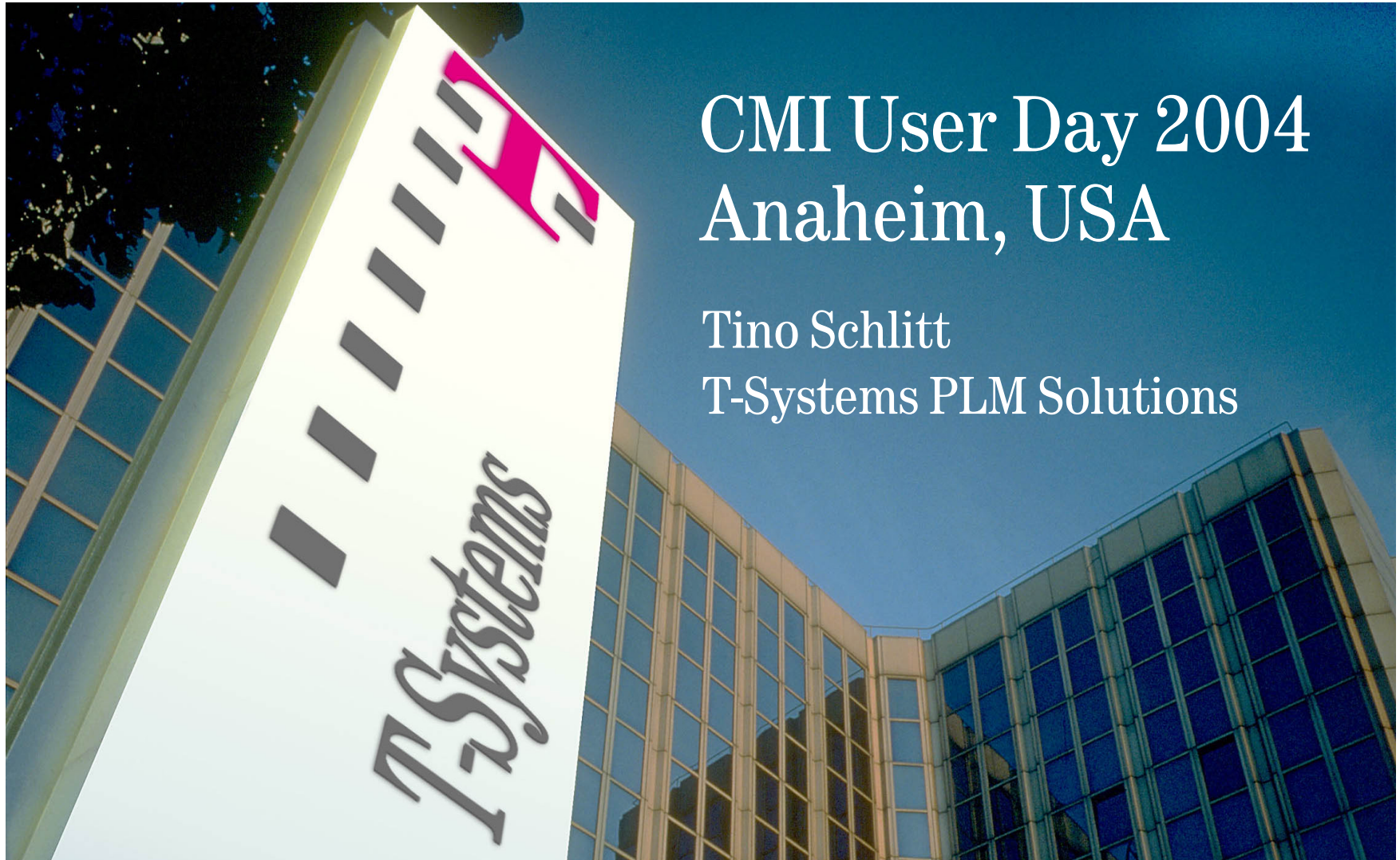


CMI - CATIA Teamcenter Integration



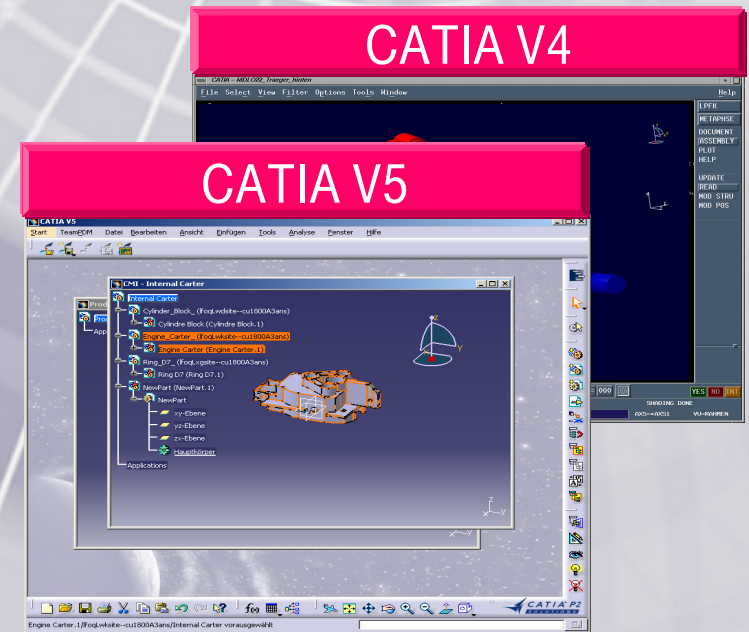
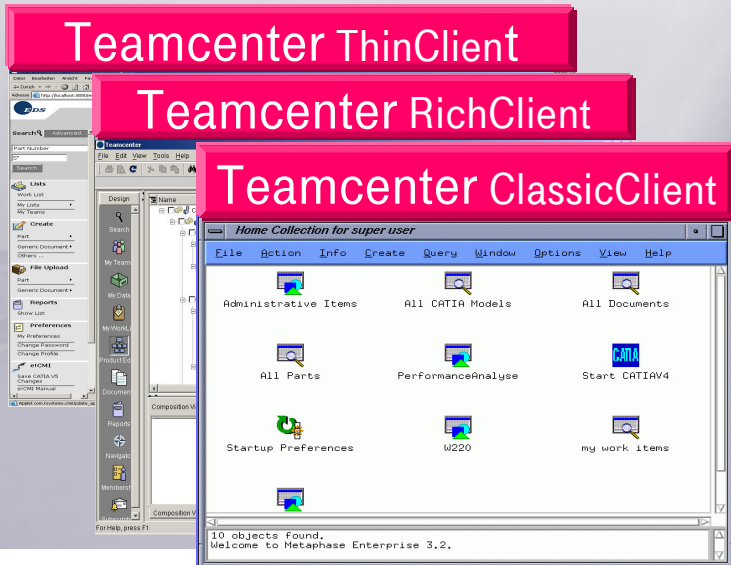
CMI User Day 2004
Anaheim, USA

Tino Schlitt
T-Systems PLM Solutions

Product Development / Strategy.

CATIA Metaphase Interface - Overview.

- Integration of CATIA V4 / V5 and TeamCenter Enterprise
- Teamcenter Enterprise as global PDM system
- Product since 1995
- Assembly functionality in CATIA V4
- Integration of bill of material and geometry data
- Wide range of customization possibilities
- www.cmi-support.com



