

## Managing Student Projects in Teamcenter Engineering

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# Coursework at GT

## **ME4041**

### **Interactive Computer Graphics and Computer-aided Design**

3.0 Lecture Hours

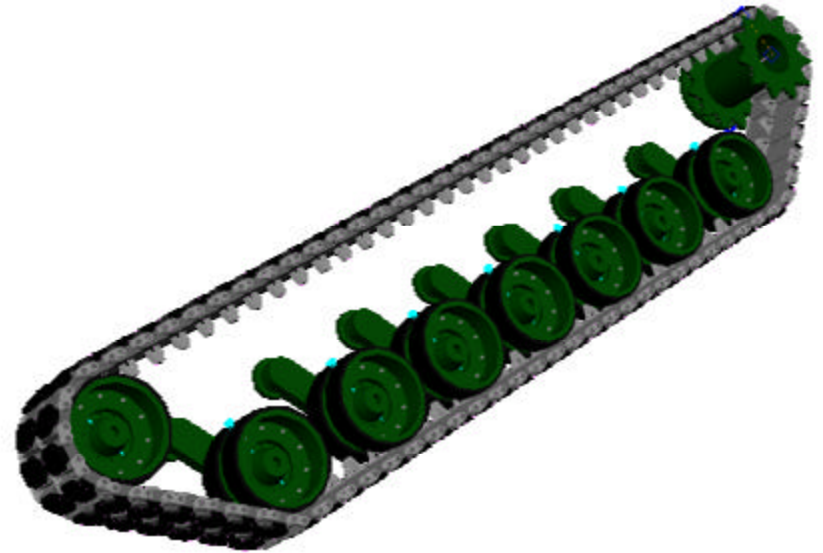
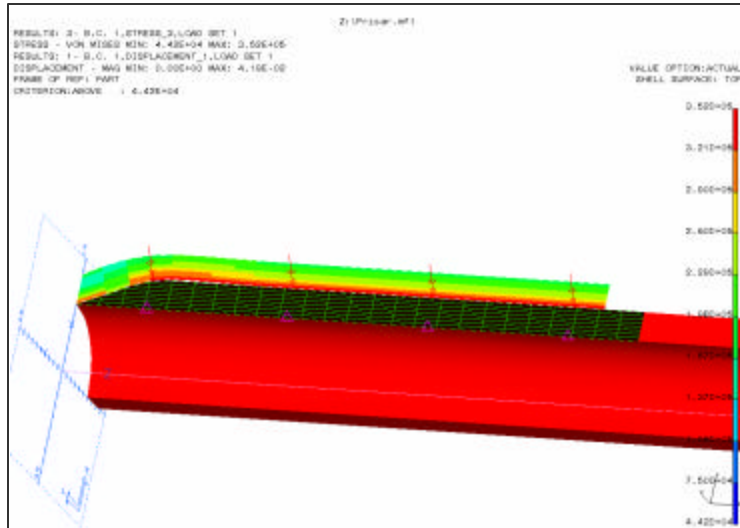
1.5 Lab Hours

Prerequisite: senior standing, ME2016.

Principles of interactive computer graphics hardware and software. Programming for interactive graphics with application to the solution of thermal and mechanical design problems.



# ME4041 Projects



<http://www.ecs.gatech.edu/courses/me4041.html>

*tdennis@cad.gatech.edu*

gt motorsports



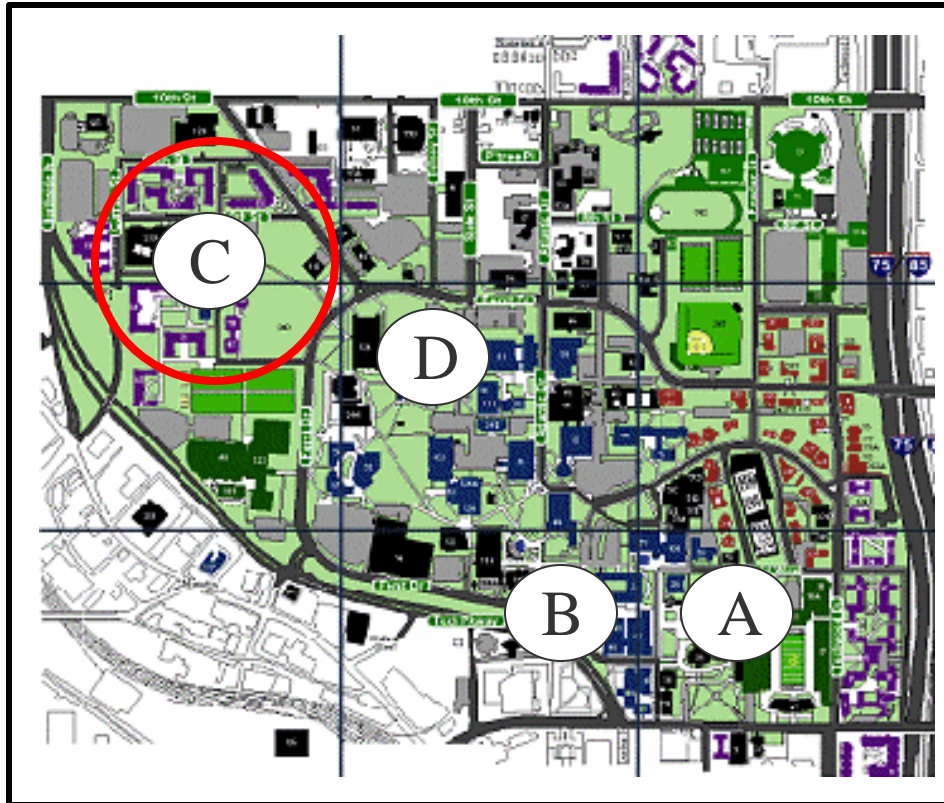
Georgia Tech School of Mechanical Engineering

Georgia Tech College of Engineering

<http://www.me.gatech.edu/gtmotorsports/>

*tdennis@cad.gatech.edu*

# Distributed environment at GT



**A - Central I-DEAS TDM server networking (T1 ethernet)**

**A - 2 WinXP labs in the A. French Bld**

**B - gt motorsports shop**

**C - personal student computers in West Dorms**

**D - 1 Win XP lab in the ME Bld**

# Software

- I-DEAS 10m2
- TCEng 8.1.1.6
- NX Manager 2.0



- Needs for Teamcenter Engineering
  - ❖ Repository
  - ❖ Search
  - ❖ Distributed Collaboration
  - ❖ Multi-Vendor CAD mgt

# This is file management?

The screenshot shows a Windows Explorer window titled 'Z:\GTMS Data'. The address bar shows the path 'Z:\GTMS Data'. The main pane displays a list of files and folders with the following columns: Name, Size, Type, and Date Modified.

