



# CAD Data Migration Status

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# Content Migration Manager (CMM)



## Migration Modes

- ▶ Interactive UI
- ▶ Command line/bulk tools

## Select data for migration

- ▶ User may select items, item/revisions or folders
- ▶ CMM resolves dependencies

## Configure Migration

- ▶ User may configure the migration operation
- ▶ Style of migration (e.g., Brep vs features)
- ▶ Success criteria
- ▶ Level of checking

The screenshot displays the Content Migration Manager (CMM) interface within Teamcenter Engineering V8.1.1.2. The main window shows a file tree on the left with folders like Mailbox, Newstuff, and Satellite. An 'OptionsDialog' is open, showing configuration controls for the Content Migration Manager, including 'Target units' set to Millimeters and 'Target data' set to Managed. A 'Migration Status' dialog is also open, displaying a table of migration items.

Name	Number	Type	State	Status	Completion Status
Ass_Satellite	000739	assembly	Checkout	Scheduled	78
Red_17	000728	part	Checkin	Current	100
Rondelle_esp_2	000733	assembly	Checkin	Current	50
Red_28	000722	part	Checkout	Scheduled	0
Red_11	000730	part	Checkin	Current	100
Entretoise	000734	assembly	Checkin	Current	50
Red_27	000723	part	Checkout	Scheduled	0
Tourillon	000736	assembly	Checkin	Current	100
Red_13	000724	part	Checkin	Current	100
Cages_ aiguilles	000732	assembly	Checkin	Current	100
Red_34	000727	part	Checkin	Current	100
Plaque arret	000735	assembly	Checkin	Current	100
Red_67	000726	part	Checkin	Current	100
Red_25	000729	part	Checkin	Current	100
Ecrous_66	000737	assembly	Checkin	Current	100
Red_66	000725	part	Checkin	Current	100
Red_16	000731	part	Checkin	Current	100
Rondelle_esp	000738	assembly	Checkin	Current	50

Below the table, a log window shows migration progress:

```

** Reusing migrated item000725 / A : Red_66 ; part
* 000725 / A : Red_66 ; part ugDataset current 100%
** Reusing migrated item000737 / A : Ecrous_66 ; assembly
* 000737 / A : Ecrous_66 ; assembly ugDataset current 100%
** Reusing migrated item000731 / A : Red_16 ; part
* 000731 / A : Red_16 ; part ugDataset current 100%
** Reusing migrated item000738 / A : Rondelle_esp ; assembly
* 000738 / A : Rondelle_esp ; assembly ugDataset current 100%
* 15 ugnx datasets be reused
* 3 ideas datasets will be migrated
  
```

## Migration Reporting

- ▶ Pre-migration report
- ▶ In-migration status (dashboard)
- ▶ Post-migration summaries
- ▶ Item migration reports (persistent)



# Part Migration Options



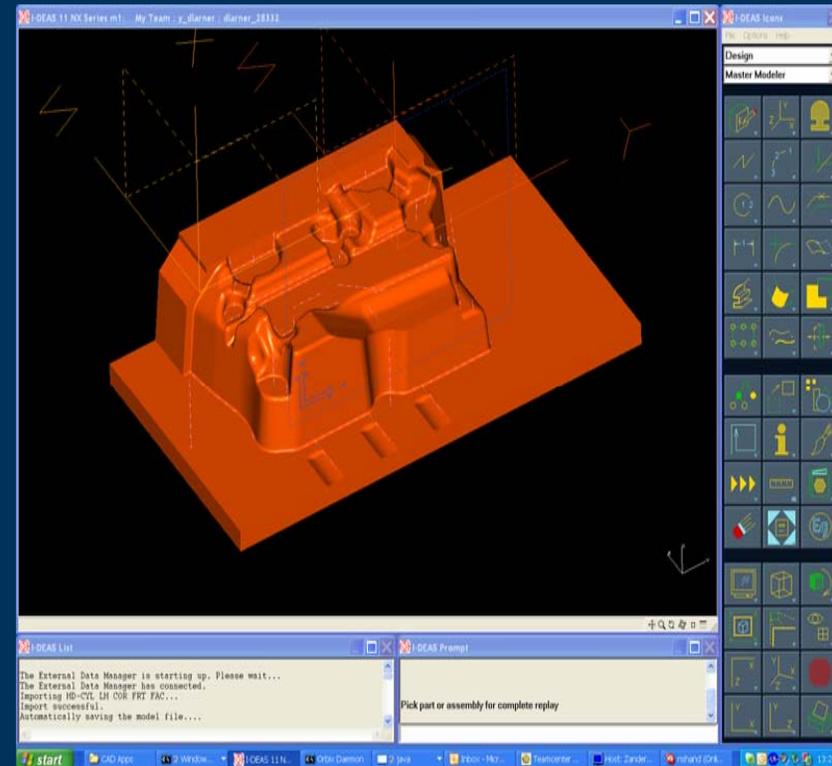
- ▶ JT file with precise data
  - ▶ Full support for design in context
  - ▶ Facet and precise measure, cross section and interference
  - ▶ Full support of PMI between JT parts and native geometry
- ▶ Boundary Representation
  - ▶ Direct Modeling Extensions (DMX) in NX will add support of modification of some geometry
  - ▶ I-deas Coincident Point Tolerance accuracy guaranteed
- ▶ Features
  - ▶ Full and partial featured models
  - ▶ I-deas Coincident Point Tolerance accuracy guaranteed
  - ▶ Partial featured models still have all parameters of all features stored with model
    - ▶ Aids in recreation of fully featured model
    - ▶ Aids in information to modify design intent for many modifications



