PDM Workbench for Aras Innovator

T-Systems PLM Applications
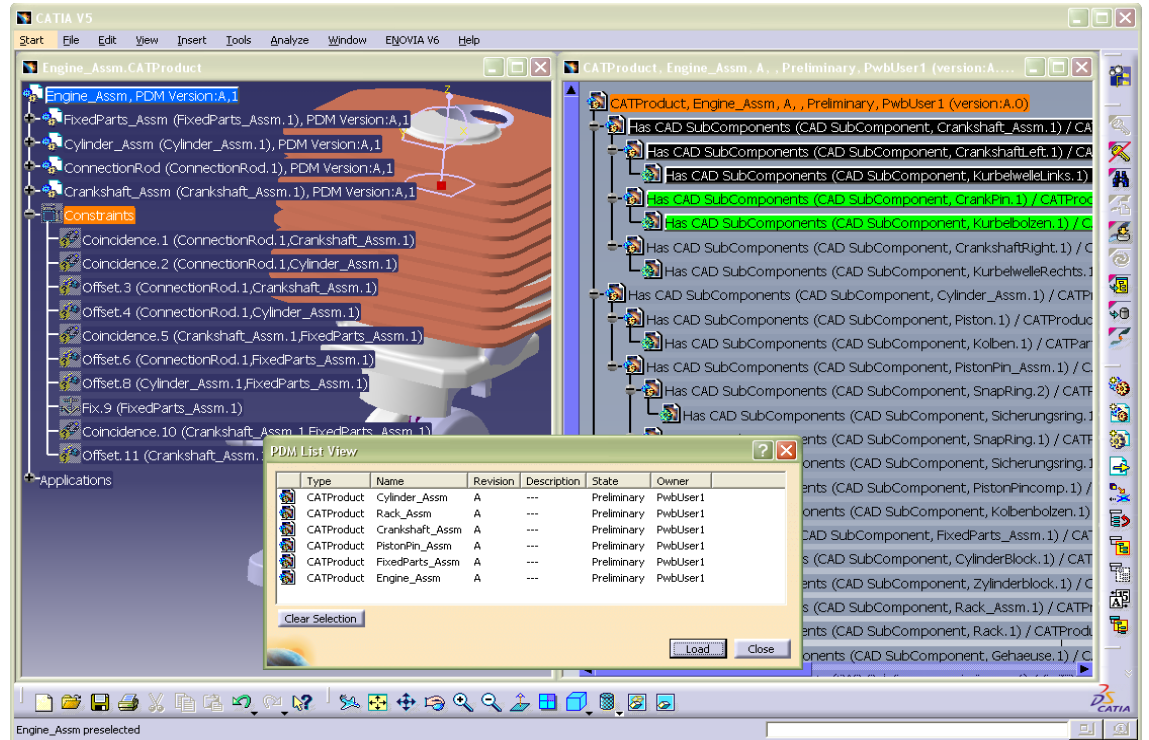
T··Systems

Let's power
higher performance

PDM Workbench for Aras Innovator
Overview

The PDM Workbench is a comprehensive PDM Rich Client seamlessly integrated in CATIA V5.

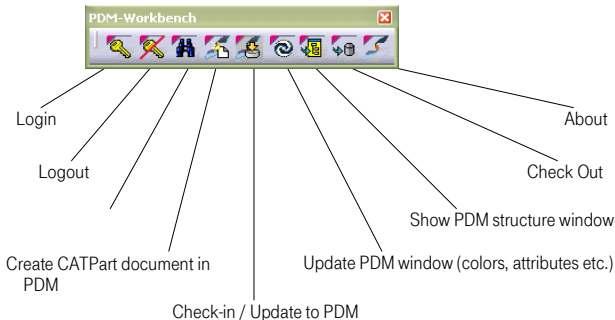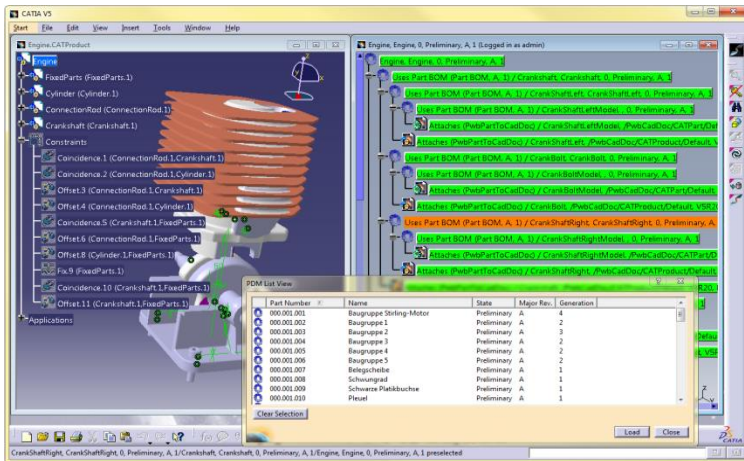It enables access to and full control of CATIA data via PDM.

Supported PDM systems

- SAP ERP 6.0

- Matrix/ENOVIA

- Aras Innovator

  - BOM Part Structure

  - Document Structure

PDM Workbench for Aras Innovator
The immersive PDM Integration for CATIA V5

Login
Logout
Create CATPart document in PDM
Check-in / Update to PDM
Update PDM window (colors, attributes etc.)
Show PDM structure window
Check Out
About

PDM Workbench 7.0 for Aras Innovator 11 SP9

CATIA V5 6R2014, 6R2015, 6R2016, and 6R2017. Other revisions on request.

T-Systems Business Area PLM / PDM Workbench for Aras Innovator

- CAD specific PDM functionality in CATIA V5 enabling design engineers to stay in CATIA only.
- CATIA V5 look and feel by using standard CAA framework.
- Allows the use of any customized data model.
- Follows relevant configuration context (expand).
- PDM Workbench features can be tailored by simply editing schema files.