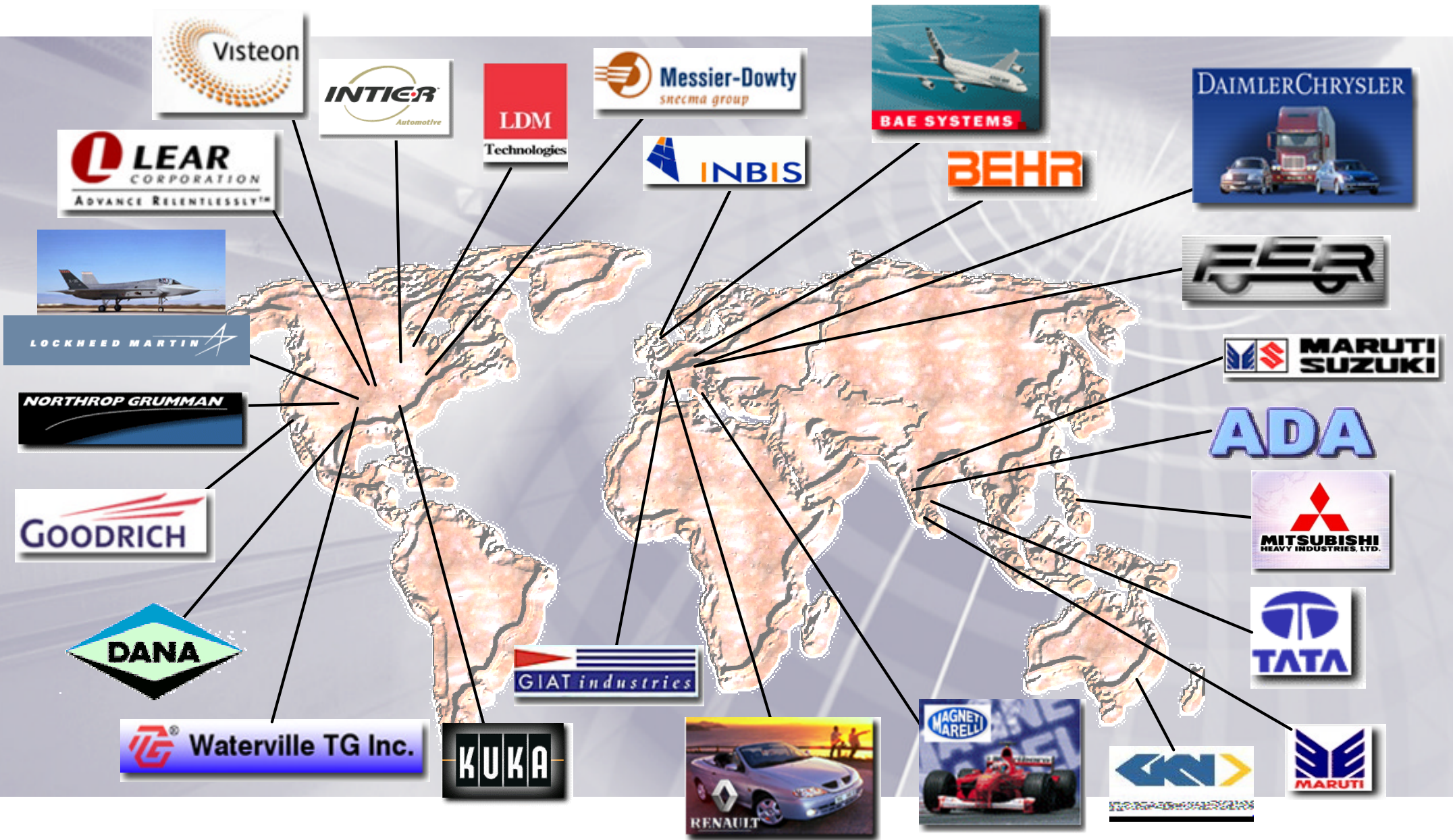
Product Development / Strategy.

CMI - Productive Users world wide.