# Migration Part Test



- ▶ Automotive Migration Part
  - ▶ Front Core Cylinder Head
  - ▶ I-deas 10 M1 Part
  - ▶ Part Version 22
  - ▶ 191 Major and Minor History Steps
- ▶ Migration Results Released Code
  - ▶ NX 3.0.1 and I-deas 11 M2
  - ▶ 97% Feature Pass Rate
  - ▶ 6 Advanced Fillet Issues
    - ▶ Rollover and stop short
  - ▶ Manual repair to get same part as I-deas took 20 minutes
- ▶ Rebuilding all geometry from scratch in I-deas took 20 hours



# Part Migration Value 60 to 1



# Xerox Audit Results



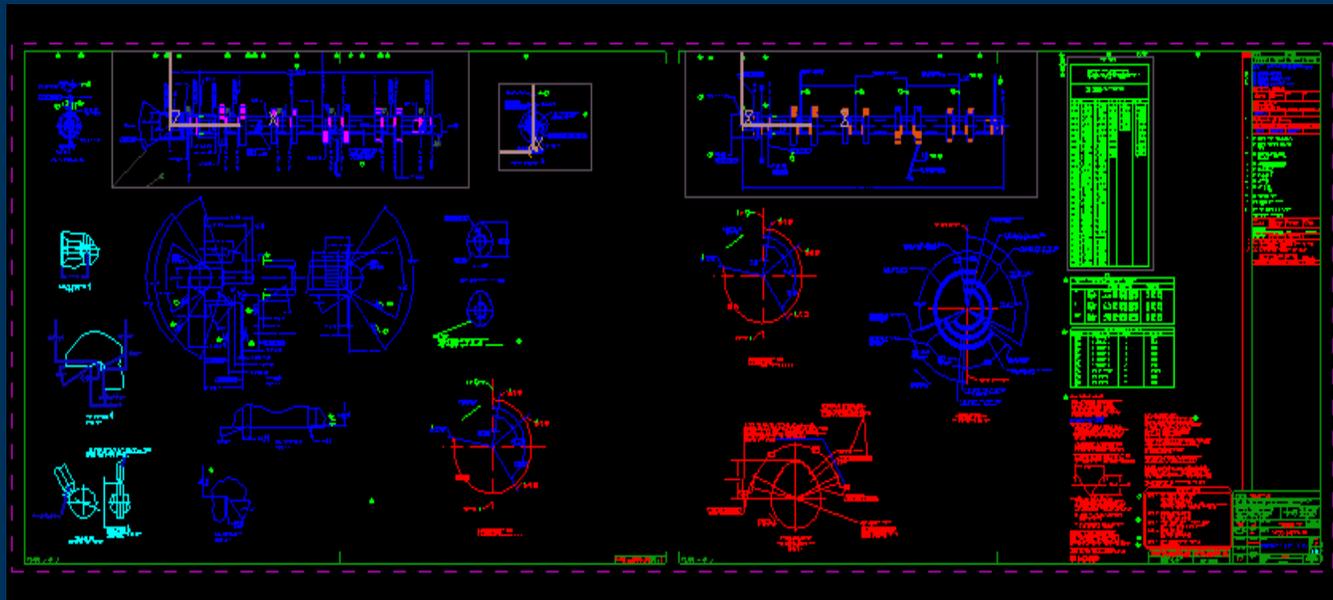
- ▶ Analyzed 215,871 parts with over 3,885,678 features
  - ▶ Most features not prismatic
  - ▶ Migration in NX 4.1 estimated > 97%
  - ▶ Fillet used in 44% of parts
  - ▶ Draft used in over 15,000 parts
- ▶ Analyzed 107,093 assemblies with average size of 56 items
  - ▶ One super large assembly had 5145 instances
- ▶ Open I-deas of 1221 calls, with 152 different methods



# Drawing Migration Results



- ▶ Example of Drawing migration test at Canon
- ▶ Drawing migration certified for fidelity and associativity
- ▶ Migration pass rate for this set of drawings in NX 4.0.0 is 92% or 193,572 entities migrated successfully
- ▶ Most conservative estimate of value of migration of these drawing compared to going to any other CAD system is **75 to 1**