Examples for PDM functionality in CATIA V5

- Check In/Out, Lock/Unlock, Update and Synchronize of CATIA data
- Comprehensive management of PDM objects and structures
- Copy & Paste, context menus, tool bar
- Tree navigation and list view
- Display and modification of PDM properties via dialogs
- Identification of nodes, display of access rights

PDM Workbench for Aras Innovator Architecture Overview

PDM INFRASTRUCTURE

Aras Innovator Vault

Aras Innovator Database

PWB SERVER

USE OF NATIVE ARAS INNOVATOR APIS

CHECK IN / OUT
(FILE TRANSFER OF CATIA FILE DATA)

WEB COMMUNICATION
(SOAP)
PDM DATA (XML)

CATIA V5 WORKSTATION

LOCAL DIRECTORY (CACHING)

PDM WORKBENCH CLIENT
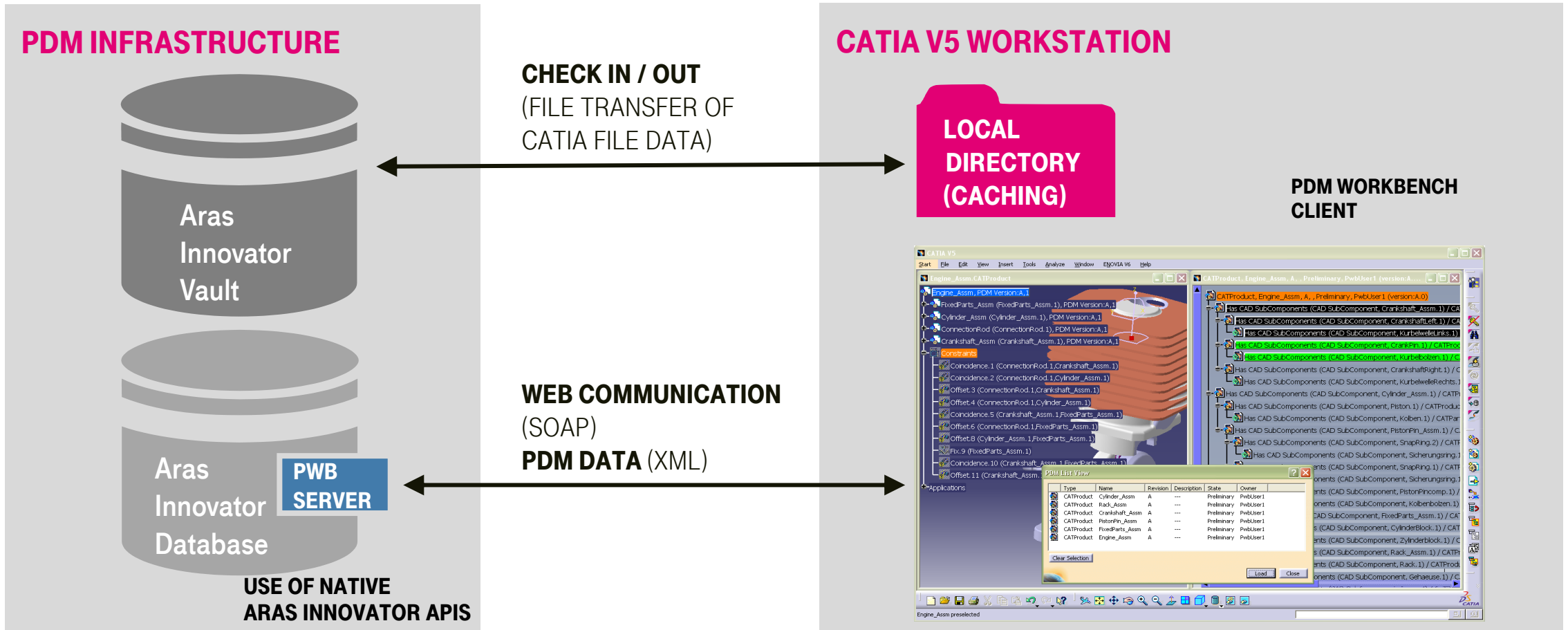
PDM Workbench for Aras Innovator
Key Features

Supports CAD relevant PDM capabilities like

· Query

· Structure navigation

  · BoM navigation

  · CAD navigation

· Check In/Out

· Load CAD data corresponding to expanded structure

· Update of PDM and CAD data

Furthermore

· Company defined CAD Use cases as PDM Workbench Add-On's

PDM Workbench for Aras Innovator
Technical Highlights

No special CATIA licenses required (CAA, PX1).

Communication between CATIA session and PDM session based on Web Services.

SOAP (Simple Object Access Protocol) is used as communication protocol:

- Firewall-friendly
- Using the XML-based protocol SOAP and Web Services because of:
  - Independence of
    - Platform/operating system
    - Programming language
    - Transport protocol
  - Security aspects
    - http or https can be used
    - Encryption of XML tag values

PDM Workbench for Aras Innovator Accessibility

Directly within CATIA

- Central Toolbar
- Context Menu
  - PDM objects
  - Product
- Part Toolbar

Login

Logout

About

Check Out

Show PDM structure window

Create CATPart document in PDM

Update PDM window (colors, attributes etc.)