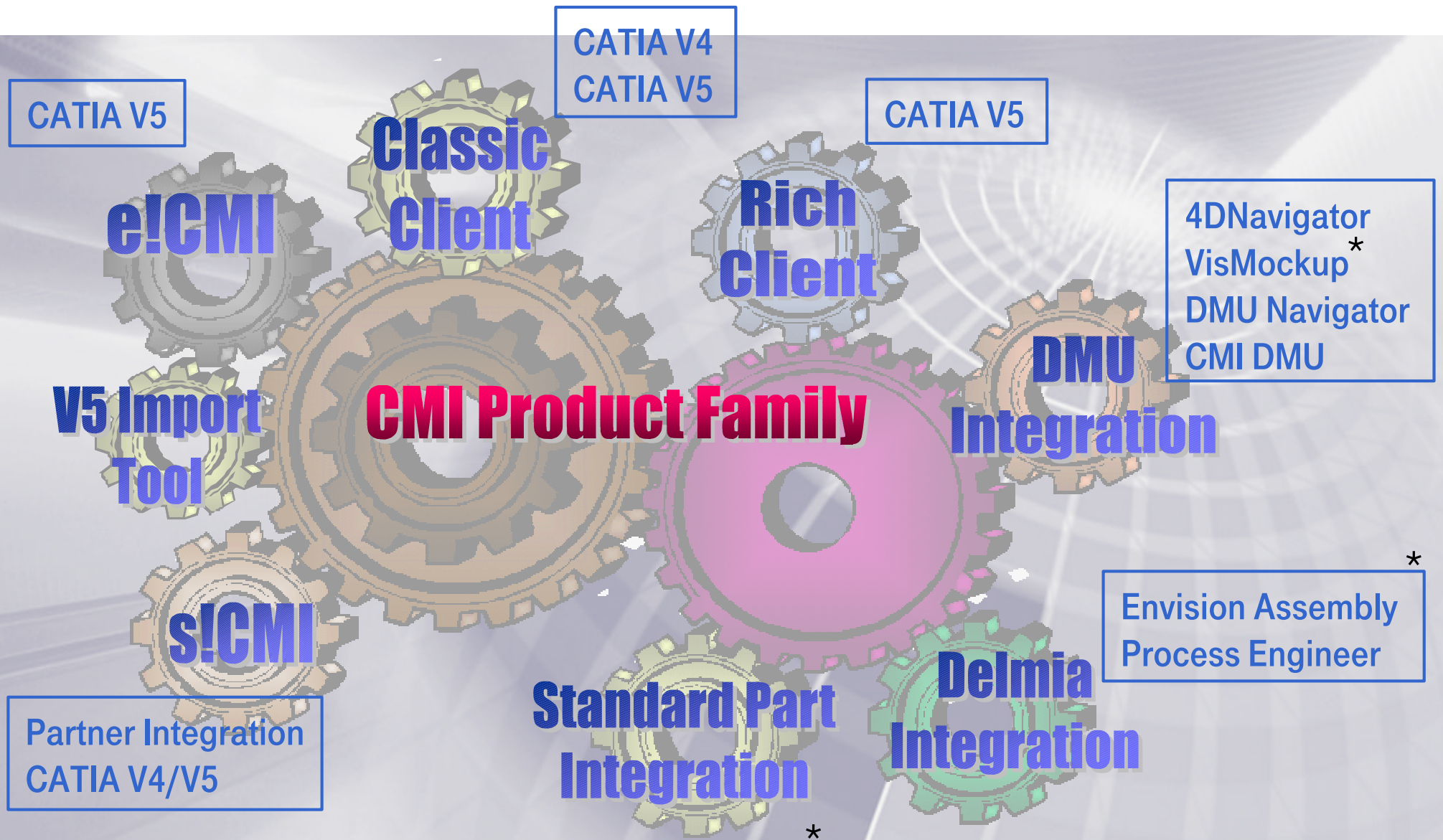
Product Development / Strategy.

CMI Customer extract.



Product Development / Strategy.

The CMI product family.