Name	Size	Type	Date Modified
Bodywork		File Folder	7/21/2002 12:56 AM
Chassis		File Folder	4/26/2003 6:03 PM
Composites		File Folder	4/21/2003 12:30 PM
Computer Systems		File Folder	5/30/2003 12:07 PM
Construction Pics		File Folder	11/8/2002 10:16 PM
Cost Report		File Folder	4/4/2003 1:08 PM
Doka Ac		File Folder	1/27/2003 1:16 PM
Design		File Folder	4/8/2003 9:32 PM
Driveline		File Folder	3/7/2003 4:40 AM
Electrical		File Folder	4/26/2003 2:35 PM
Management		File Folder	7/22/2003 11:59 AM
Pictures		File Folder	3/16/2003 9:10 PM
Powertrain		File Folder	4/6/2003 8:31 PM
Presentation		File Folder	7/13/2003 3:30 PM
SAE International		File Folder	8/29/2002 4:23 PM
Suspension		File Folder	5/9/2003 12:38 AM
Video		File Folder	5/5/2003 1:15 PM
Website		File Folder	11/23/2002 1:17 AM
494.pdf	132 KB	Adobe Acrobat Doc...	1/17/2003 10:12 PM
4901 Report.doc	31 KB	Microsoft Word Doc...	12/8/2002 5:19 PM
Control Lab.ppt	445 KB	Microsoft PowerPoi...	12/4/2002 2:04 AM
Finish Car 3.xls	14 KB	Microsoft Excel War...	3/4/2003 11:08 PM
caenloc.pdf	2,664 KB	Adobe Acrobat Doc...	8/29/2002 2:38 PM
Go With the Flow Final Presentation Spring 033.ppt	4,868 KB	Microsoft PowerPal...	4/23/2003 12:13 PM
Part Order Numbers.xls	17 KB	Microsoft Excel War...	1/7/2003 6:11 PM
Picture 001.jpg	579 KB	JPEG Image	12/4/2002 3:23 AM
Picture 002.jpg	561 KB	JPEG Image	12/4/2002 3:23 AM
Picture 003.jpg	568 KB	JPEG Image	12/4/2002 3:23 AM
Picture 004.jpg	579 KB	JPEG Image	12/4/2002 3:23 AM
Picture 005.jpg	653 KB	JPEG Image	12/4/2002 3:31 AM
Picture 006.jpg	633 KB	JPEG Image	12/4/2002 3:32 AM
Picture 007.jpg	649 KB	JPEG Image	12/4/2002 3:32 AM
Picture 008.jpg	633 KB	JPEG Image	12/4/2002 3:32 AM
sensors.pdf	8,577 KB	Adobe Acrobat Doc...	4/23/2003 7:06 PM
	109 KB	Data Base File	5/12/2003 9:35 PM

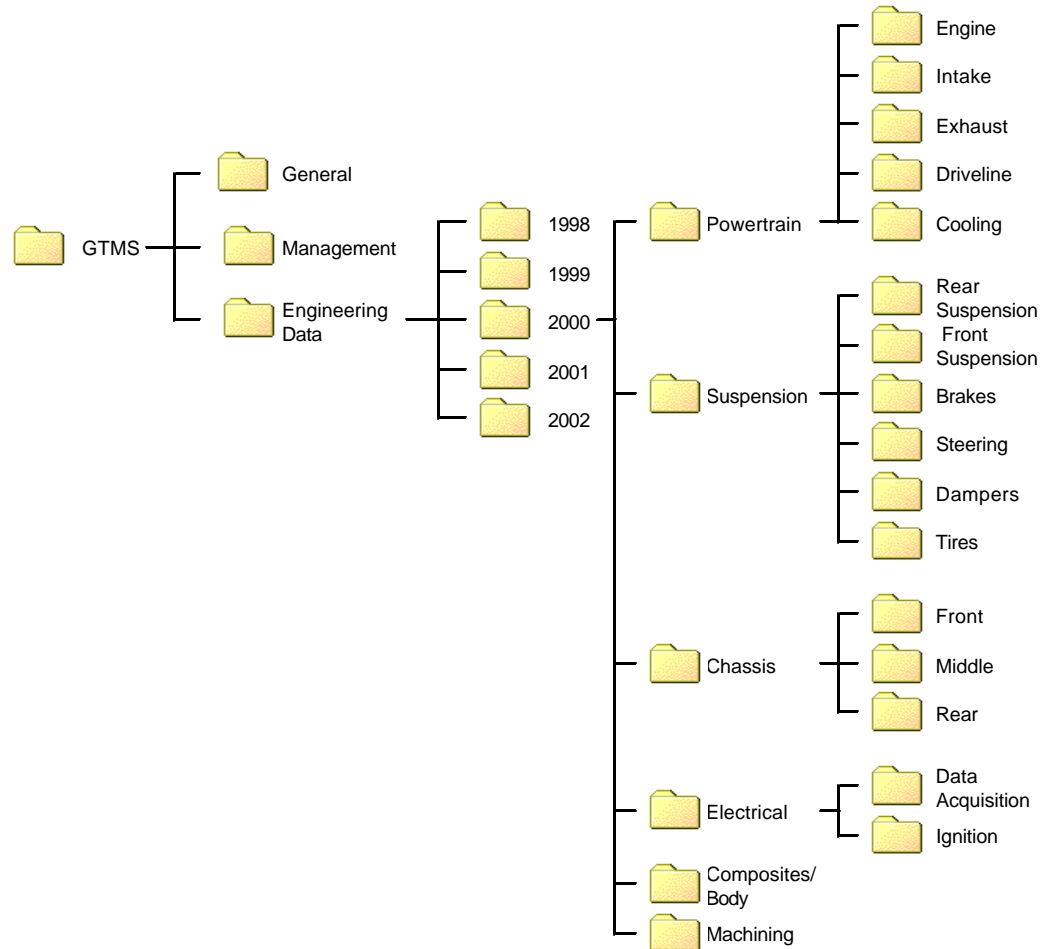
Taskbar items:

- 01\_0062.prt.Z 64 KB WinZip File 6/27/2003 3:44 PM
- 01\_0062.prt.Z 176 KB WinZip File 6/27/2003 3:44 PM