Checkin / Update to PDM

PDM Workbench for Aras Innovator
Query - Finding existing Documents

- Types to be queried can be selected in dropdown
- Results can be sorted
- Contains additional functionality like selection of
- Configurable
- Wildcard support
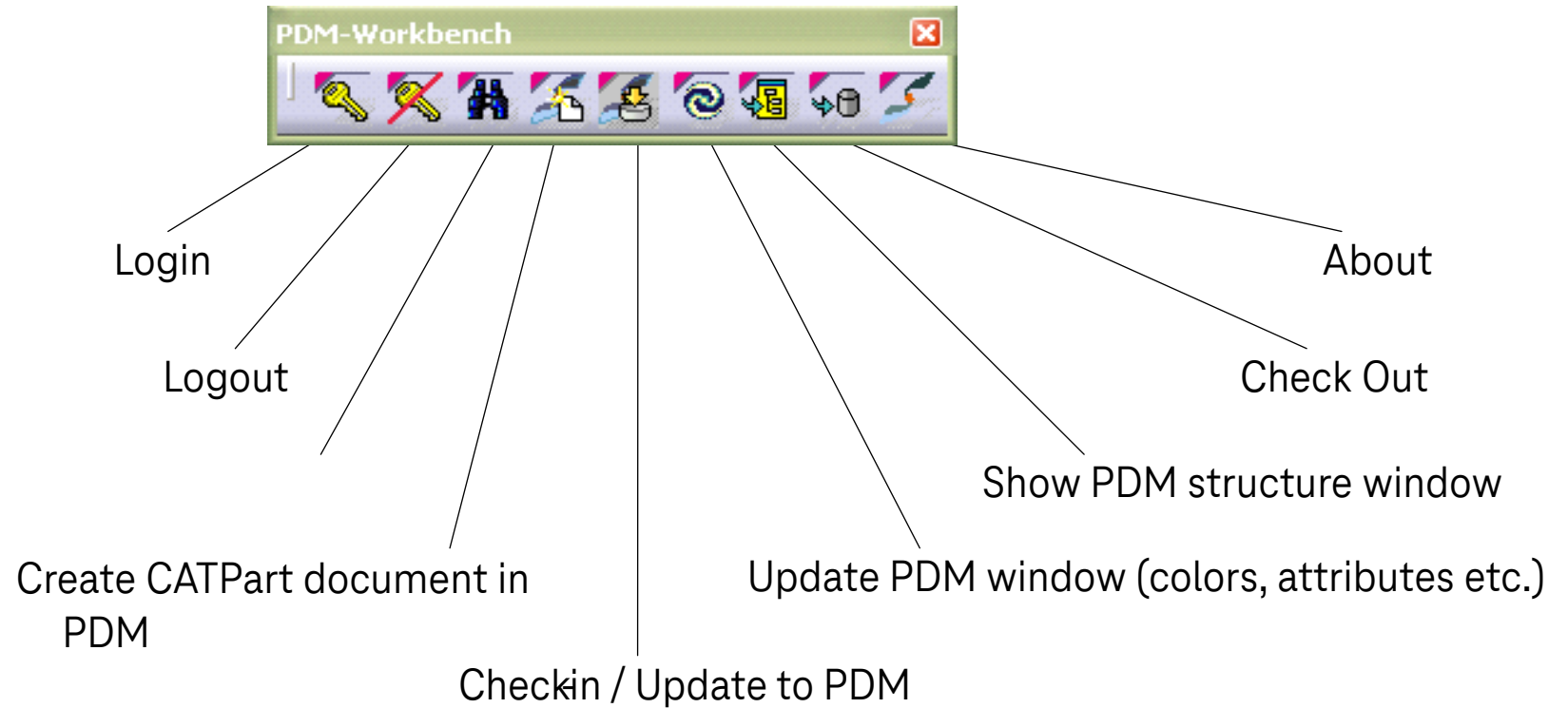
PDM Workbench for Aras Innovator
Create – Creating new Documents and PDM Objects

Create new PDM object

- Dialog guided

- Decide which class of objects you want to create in PDM

- Specify attribute values for resulting Create dialog

- Object created in PDM appears in active PDM Workbench window

Create new PDM object in context

- Object created in PDM appears in active PDM Workbench window

- Note that created PDM object is related to its context object!!

Select a PDM type for perfor...

PDM Object Types

CATPart
CATProduct
CATDrawing
Assembly
Component
Std. Part

OK   Cancel
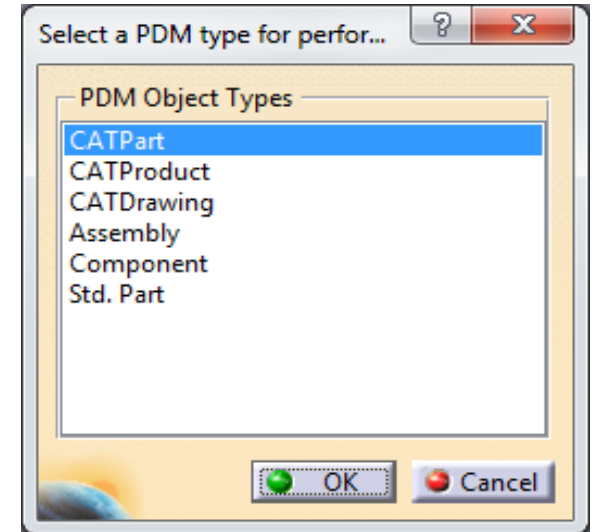
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Modify Structure – Building Structures

Reopen structure window.

Multiple modification possibilities:

- Immediate in the PDM window
  - Copy/Paste
  - Create new PDM objects in context
- On Update
  - Copy/Paste in CATIA workshop
  - Create new in CATIA workshop
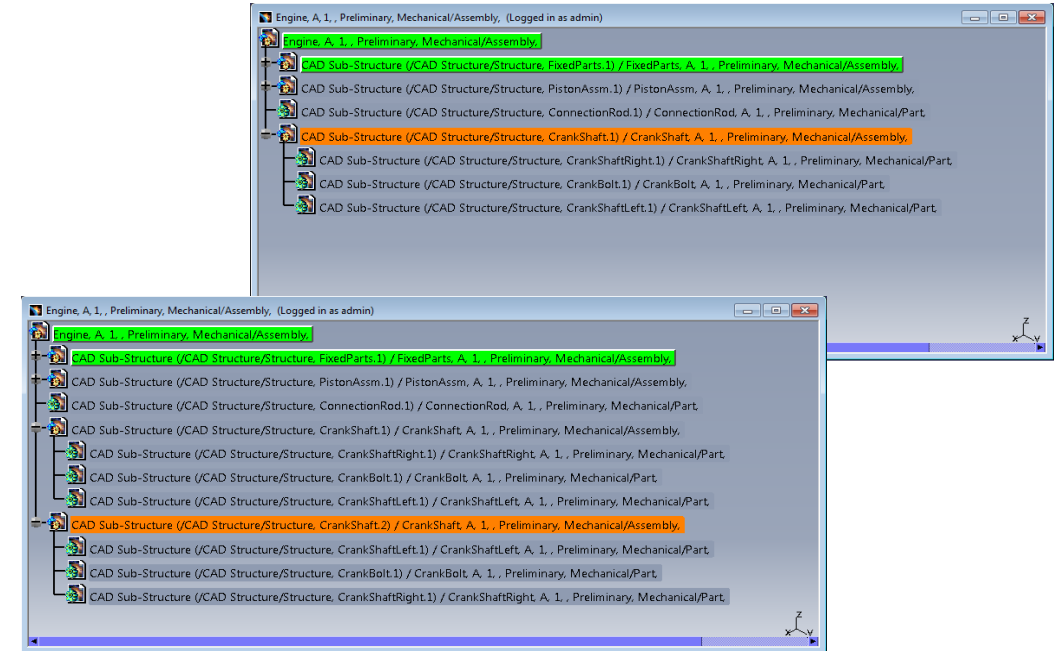
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Expand – Exploring the Structure

Various relations:

- Is attached by
- Derives drawing
- Sub-Structure
- Used in structure

Multi levels possible:

- Multiple Levels Sub-Structure
- Multiple Used in structure

Collapse structure with:

- De-Expand

T-Systems Business Area PLM / PDM Workbench for Aras Innovator
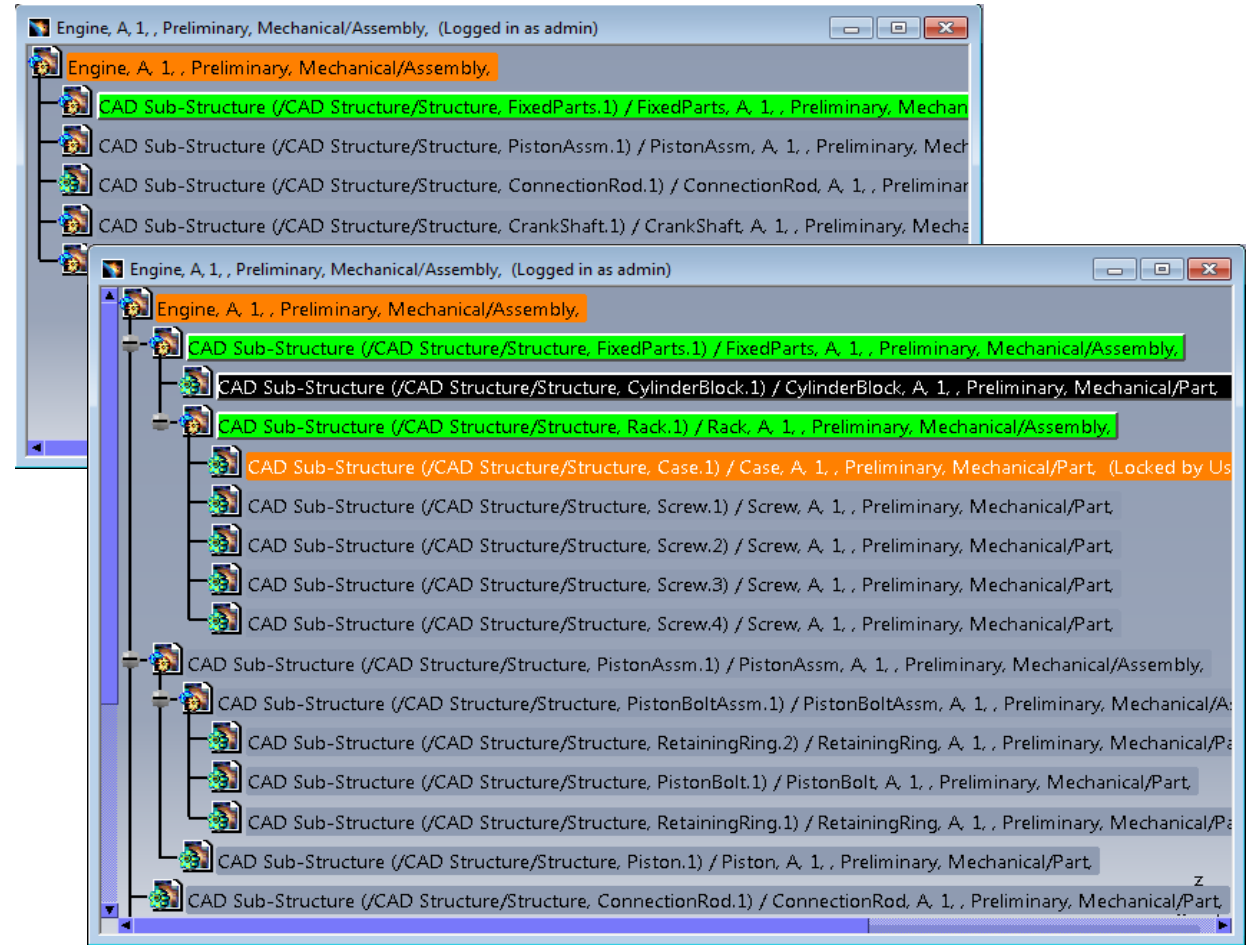
PDM Workbench for Aras Innovator
Load – Opening a Structure

- Assembly structure expanded to PDM Workbench window
  - No full expansion needed
- "Load Structure" on "root" object loads expanded product structure to CATIA V5 window
- PDM meta information as well as CAD files get downloaded out of the PDM system
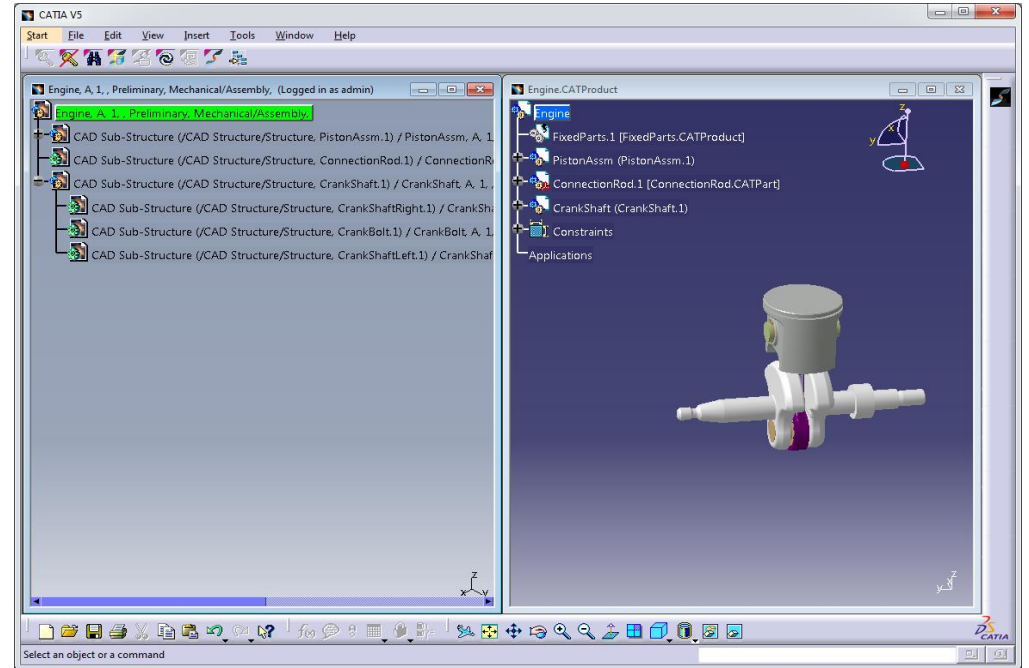
PDM Workbench for Aras Innovator
Update – Create/Update Documents