* = customer specific development

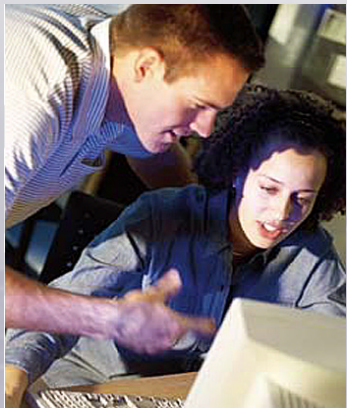
Product Development / Strategy.

Services around T-Systems PDM – CAD Integration.



Consulting

- Identification of relevant CAD / PDM processes
- Specification of integration requirements
- Definition of Scope & Functionality of pilot program
- Identification and implementation of migration paths
- Help integrating of CAD engineering operations



Implementation services

- Implementation of customer specific requirements
- Configuration and Customization of standard implementation
- Implementation of additional tools
- Running of PDM integration projects

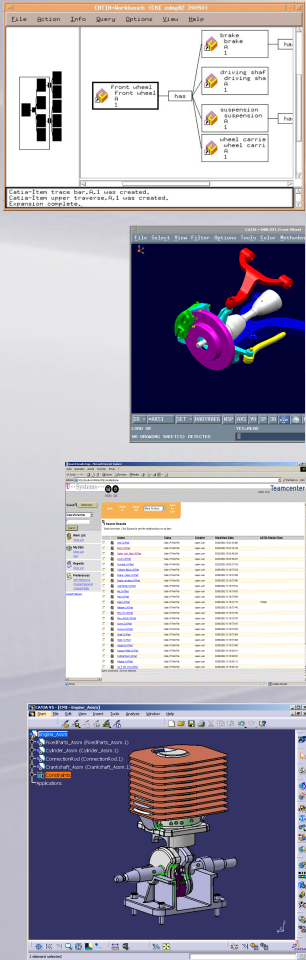


Support

- 1st and 2nd level Support
- Workshops, Customization, Introduction, Training, ...

Product Development / Strategy. CMI Core Functionality.

Core Functionality



- On-the-fly creation of CATIA V5 assemblies out of TC Enterprise product structures (PDM → CATIA V4/5)
- Creation of TC Enterprise product structures out of CATIA V5 (CATIA V5 → PDM)
- Design in configuration context
- Multilevel expand/de-expand
- Drawing creation
- DMU integration in TC Enterprise (neighborhood search)
- Bidirectional identification of items in structures (CATIA ↔ PDM)
- CATIA V5 caching support (CGR files, DMU Navigator)
- Standard part integration
- Black Box – (non-BOM related CATIA files in TC Enterprise)
- Virtual Workbench – loads several assemblies in a single CATIA V5 window.

Product Development / Strategy. CMI Integration Added Value.

DMU in configuration context

- Configured DMU
- Neighborhood search in PDM context
- Volume based search in PDM context
- Global cache management (CGR file control)