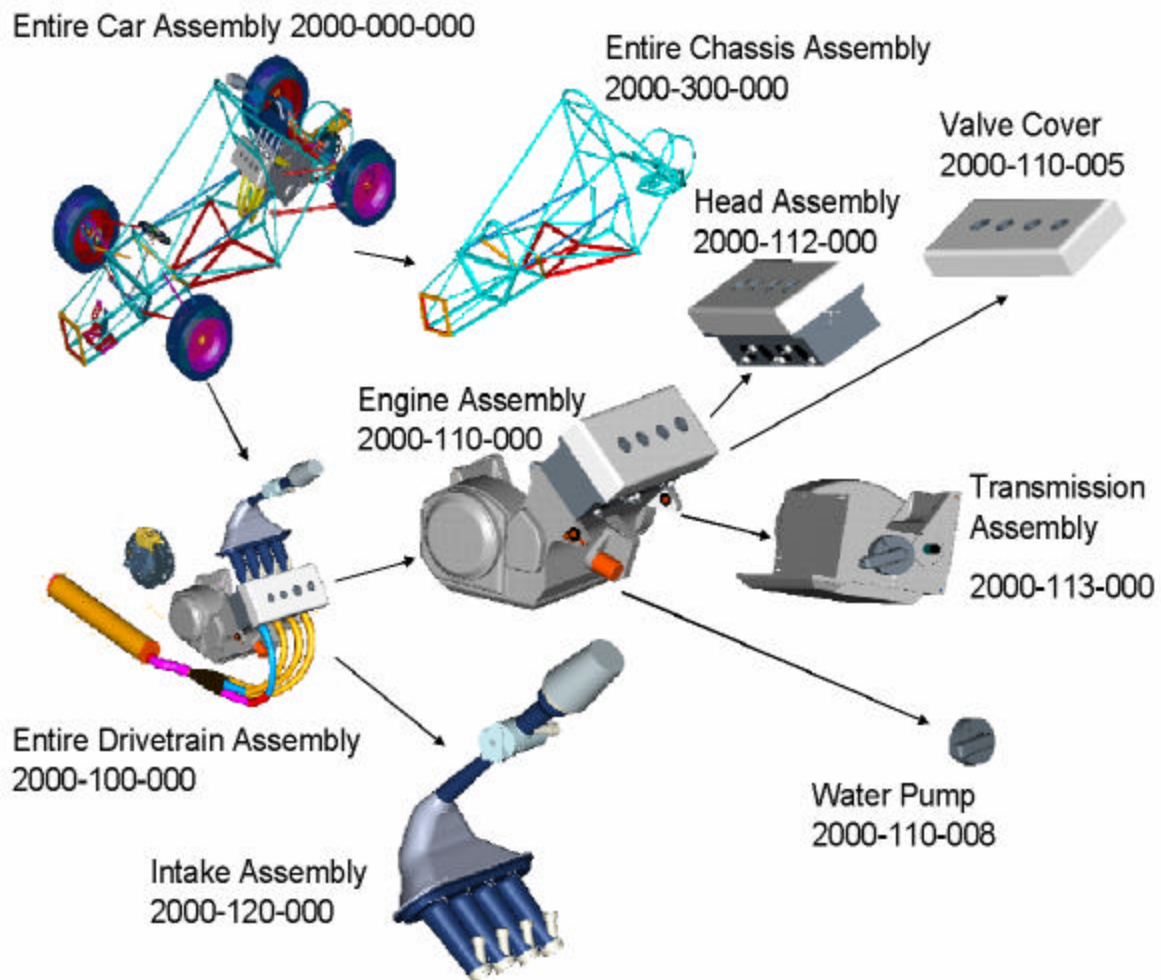
Status bar: 7,182 objects



# Proposed Folder Hierarchy



# Top-down car design



# Part numbering schema

YYYY-MAS-ZZZ

YYYY

Car Model Year

M

Main Category

- 0 Entire
- 1 Powertrain
- 2 Suspension
- 3 Chassis
- 4 Electrical
- 5 Composite/Body

A

Sub Category

	<u>Powertrain</u>	<u>Suspension</u>	<u>Chassis</u>	<u>Electrical</u>
0	Entire	Entire	Front	Entire
1	Engine	Rear Suspension	Rear	Data Acquisition
2	Intake	Front Suspension	Middle	Wiring Harness/Ignition
3	Exhaust	Brakes		
4	Driveline	Steering		
5	Cooling	Dampers		
6		Tires		