- Includes highlight of the geometry of the files selec
- Feedback
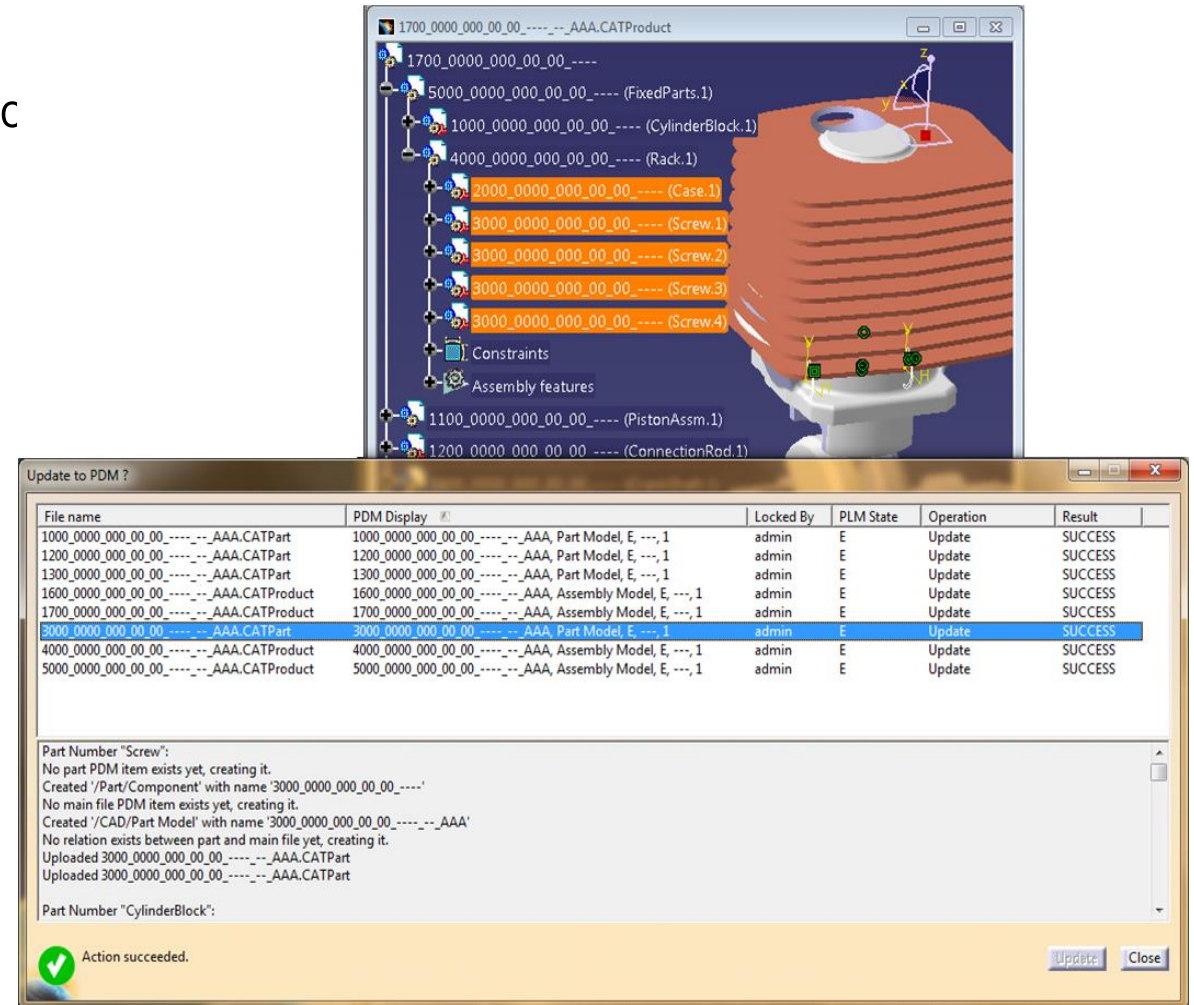
PDM Workbench for Aras Innovator
Properties – Reviewing and Editing PDM Properties

· View configured properties

· Edit configured properties directly

PDM Workbench for Aras Innovator
Highlight – Find Component in other View

- Highlight PDM object in Design structure
- Highlight Design component in PDM view
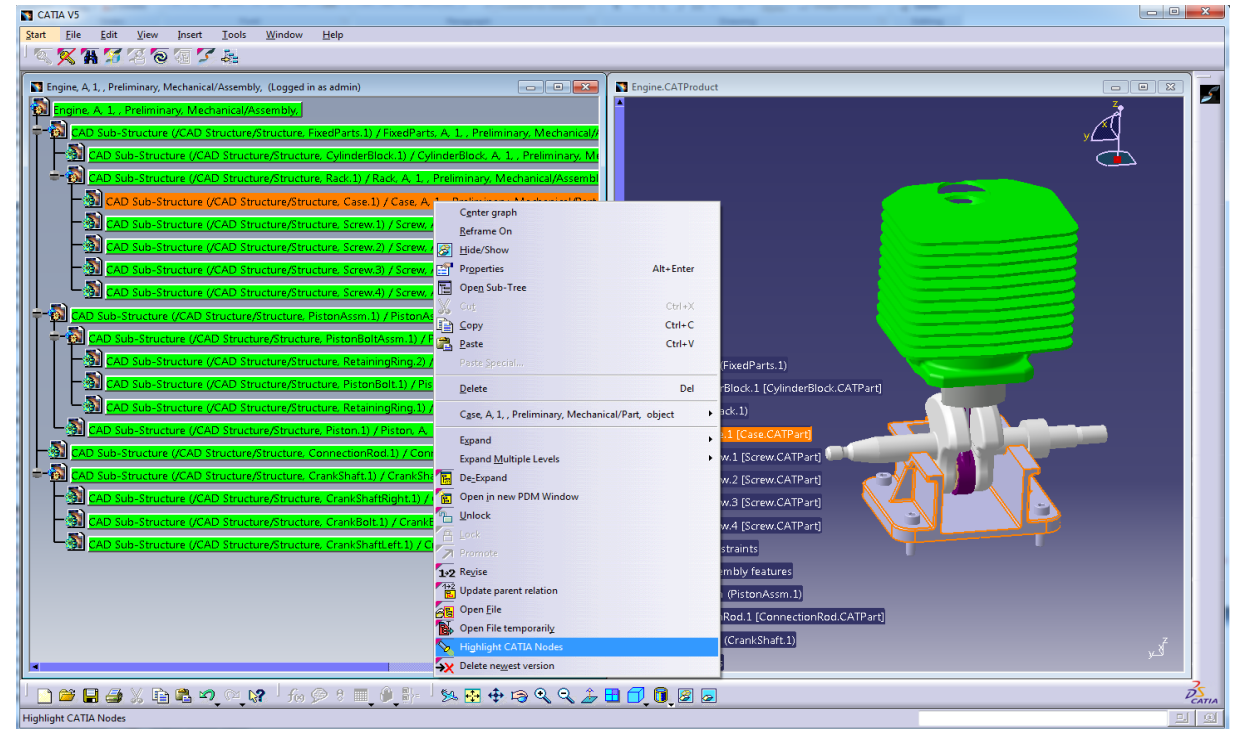
PDM Workbench for Aras Innovator
Lock – Locking and Unlocking PDM Objects

