Intelligent Fastener 4.0

B&W Roadshow 2017

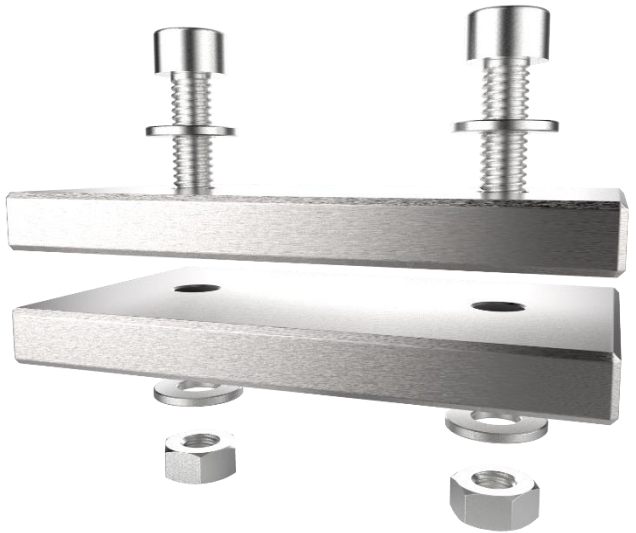
Introduction

- Technical Draftsman
- KSB pumps and valves – Pegnitz
- Mechanical Engineer – Nürnberg
- Since 2002 B&W Productmanager
  - **Intelligent Fastener Extension** / SMARTLibrary
  - SMARTHolechart
  - SMARTOptics
  - Customer Projects

Oliver Gräbner

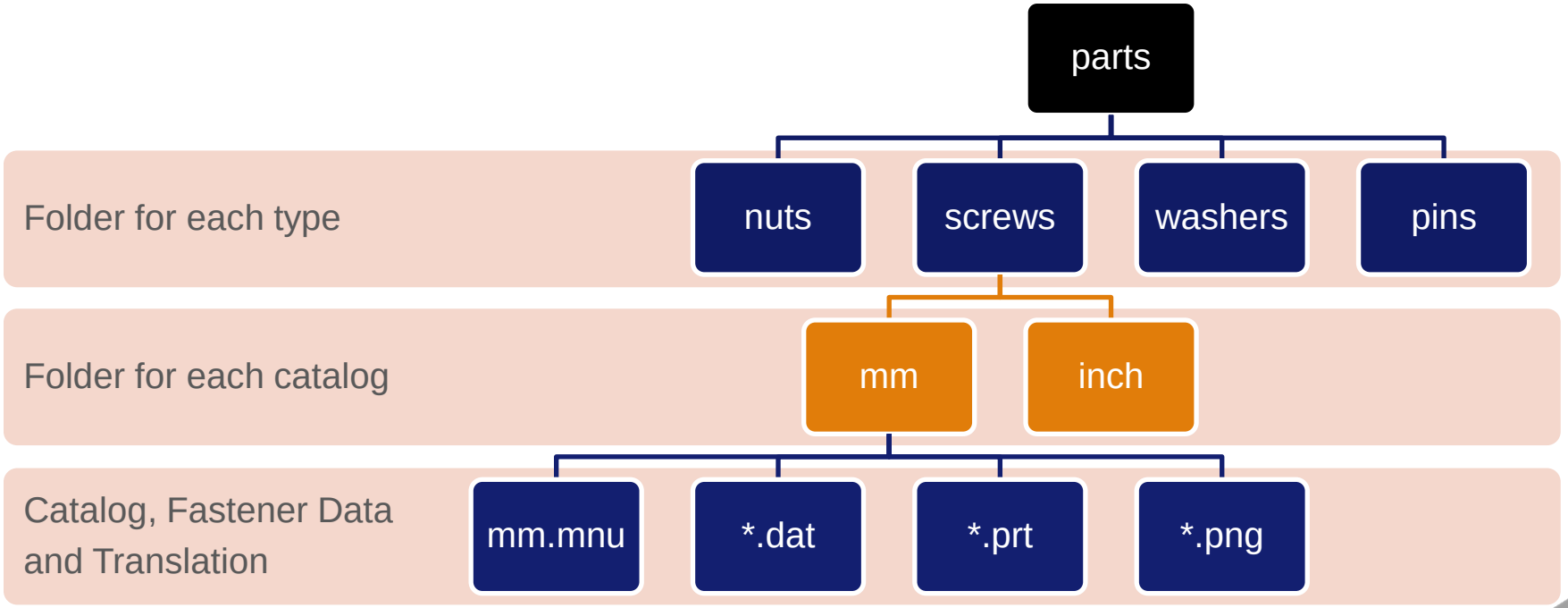
Agenda

- **Old vs. new library structure**
- New features
- How to add legacy data
- PTC Community