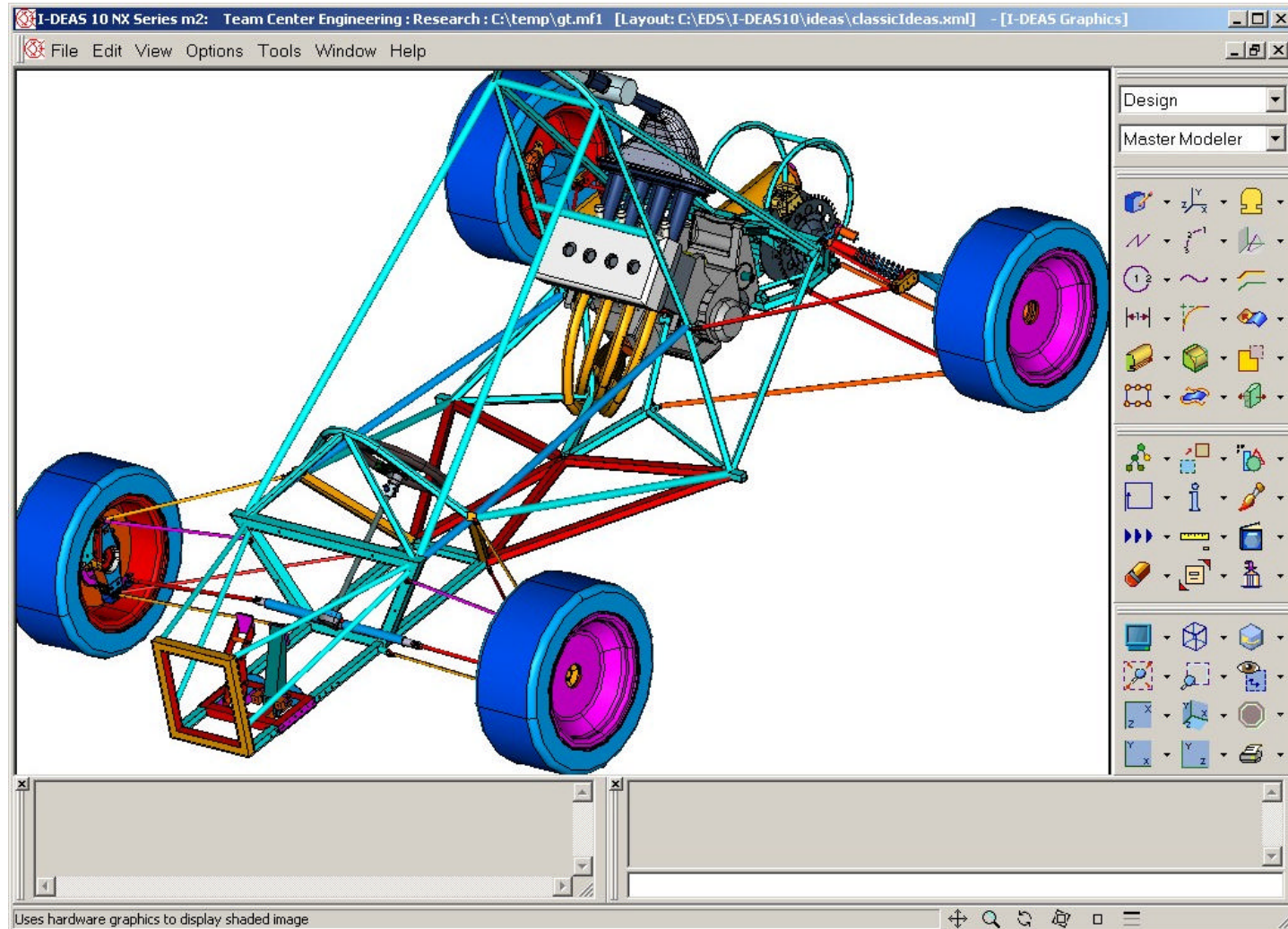
S

Sub Assemblies Within sub Category

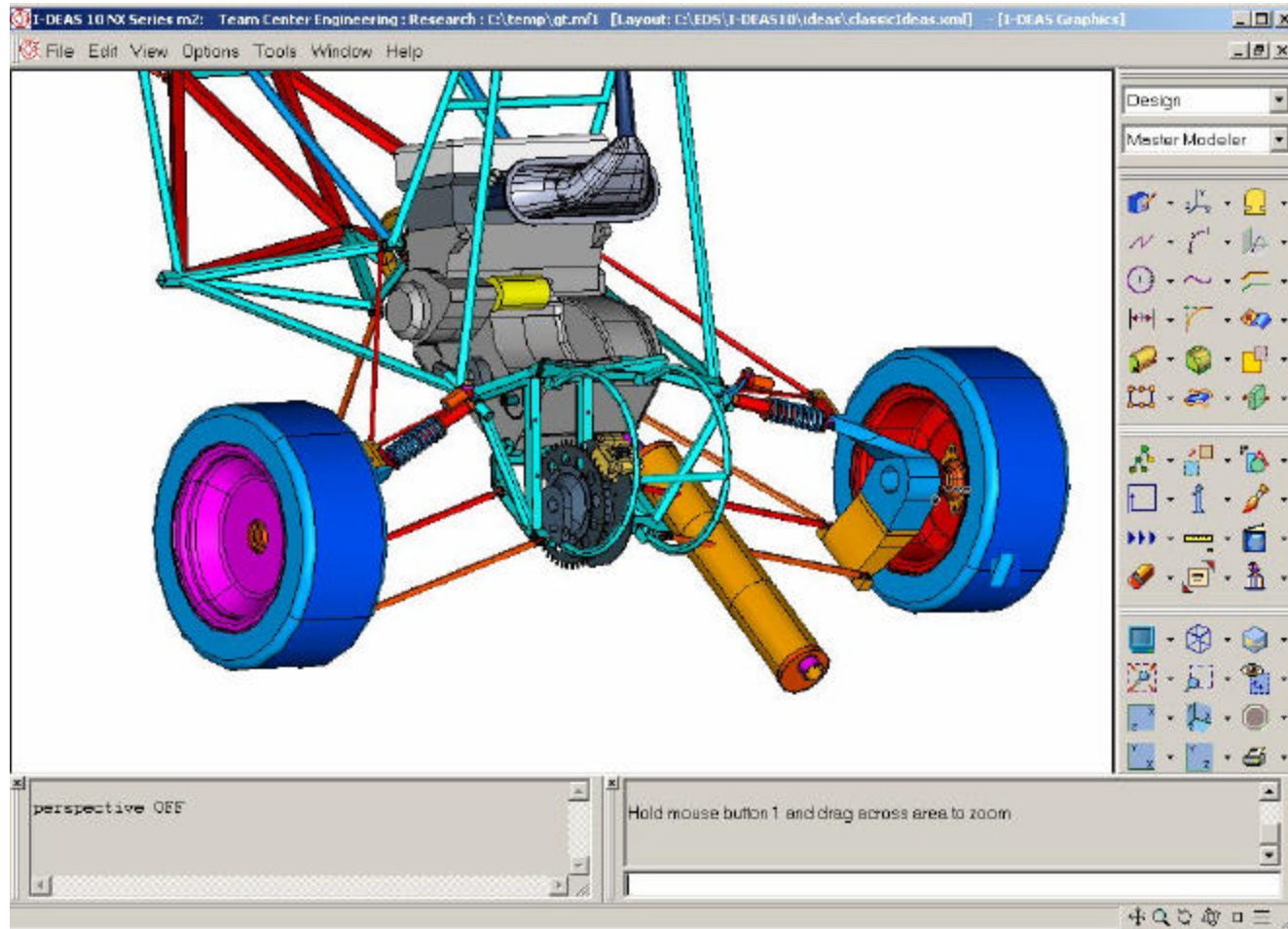
ZZZ

Part number (defaults to 000 if an assembly)