- Locking on demand
  - Only lock what should be updated
  - Prevents unnecessary updates on not really changed PDM objects
  - Mutual design changes lead to lost updates
- Locking on check out (recommended)
  - PDM Objects are locked before design changes
  - Only way to modify PDM structure directly in PDM window
- Locking from within CATIA design workshop
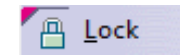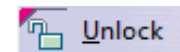
PDM Workbench for Aras Innovator
Visual Lock Feedback

You can see if object is:

· Unlocked

· Locked (by own)

· Locked (by other)

· Modified locked

· Modified not locked

· Superseded
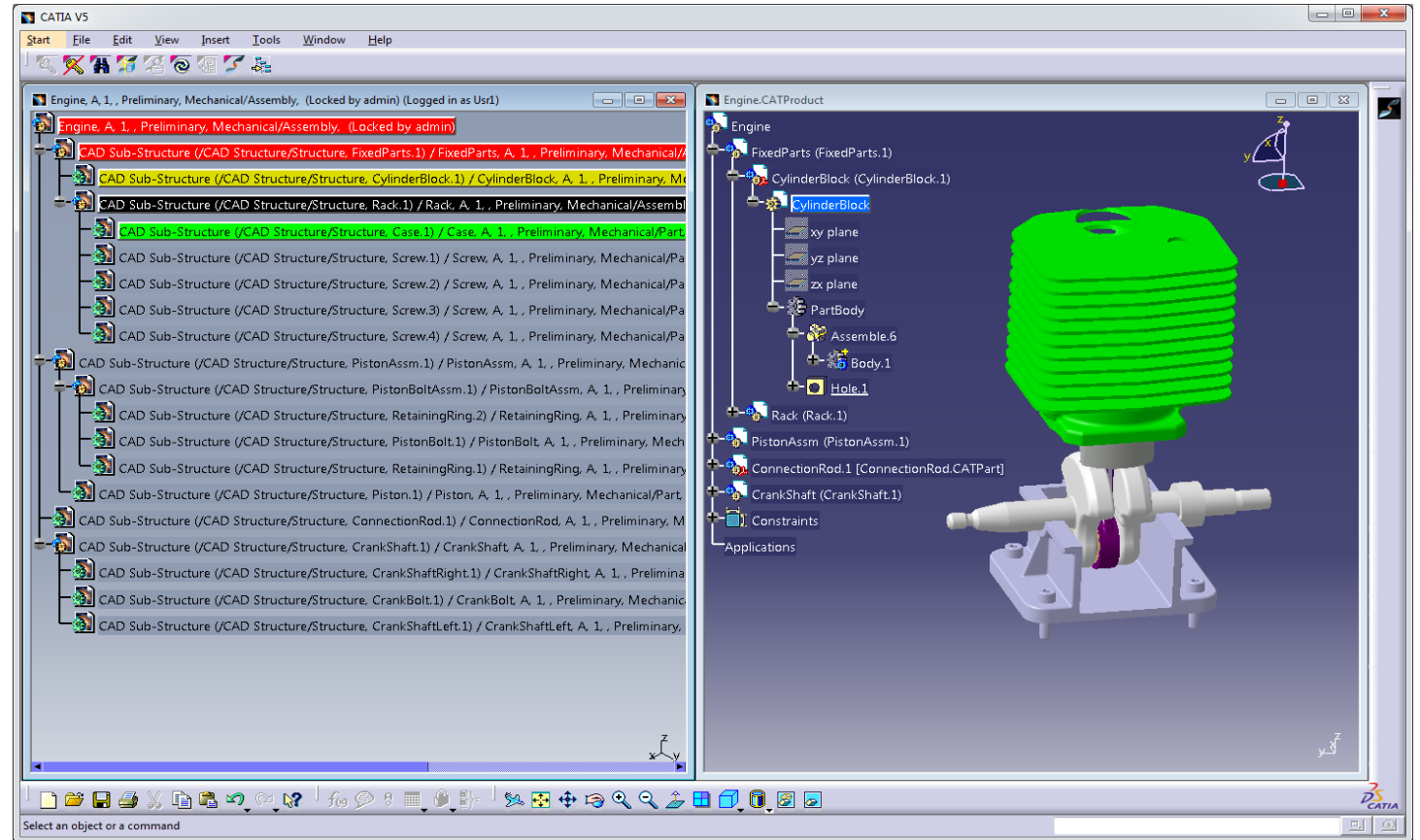
PDM Workbench for Aras Innovator
Addtemp – Comparing Structures