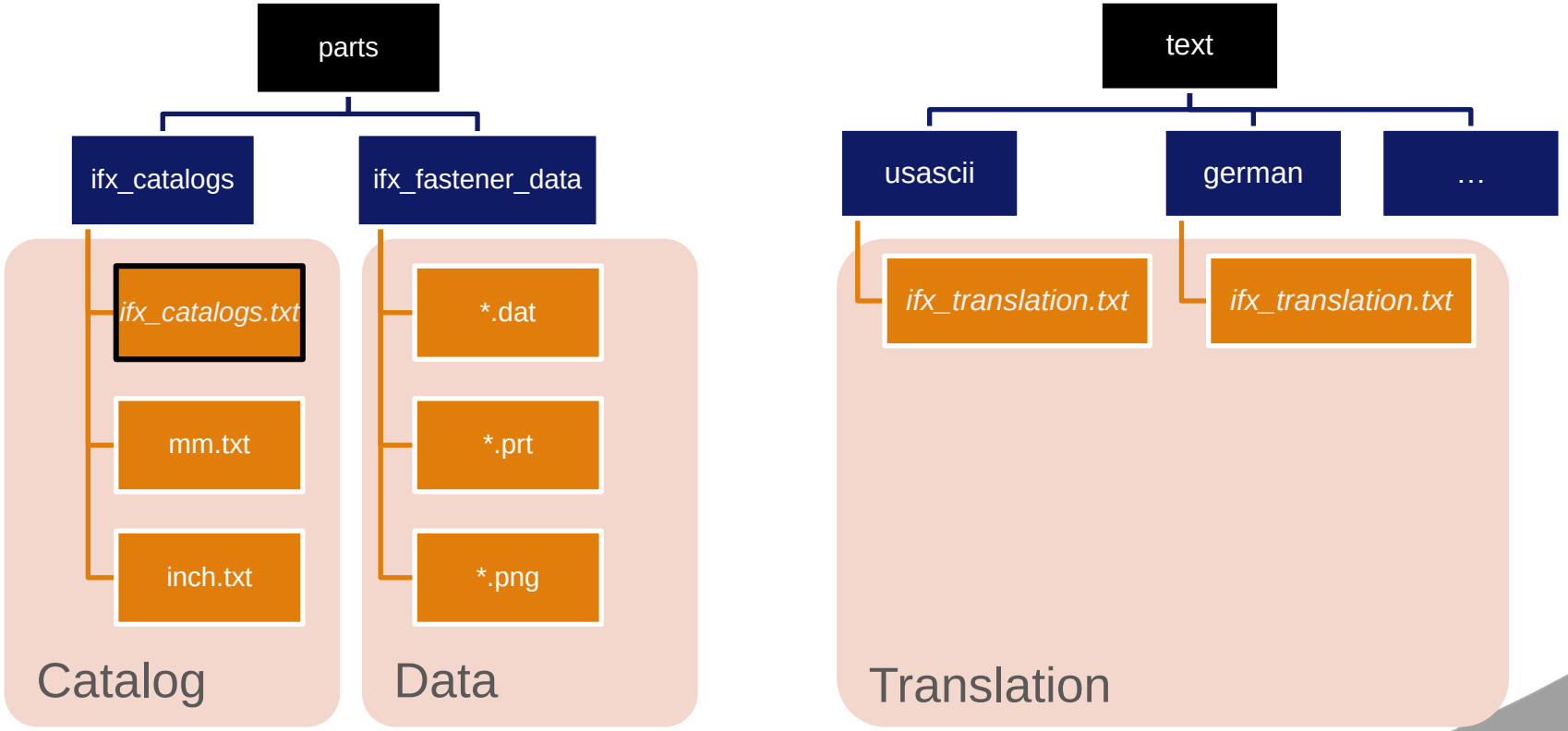
Old Library Structure

All fastener information is scattered over many folders

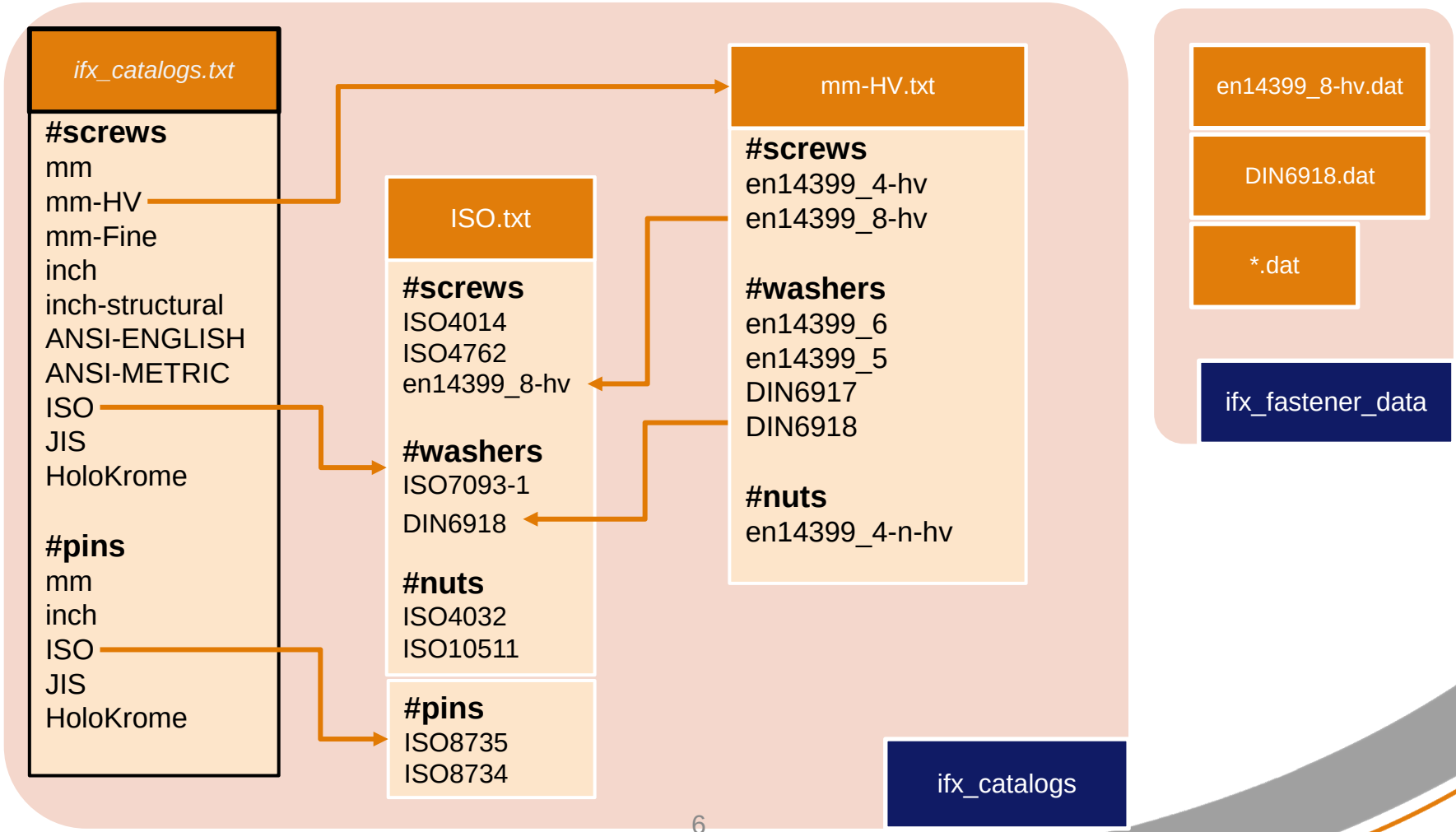


New Library Structure

All fastener information is stored in two folders



Example

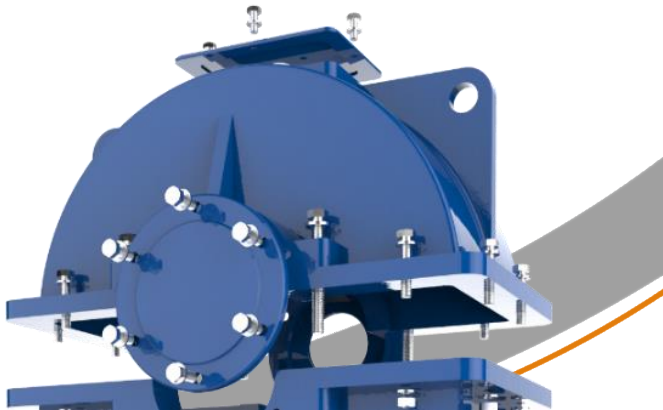

ifx_catalogs.txt
#screws
mm
mm-HV
mm-Fine
inch
inch-structural
ANSI-ENGLISH
ANSI-METRIC
ISO
JIS
HoloKrome
#pins
mm
inch
ISO
JIS
HoloKrome
ISO.txt
#screws
ISO4014
ISO4762
en14399_8-hv
#washers
ISO7093-1
DIN6918
#nuts
ISO4032
ISO10511
#pins
ISO8735
ISO8734
mm-HV.txt
#screws
en14399_4-hv
en14399_8-hv
#washers
en14399_6
en14399_5
DIN6917
DIN6918
#nuts
en14399_4-n-hv
ifx_catalogs
en14399_8-hv.dat
DIN6918.dat
*.dat
ifx_fastener_data

Advantages of the new Library Structure

- Customize your catalogs with ease
- Use same *.dat file in different catalogs
- Separate fastener data and translation
- Multilanguage support

Note:

- Set option USE_NEW_LIBRARY_STRUCTURE to YES
- A Library converter is available!