# Fidelity Certification of All Migrated Data



## Parts

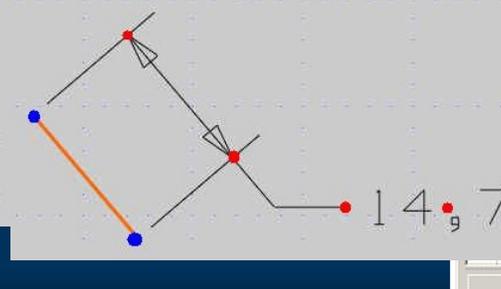
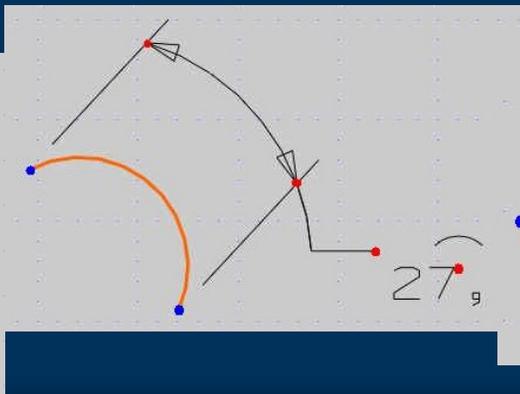
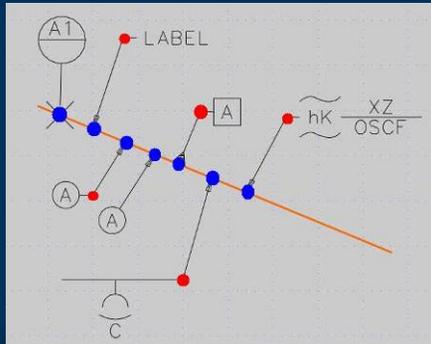
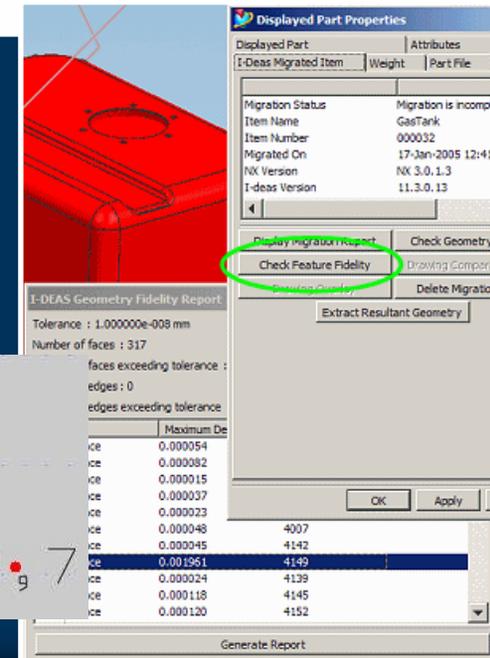
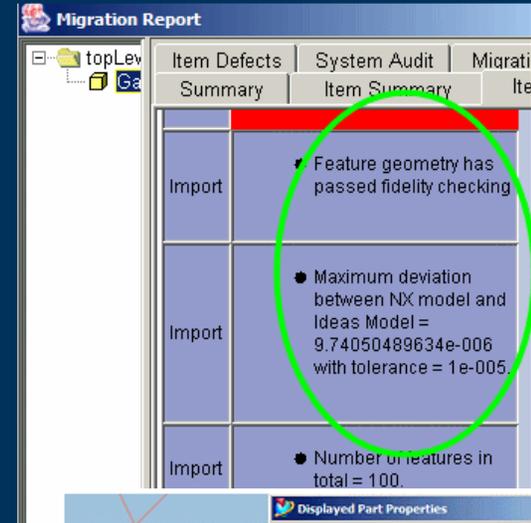
- Fidelity Measured at I-deas Coincident Point Tolerance (PCT) of  $1e-5m$ 
  - “/up f” Developed Originally as Joint Project with Ford
- All Faces are Compared with the Original I-deas Faces

## Drawings

- Pixel, vector and unique “key point” drawing entity certification tool
- All drawing entities are certified with associativity

## Assemblies

- Location, configurations, constraints and ACF relations all certified





# Summary



- ▶ Robust migration from I-deas to NX native models
  - ▶ E.g. model history, sketches, reference geometry, associative drawings, assembly constraints, PMI, ...
  - ▶ Zero CAD license cost for Xerox and suppliers with I-deas
  - ▶ Data migration tools provided at no cost
  - ▶ Migration training offered by UGS
- ▶ Teamcenter Engineering offers a managed environment for work in process, managed migration process data
- ▶ NX offers best in class capabilities for product development
  - ▶ E.g. Design / visualization, CAD creation, Large Assemblies, harness design, Knowledge Based Engineering, Simulation

*Moving to NX is Low Risk, Low Cost, High Value*



Thank you !!