# Assembly in I-DEAS



# Assembly in I-DEAS



# Assembly in Manage Bins

Manage Bins

View: Assembly

0 selected

Top Assembly Only

Stat: Name Type: Version(F) Part Number

Stat	Name	Type	Version(F)	Part Number
	Main	BIN		
----	o 2000 GTMS CAR 33	ASSEMBLY	1 (A)	2000-000-000
----	Chassis assembly	ASSEMBLY	1 (A)	2000-300-000
----	Front section Assembly...	ASSEMBLY	1 (A)	2000-310-000
----	middle...	ASSEMBLY	1 (A)	2000-320-000
----	Rear Section Assembly...	ASSEMBLY	1 (A)	2000-330-000
----	Main front suspension Assembly	ASSEMBLY	1 (A)	2000-220-000
----	left front suspension subassembly	ASSEMBLY	1 (A)	2000-221-000
----	pedals assembly	ASSEMBLY	1 (A)	2000-241-000
----	accelerator pedal subassembly	ASSEMBLY	1 (A)	2000-242-000
----	accelerator mount	PART	1 (A)	2000-240-016
----	base	PART	1 (A)	2000-240-020
----	block pin	PART	1 (A)	2000-240-021

Dismiss



# Assembly in TcEngineering PSE

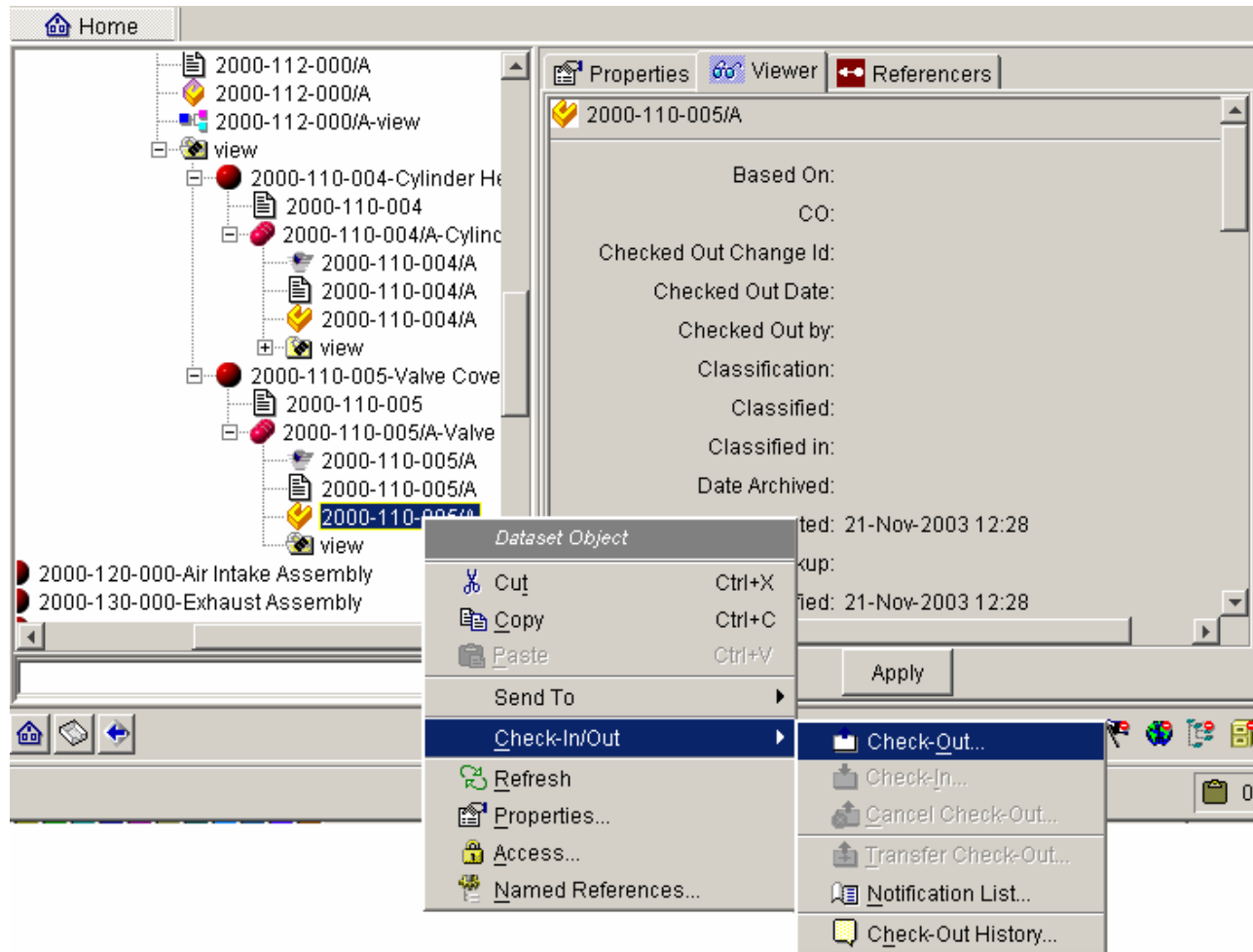
PSE (Damien Gaudry (gt8860a) - dba/DBA [IMC-1417791697])

2000-000-000/A-2000 GTMS CAR 33 (view) - Latest Working - Date - "Now"