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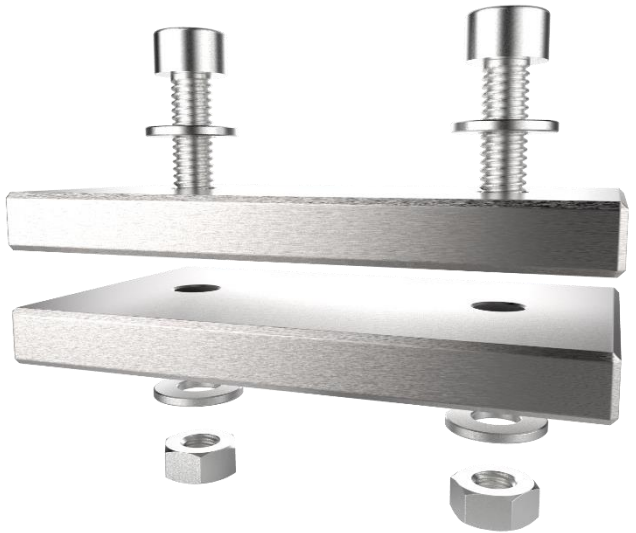
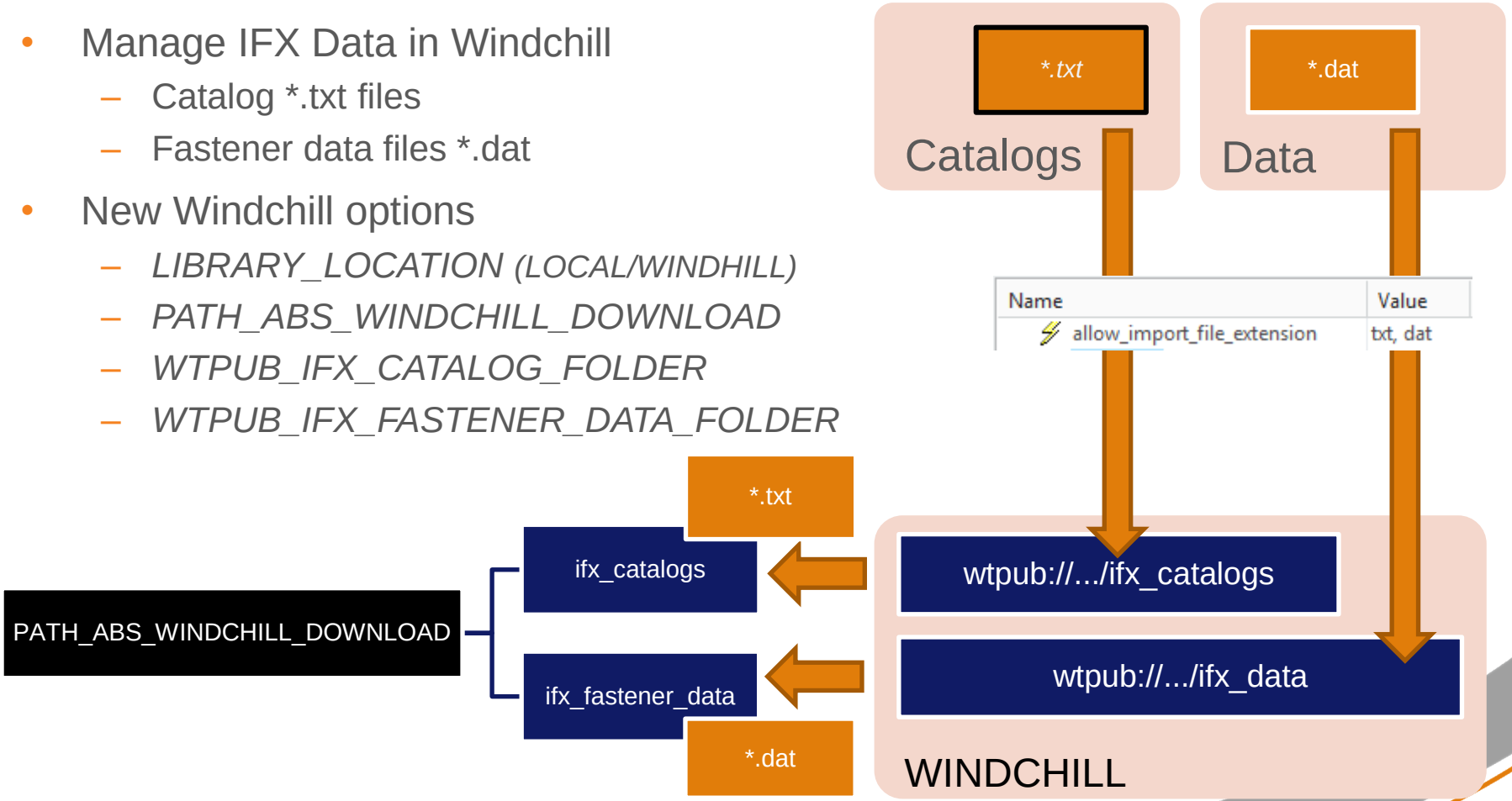