Design In Context

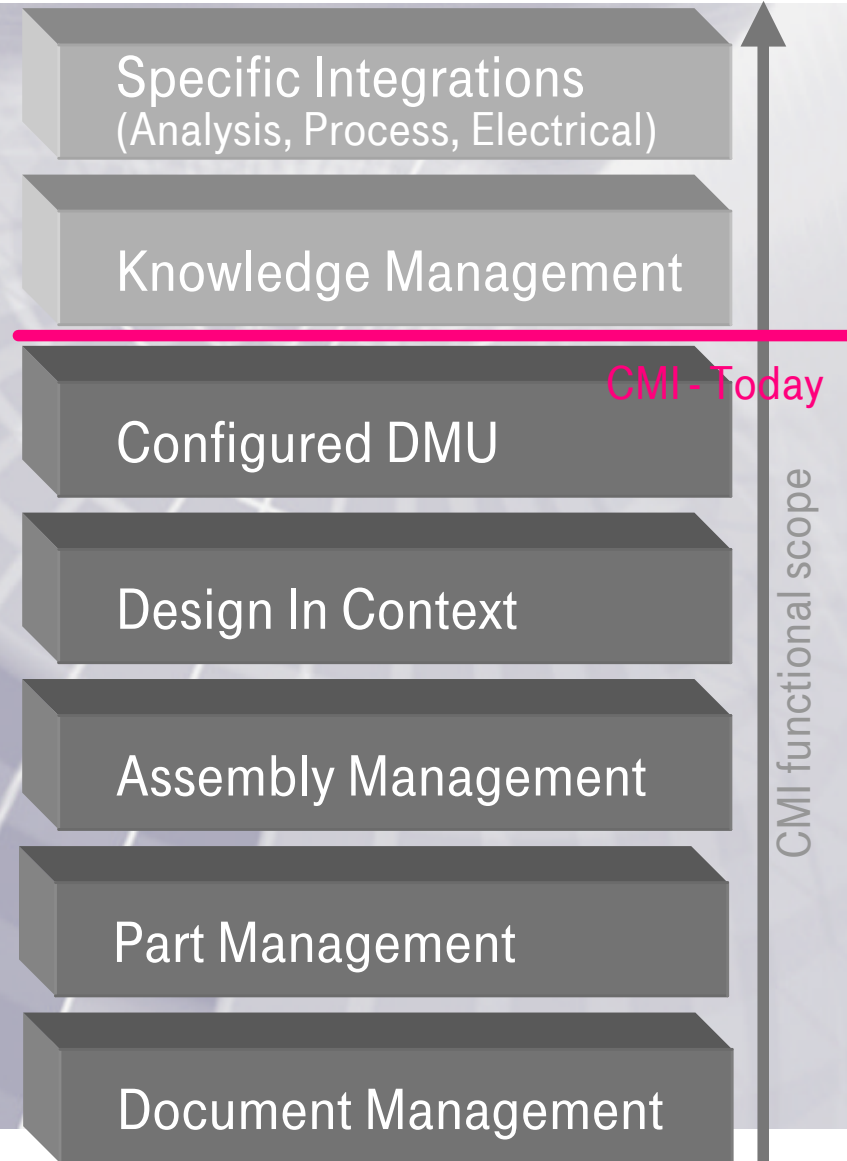
- Product variant management
- Product configuration management
- Identification

Assembly/ Part Management

- Product structure creation/ modification
- BOM synchronization

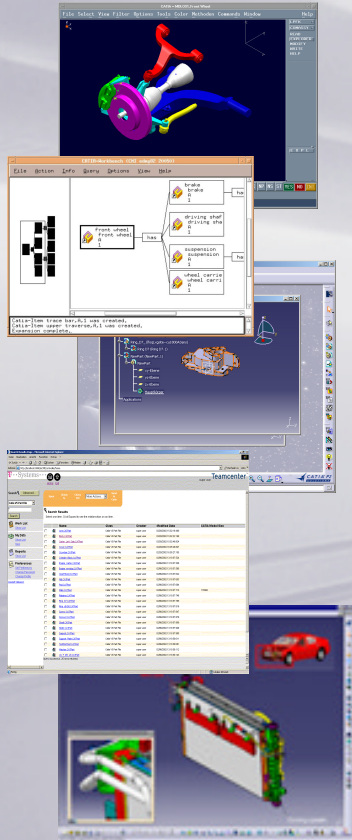
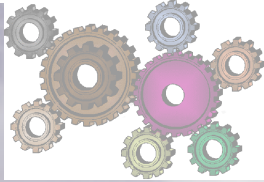
Concurrent Engineering

- User access control
- Live cycle control



Product Development / Strategy.