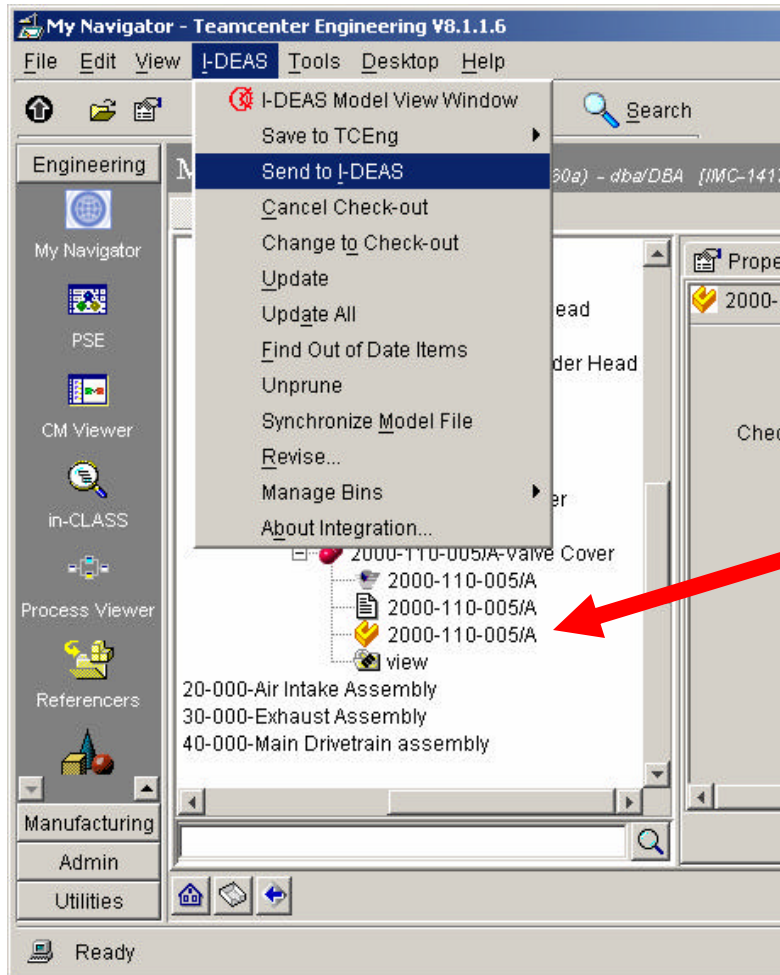
BOM Line	Rule configure...	Item Rev Status	S...	All Notes	VO...	HV...
2000-000-000/A-2000 GTMS CAR 33 (view)					Y	
2000-300-000/A-Chassis assembly (view)	Working( )		10	IDEAS TMTID: 2	Y	
2000-320-000/A-middle (view)	Working( )		10	IDEAS TMTID: 9	Y	
2000-330-000/A-Rear Section Assembly (view)	Working( )		20	IDEAS TMTID: 89	Y	
2000-310-000/A-Front section Assembly (view)	Working( )		30	IDEAS TMTID: 122	Y	
2000-310-004/A-Front Chassis transverse support	Working( )		10	IDEAS TMTID: 2	Y	
2000-310-006/A-Union/Transverse Support	Working( )		20	IDEAS TMTID: 4	Y	
2000-310-007/A-Upper side support Bar	Working( )		30	IDEAS TMTID: 6	Y	
2000-310-002/A-Front chassis lower support bar	Working( )		40	IDEAS TMTID: 7	Y	
2000-310-002/A-Front chassis lower support bar	Working( )		50	IDEAS TMTID: 8	Y	
2000-310-005/A-front fitting	Working( )		60	IDEAS TMTID: 9	Y	
2000-310-005/A-front fitting	Working( )		70	IDEAS TMTID: 10	Y	
2000-310-007/A-Upper side support Bar	Working( )		80	IDEAS TMTID: 11	Y	
2000-310-001/A-cyclinder	Working( )		90	IDEAS TMTID: 13	Y	
2000-310-003/A-Front Chassis Middle support bar	Working( )		100	IDEAS TMTID: 16	Y	
2000-310-003/A-Front Chassis Middle support bar	Working( )		110	IDEAS TMTID: 17	Y	
2000-100-000/A-Powertrain Assembly (view)	Working( )		20	IDEAS TMTID: 118	Y	
2000-210-000/A-Main Rear Suspension Assembly (view)	Working( )		30	IDEAS TMTID: 645	Y	
2000-220-000/A-Main front suspension Assembly (view)	Working( )		40	IDEAS TMTID: 860	Y	