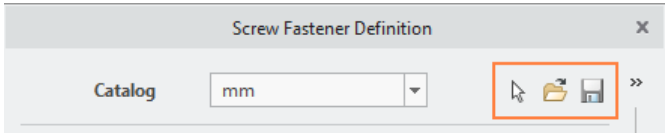
New Feature

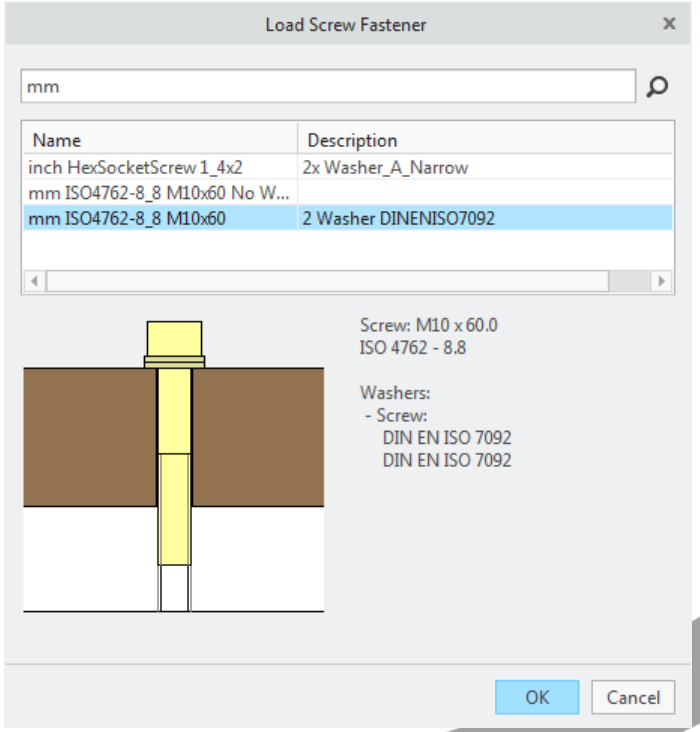
- Manage IFX Data in Windchill
  - Catalog *.txt files
  - Fastener data files *.dat
- New Windchill options
  - *LIBRARY_LOCATION (LOCAL/WINDHILL)*
  - *PATH_ABS_WINDCHILL_DOWNLOAD*
  - *WTPUB_IFX_CATALOG_FOLDER*
  - *WTPUB_IFX_FASTENER_DATA_FOLDER*



New Feature

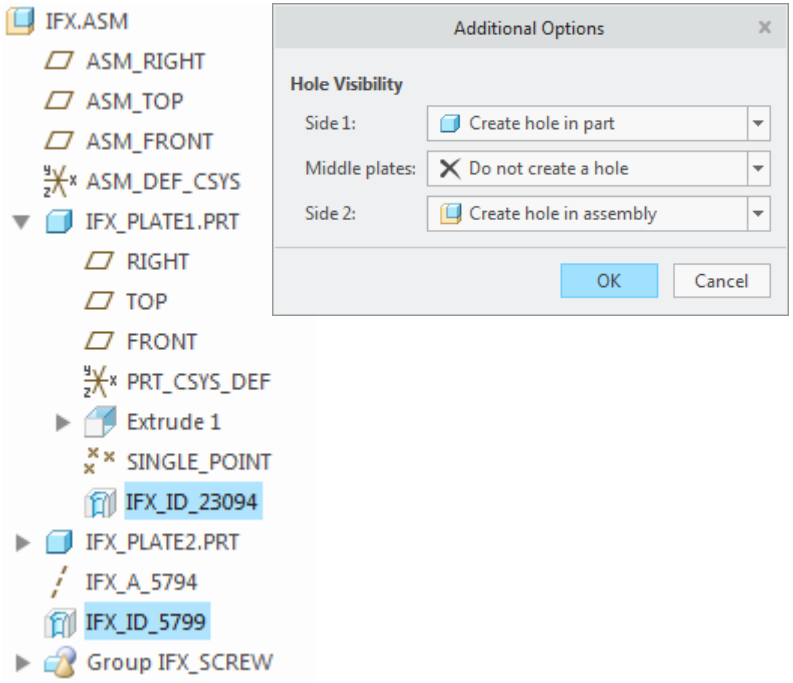
- Reuse fastener
  - Select existing fastener
  - Open fastener
  - Save fastener
- New option *PATH_ABS_SAVESCREWS*