- Open a structure for comparison

- Generic prefix is added

- Added structure is not updateable
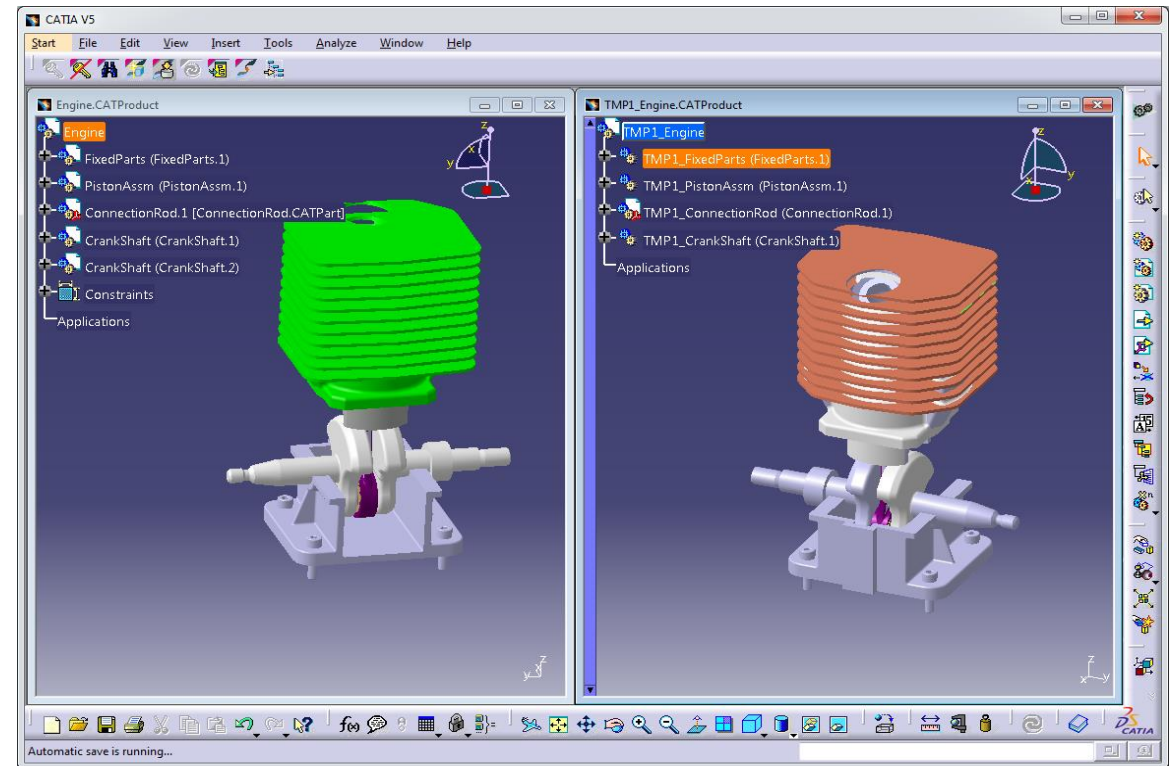
PDM Workbench for Aras Innovator
Attribute Mapping

- Map PDM object properties to CATIA attributes

- Unidirectional

- Bidirectional

- CATIA Standard attributes

- CATIA User attributes

- Configurable
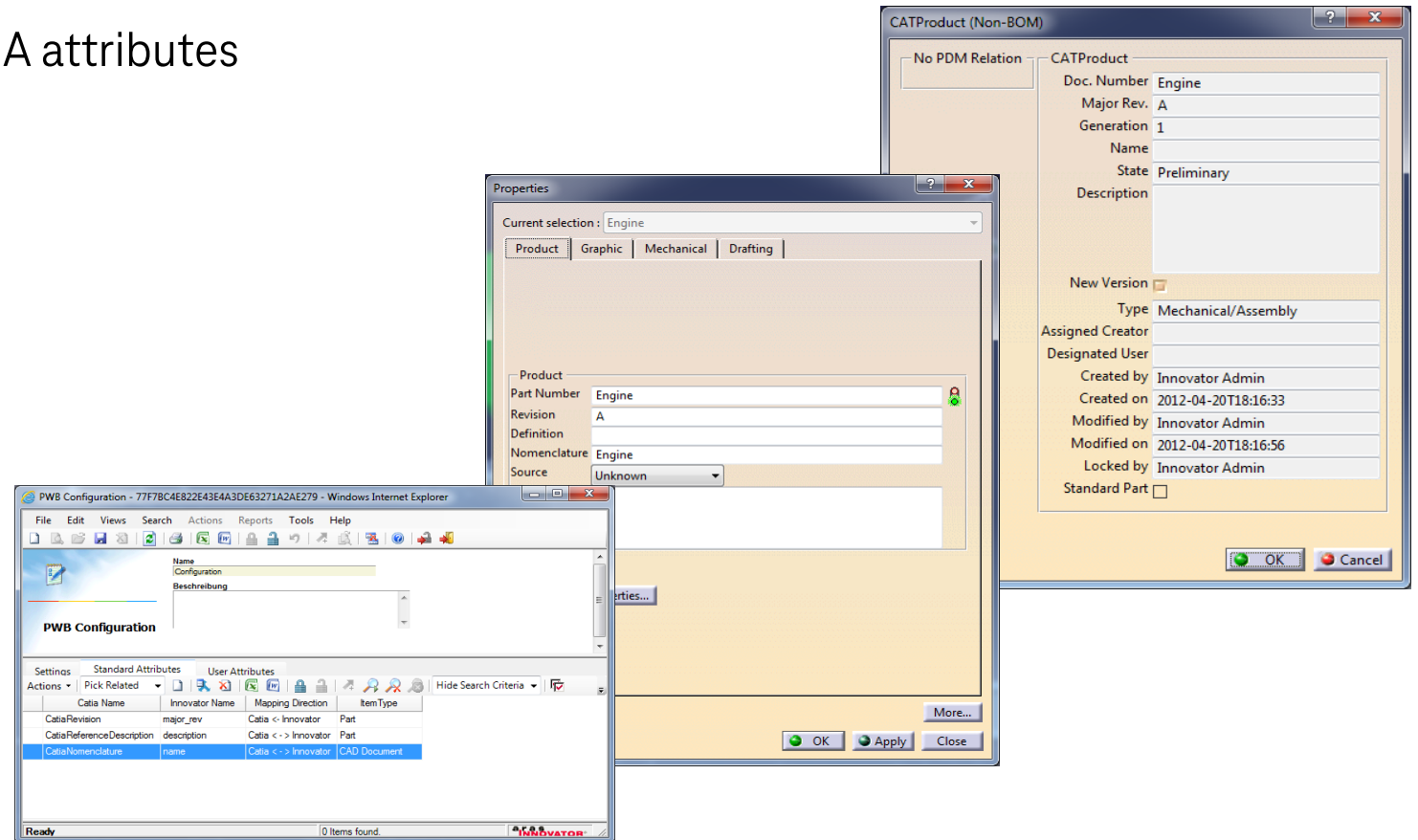
PDM Workbench for Aras Innovator
Others

There are more functions available:

- Update structure relations

- Update parent relation

- Delete

  - Delete whole PDM object

  - Delete latest version of PDM Object

- Lifecycle management

  - Promote

  - Revise

PDM Workbench for Aras Innovator
Data in the PDM System
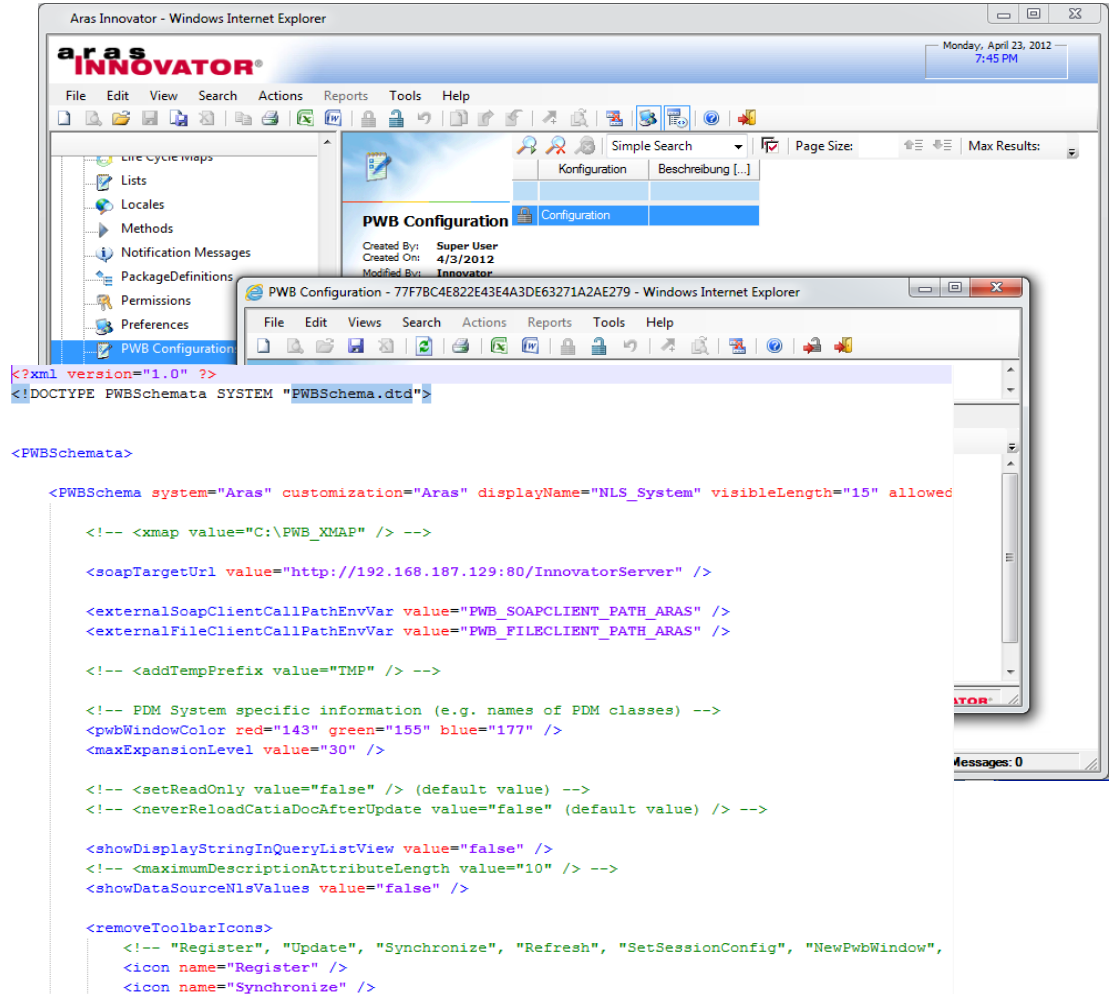
- Different data structures
  - CAD Structure
  - BOM Part Structure
    - Processes & Lifecycles
    - Part
  - Identifying PDM objects
    - One single property value
    - Part number (default)

PDM Workbench for Aras Innovator
PWB Client and Server Configuration

The CATIA Integration UI can be configured in a wide range via XLM Schema file:

- Dialogs

- Displayed attributes

- List view

- Context menus

- Available functionality

- Data model to be supported (Part or Document data model)

PDM Workbench for Aras Innovator Customization – Specific Part Numbers

Customer-specific part numbers can be generated from the dialog attribute values (both part and document attributes) in a customizable server-side method
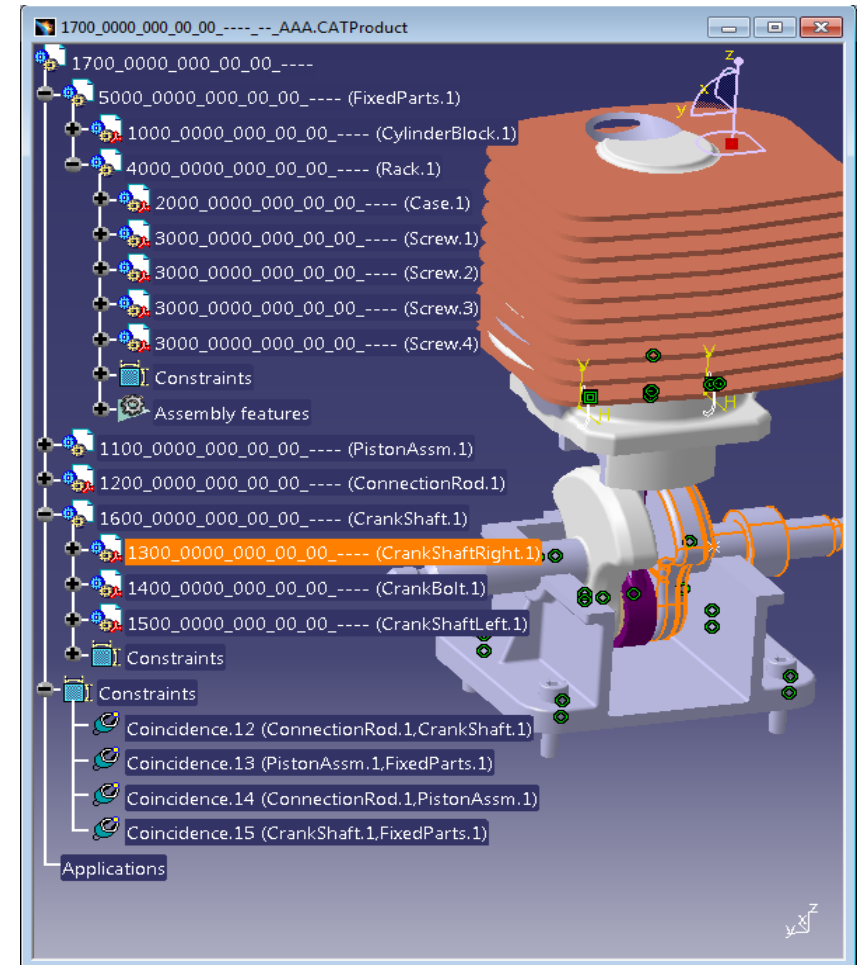
PDM Workbench for Aras Innovator
Customization – Specific Dialogs for the Update Process

Dialogs can contain pre-defined values, including dropdown lists

Part and CAD document are regarded as one entity, attributes for both types can be shown in one window