# Check-In/Out changes



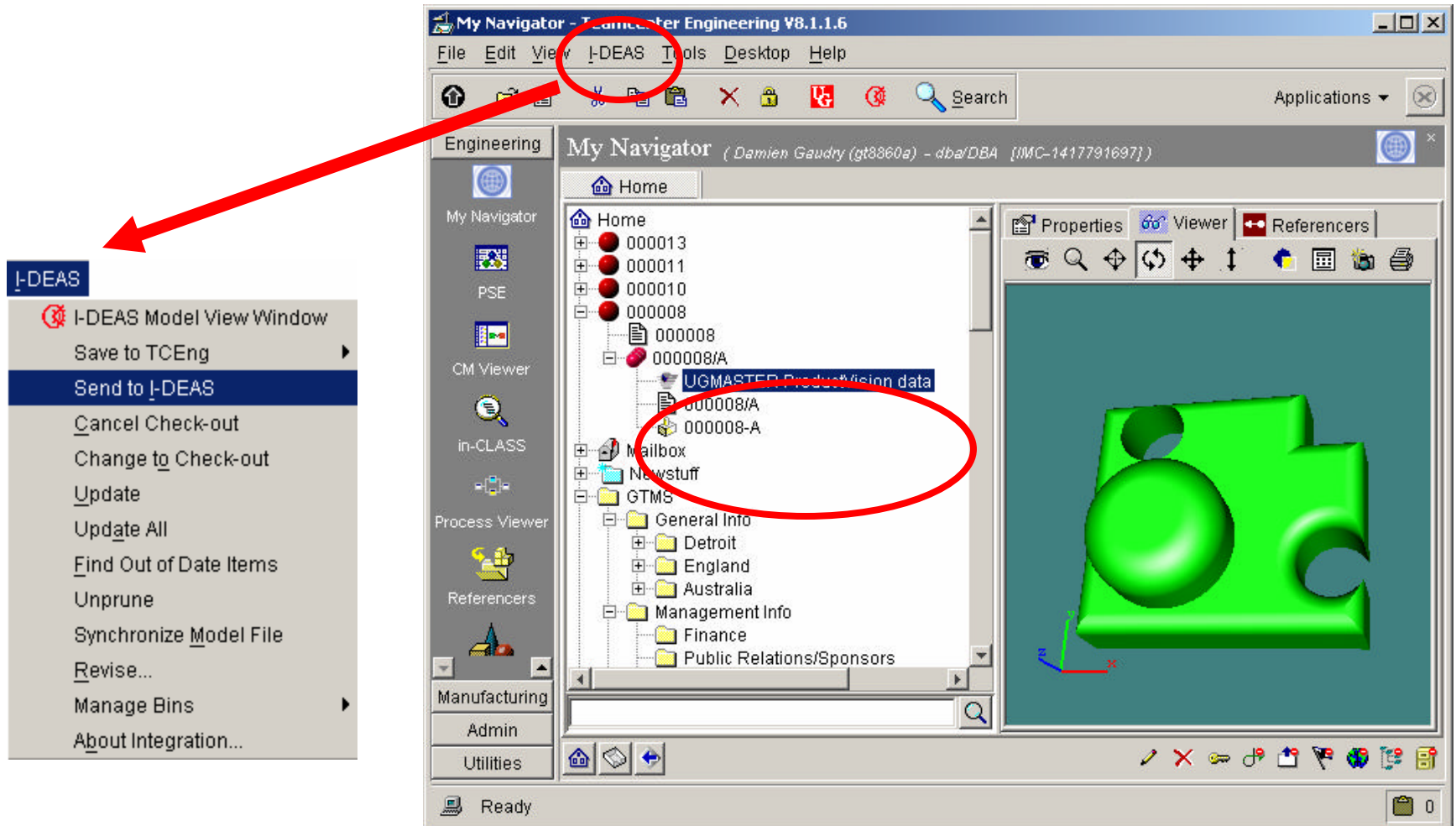
# Send to I-DEAS



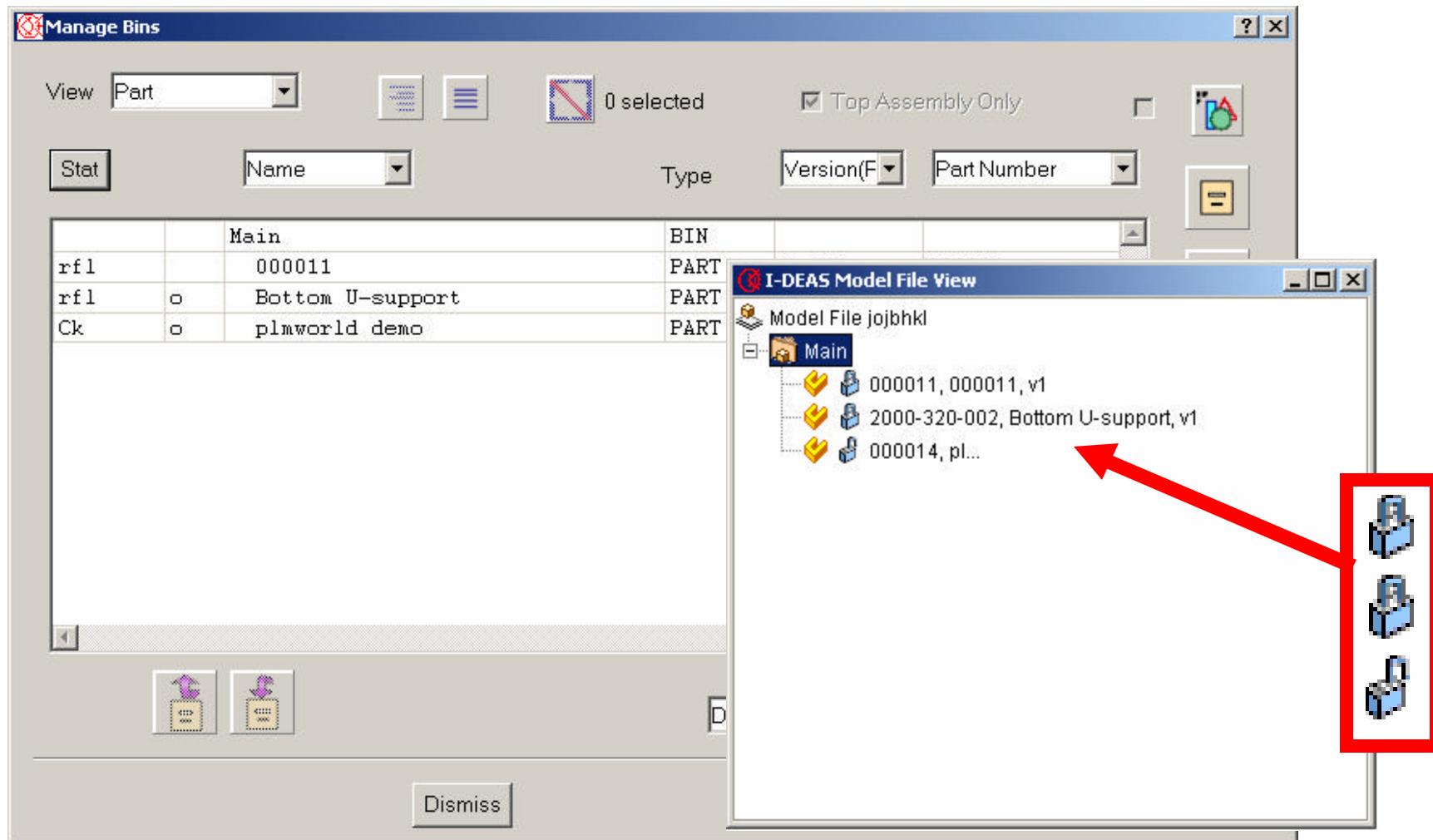
Or double-click



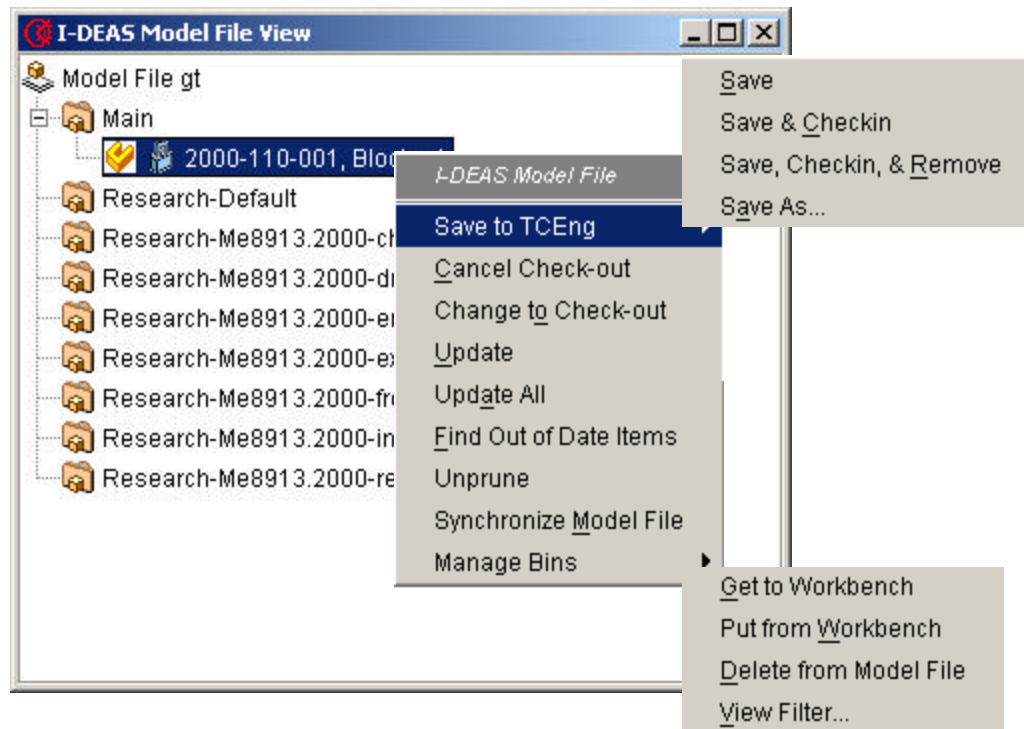
# Send to I-DEAS



# Model File View replaces Manage Bins



# Model File View replaces Manage Bins



# Future work

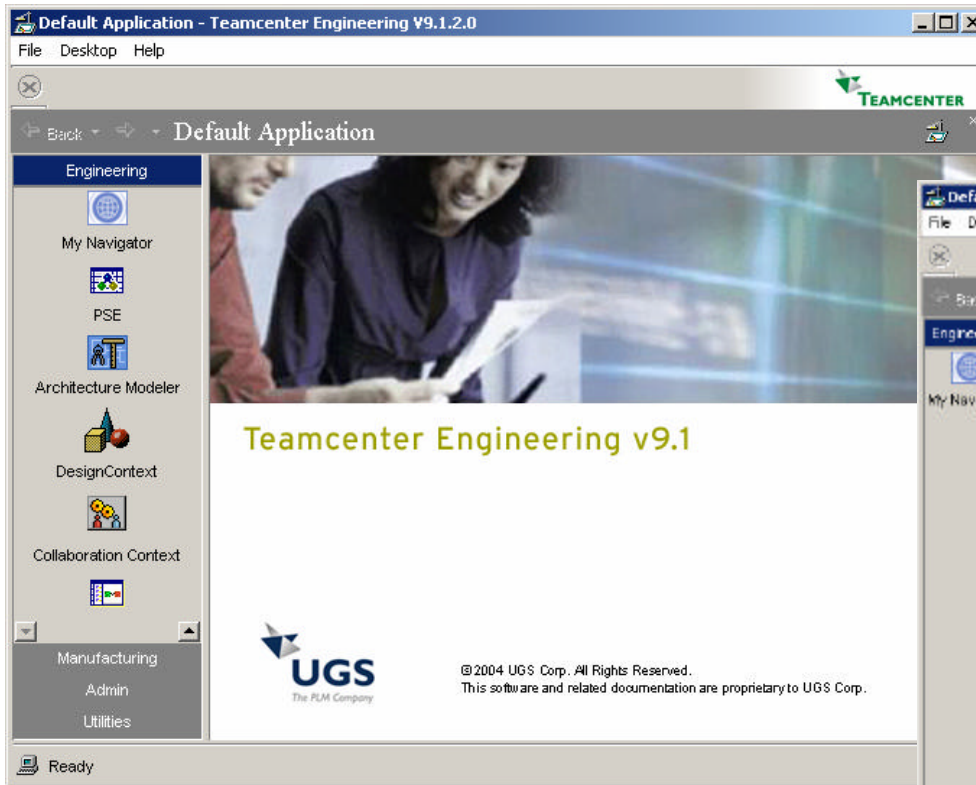
- Teamcenter Engineering 9
  - ❖ Security (Firewall) issues
  - ❖ Don't fear Oracle
- NX3
- Solid Edge

## *Wish List*

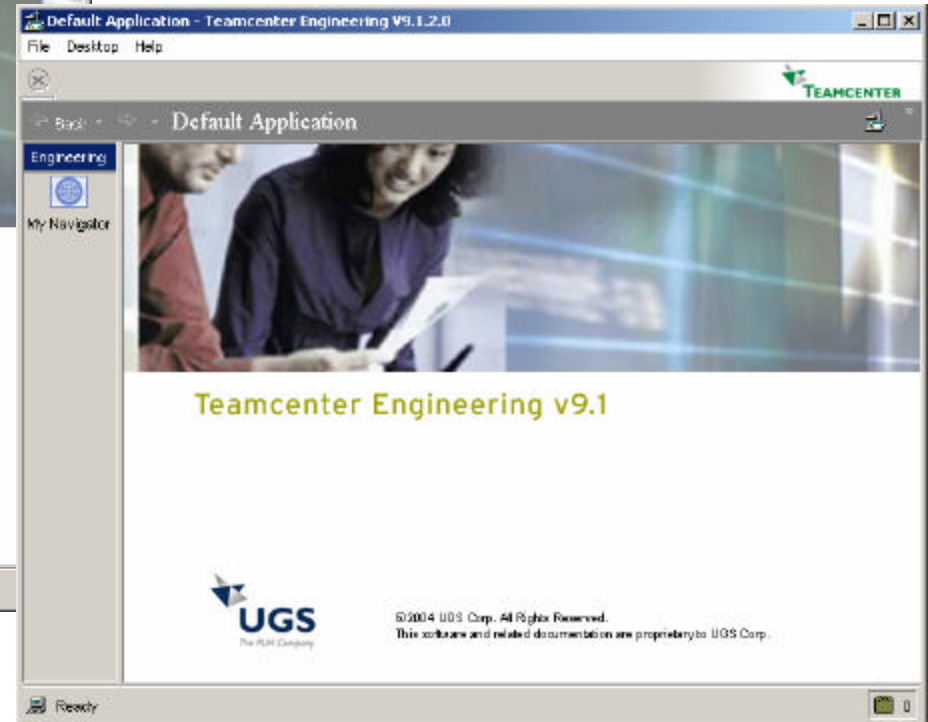
- Teamcenter Community
- Non-UGS CAD management

# Portal Viewer

## Teamcenter Engineering Portal



## NX Manager Portal



# Getting Help via the Web-board

WebBoard - Tord Dennis - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://citizen.plmworld.org/wb/default.asp?action=10&fid=13> Go Links

PLM WORLD™ CITIZEN [Home](#) [Search](#) [Help](#)

Home » PLM Citizen Forum » Teamcenter Engineering - General [Show New Messages](#)

Tree View Topics [New Topic](#)

Subject	New	Replies	Views	Started By	Last Reply
Teamcenter Engineering Web Access	3	2	14	Maarten Romers 04/28/05 01:47am	04/28/05 10:55am
TCE & Visualization	7	6	42	Stan York 04/25/05 02:35pm	04/28/05 08:57am
Teamcenter Community	8	7	33	Ross Blanton 04/25/05 11:35am	04/29/05 12:14pm
Teamcenter Engineering implementation	6	5	31	Neel Venkataraman 04/22/05 05:05pm	04/26/05 09:52am
Performance when working from a different loaction ...	3	2	33	Maarten Romers 04/10/05	04/25/05 09:01am

Internet



# Questions



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