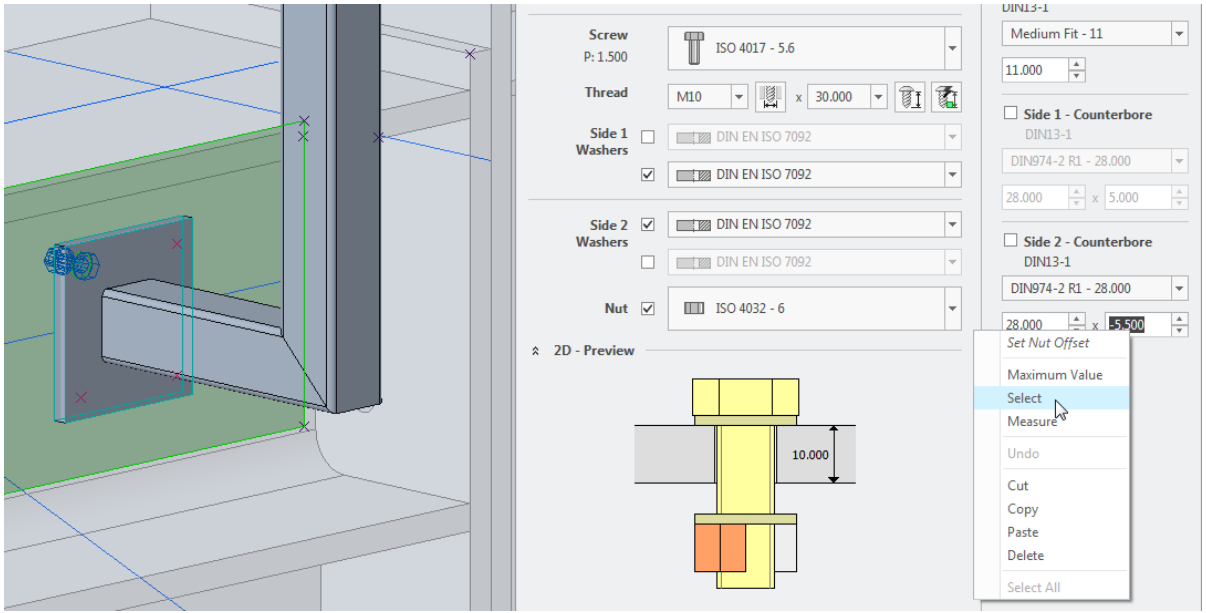
New Feature

- Control hole position
  - Part
  - Assembly
- New option *HOLE_VISIBILITY*
  - *SELECT* – Select hole visibility.
  - *PRT* – Create hole in part.
  - *ASM* – Create hole in assembly.
  - *No* – Do not create a hole.



New Features

- Control screw and nut offset
- New option
  ENABLE_POPUP_MENU_FOR_SCREW_NUT_OFFSET



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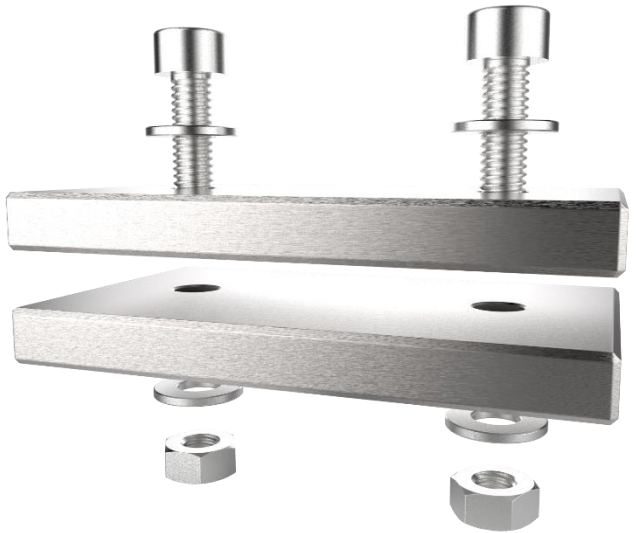
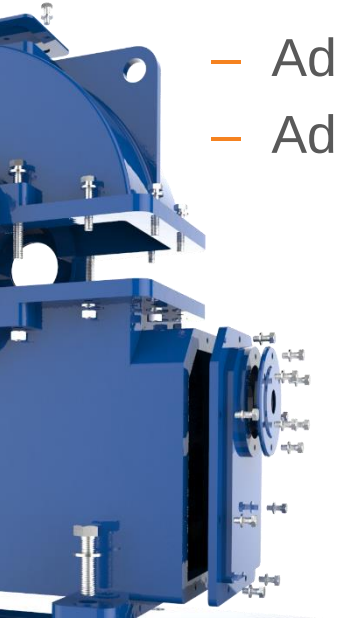


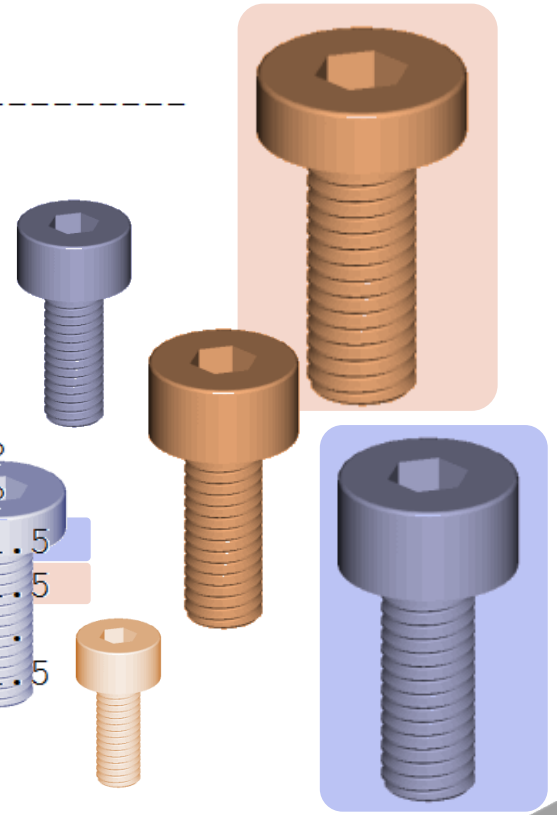
How to add Legacy Data

- Types of legacy data
  - Single fastener parts
  - Family table parts
- How to integrate to IFX
  - Add instances of single parts
  - Add instances of family table parts
  - Add dimension/parameter mapping for family table parts