Planned CMI Enhancements – Connect the future –



■ CMI Product Family

- Ongoing development for e!CMI, s!CMI, DMU
- PDM Workbench
- Customer specific enhancements

■ CMI CATIA V4

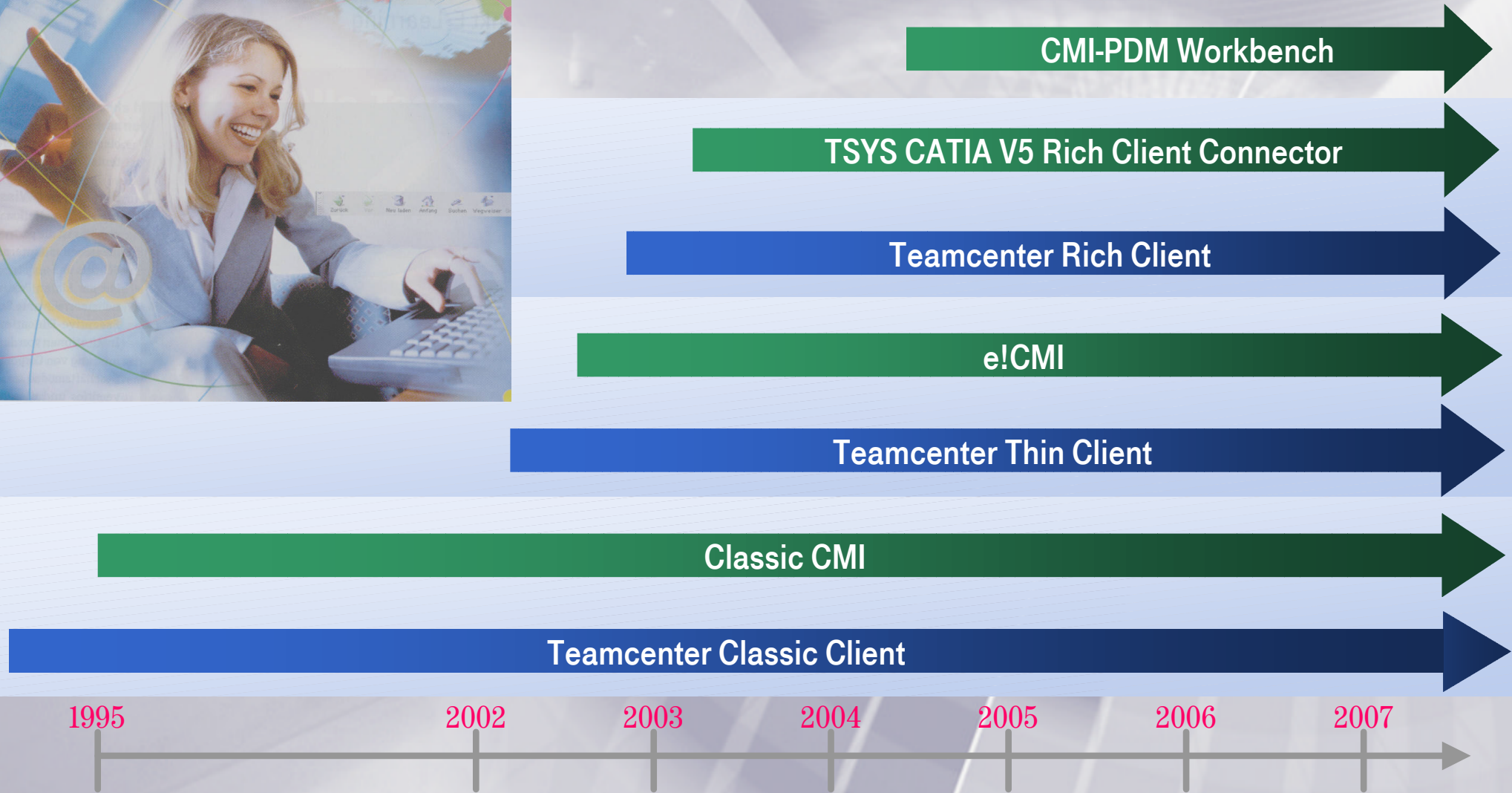
- Ongoing full support of CMI CATIA V4
- Customer specific enhancements

■ CMI CATIA V5

- Support of additional CATIA V5 objects (CATAnalysis, CATprocess, ...)
- Advanced standard part integration with CATIA V5 Catalogues

Product Development / Strategy.

