elements (unrecognized elements). Allowed range (0.00, 10.00).

1.4 Starting the application

The application starts from the Inventor Add-In ribbon. Please note that the ExportPDMS Add-In is only available if the active document is either a PART or an ASSEMBLY document.



1.5 Data mapping

ExportPDMS can map the following data. Attributes, steel sections and names.

1.5.1 Steel section mapping

Export PDMS will attempt to map sctructural beams and columsn to SCTN elements in PDMS. In order to do this a steel section profile mapping file is needed.

1.5.1.1 Steel section mapping file

A template mapping file can be created with Tools/Create profile map.

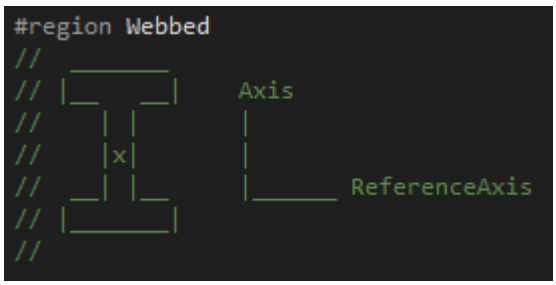
The different columns are as follows:
<profile name>
Name of the profile in Inventor

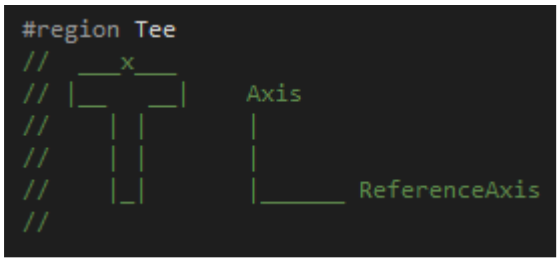
<PDMS spref>
Name of the spref in PDMS

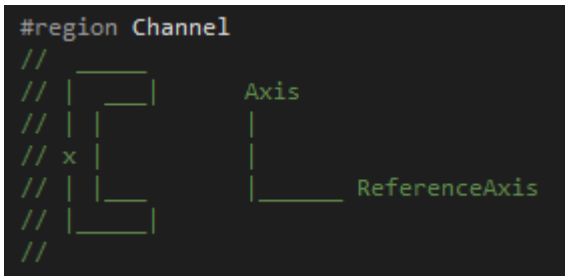
<Flip definition (yes/no)>
Flip/mirror the definition

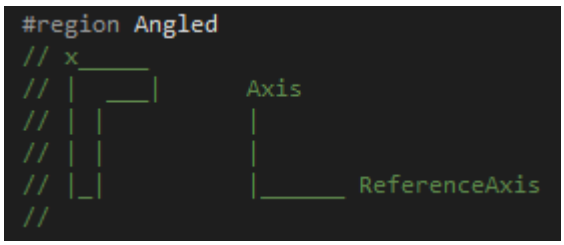
<Design Parameter>
DESP value in PDMS

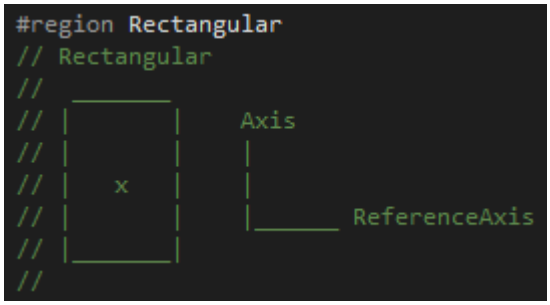
<Base type (Angled/Webbed/Channel/Tee/RectangularHollow/CircularHollow)>
The type of profile. Can be the following. The X represents the PLINE used in PDMS.

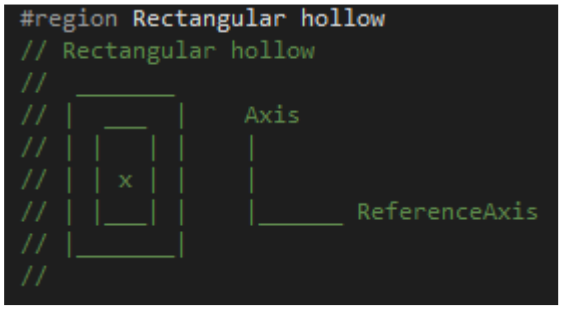












<JUSL name>
JUSL name in PDMS.

<offset rotation>
Offset rotation.

1.5.1.2 Steel section mapping example file

```
# ExportPDMS profile map file
#
#
# <profile name>     <PDMS spref>      <Flip definition (yes/no)>     <Design Parameter>     <Base type
(Angled/Webbed/Channel/Tee/RectangularHollow/CircularHollow)>      <JUSL name>     <offset rotation>
W12X40;  /OPE-W12x40;   no;    ;    Webbed;   TOAX;   0;
W8X67;   /OPE-W8x67;   no;    ;    Webbed;   TOAX;   0;
```

1.5.2 Name Mapping

Any Inventor name can be renamed to a corresponding PDMS name using name mapping. This is usefull if you for instance wish to rename Inventor assemblies to PDMS disciplines (for instance on ZONE level)

1.5.2.1 Name mapping example file

```
# ExportPDMS name map file
#
#
# <Inventor name>      <PDMS name>
430x430;               /TEST_NAME;
420x420;               /TEST_NAME2;
```

1.5.3 Attribute mapping

Any Inventor iProperty can be mapped to PDMS attribute or UDA using the attribute mapping file. Please note that for any attribute to be brought over to PDMS, it must be listed in the attribute mapping file.

1.5.3.1 Attribute mapping example file

```
# ExportPDMS attribute map file
#
#
#<Inventor attribute>          <PDMS attribute>   <data type REAL|INTEGER|TEXT#>     <type>
#-------------------------------------------------------------------------------------------------------------------------------------------
Member no;                     :NOIS_Txt;                TEXT#120;                          STRU&SUBS
Comments;                      :NOIS_Txt;                TEXT#120;                          STRU&SUBS
```

1.5.4 Recognition

ExportPDMS will automatically attempt to recognize Solid elements as PDMS primitives (BOX/CYLI/EXTRU/etc). If recognition fails a POLYHE/POHE element is created as well. By setting the “Use BOX below when unrecognized” to a specific volume in cm^3 any unrecognized Solids will be converted as a BOX instead of a POLYHE/POHE.