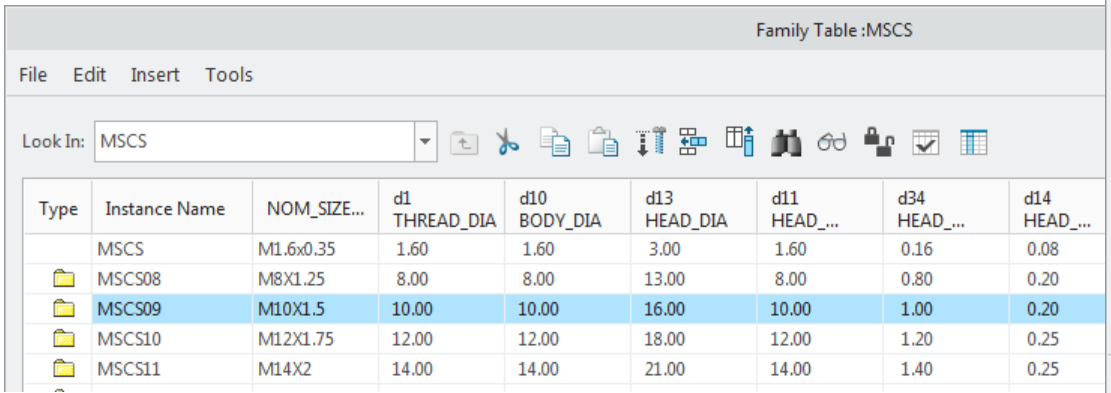
Add instances of single parts

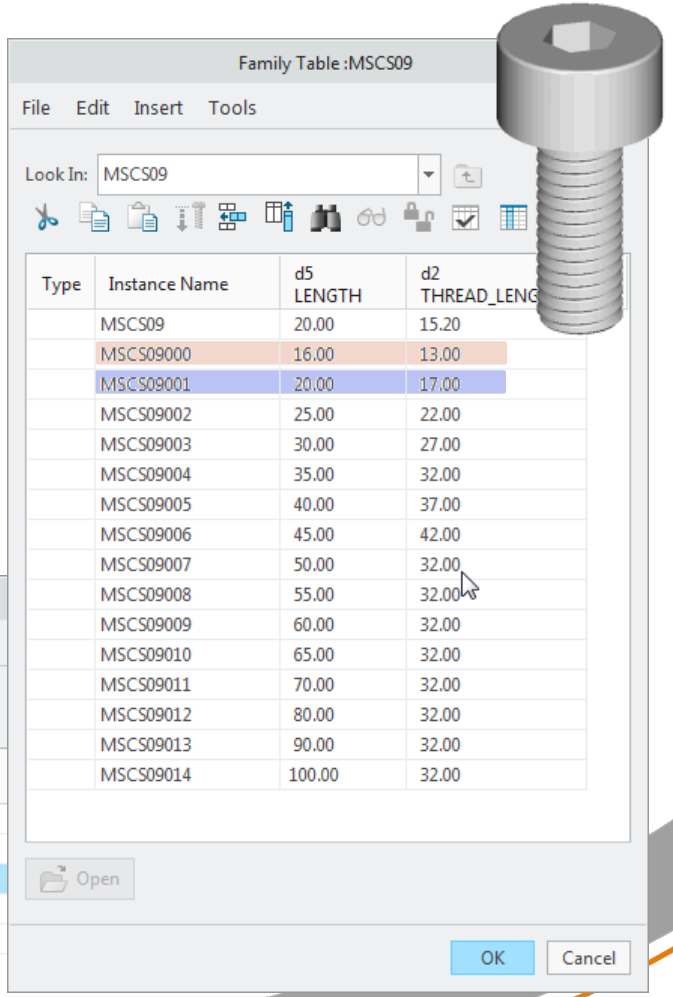
```
!-----------------------------------------------------------
!   Zylinderschraube mit Innensechskant
!   Hexagon socket head cap screw
!-----------------------------------------------------------

SCREWTYPE   1
UNIT    MM
SURFACE 28      124     11      <SURFACE-ID>
AXIS    71      56      251     <AXIS-ID>
INFO    ISO 4762

SYMBOL      STRING  DN  LG  B   S   DK  K   DG  P
INSTANCE    STRING  DN  LG  B   S   DK  K   DG  P
PART_1      M10     10  16  16  8   16  10  8.5 1.5
PART_2      M10     10  18  18  8   16  10  8.5 1.5
xxx         ..      ..  ..  ..  ..  ..  ..  ..  ..
PART_X      M10     10  xx  xx  8   16  10  8.5 1.5
```



Add instances of family table parts

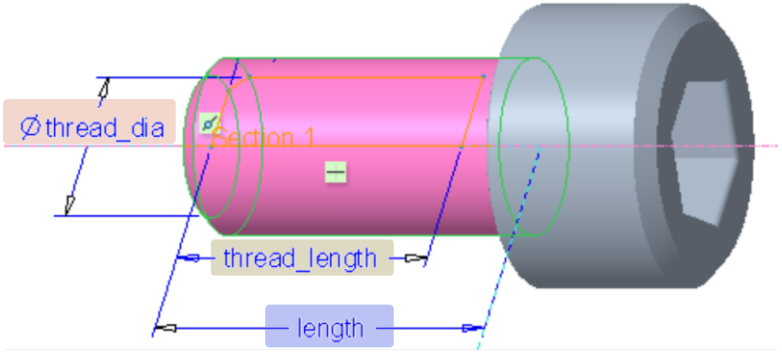
```
SCREWTYPE   1
UNIT    MM
SURFACE 28
AXIS    71
INFO    ISO 4762

SYMBOL      STRING  DN  LG  B   S   DK  K   DG  P
INSTANCE    STRING  DN  LG  B   S   DK  K   DG  P
MSCS09000   M10     10  16  13  8   16  10  8.5 1.5
MSCS09001   M10     10  20  17  8   16  10  8.5 1.5
XXX         ..      ..  ..  ..  ..  ..  ..  ..  ..
MSCS09014   M10     10  100 32  8   16  10  8.5 1.5
```





Add dimension/parameter mapping for family table parts

```
SCREWTYPE    1
UNIT     MM
SURFACE  28
AXIS     71
INFO     ISO 4762

FAMPRT   MSCS

SYMBOL       STRING   DN          LG          B             DK
INSTANCE     STRING   THREAD_DIA  LENGTH      THREAD_LENGTH HEAD_DIA
#FAMTAB      M<DN>    d1          d5          d2            d13
```



Family Table :MSCS09

File Edit Insert Tools

Look In: MSCS09

Type	Instance Name	d5 LENGTH	d2 THREAD_LENGTH
	MSCS09	20.00	15.20
	MSCS09000	16.00	13.00
	MSCS09001	20.00	17.00
	MSCS09002	25.00	22.00
	MSCS09003	30.00	27.00
	MSCS09004	35.00	32.00
	MSCS09005	40.00	37.00
	MSCS09006	45.00	42.00
	MSCS09007	50.00	32.00
	MSCS09008	55.00	32.00
	MSCS09009	60.00	32.00
	MSCS09010	65.00	32.00
	MSCS09011	70.00	32.00
	MSCS09012	80.00	32.00
	MSCS09013	90.00	32.00
	MSCS09014	100.00	32.00

Open

OK Cancel

Family Table :MSCS

File Edit Insert Tools

Look In: MSCS

Type	Instance Name	NOM_SIZE...	d1 THREAD_DIA	d10 BODY_DIA	d13 HEAD_DIA	d11 HEAD_...	d34 HEAD_...	d14 HEAD_...
	MSCS	M1.6x0.35	1.60	1.60	3.00	1.60	0.16	0.08
	MSCS08	M8X1.25	8.00	8.00	13.00	8.00	0.80	0.20
	MSCS09	M10X1.5	10.00	10.00	16.00	10.00	1.00	0.20
	MSCS10	M12X1.75	12.00	12.00	18.00	12.00	1.20	0.25
	MSCS11	M14X2	14.00	14.00	21.00	14.00	1.40	0.25

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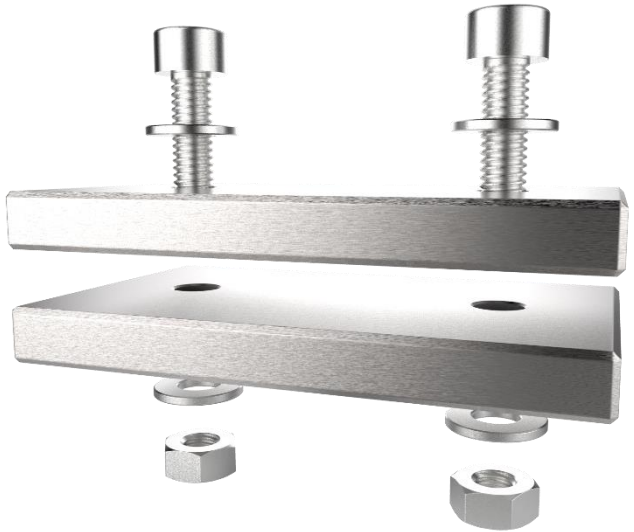

PTC Community

- Start Discussions
- Did you know?
- News
- Links
- And many more

Intelligent Fastener Extension

- Thank you for your attention.
- Contact:
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  - +49 9131 53387 04