T-Systems - CMI Roadmap.



Product Development / Strategy.

T-Systems - CMI Roadmap.

New Features in CMI 8.5

- Enhanced support for visualization mode in Catia V5
- Optional released-cache handling in Catia V5
- Add Temp – show multiple versions of an Assembly
- CATIA V5 independent save management
- Standard Part Integration
- Add to CATIA V5 in CMI Workbench loads content in single CATIA V5 window

Product Development / Strategy.

CMI - Thin & Rich Client Support.

e!CMI

- Release 2.1
- Support of TC 3.1 / 4.0
- New features
 - Localization of e!CMI Applets
 - New functionality „Update & Create”

CATIA V5 Connector

- Release 1.0 finished in Mai 2003
- Next Release planned for 2004
 - new Rich Client version 4.0 with new API's
- Support of T-Systems CATIA V5 JT Converter

Product Development / Strategy.

T-Systems - CMI Roadmap.

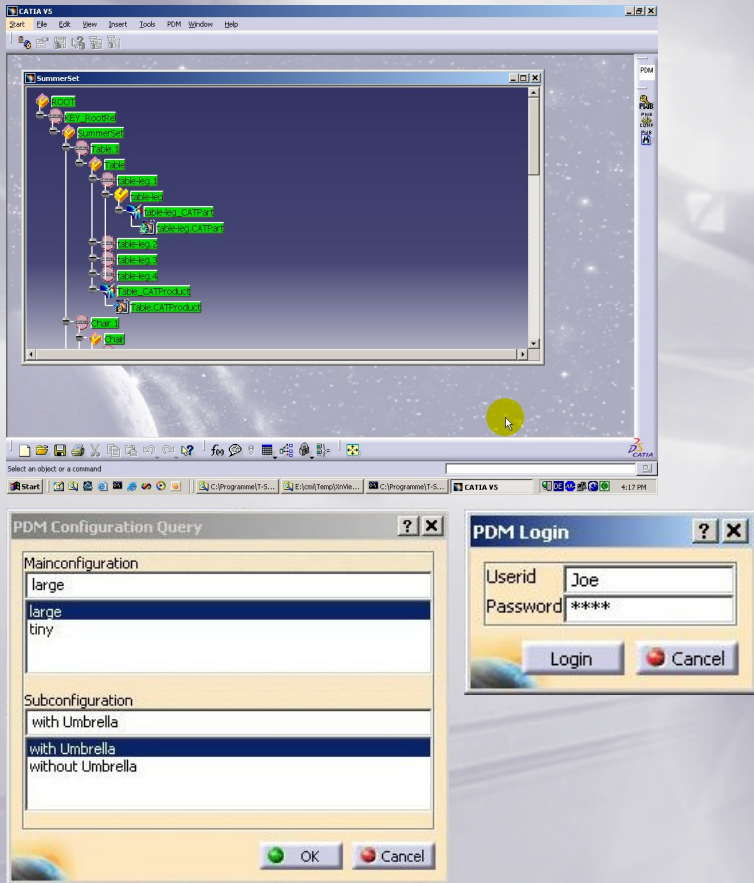
New Features in CMI 8.6

- “Import to Teamcenter” Feature for CMI “Synchronize” functionality
- Dialog in CATIA V5 which displays (customer specific) PDM properties
- Extended CATDrawing support (PDM attributes, automatic attachment)
- Advanced standard part integration with CATIA V5 Catalogues
- Support of additional CATIA V5 data types

Product Development / Strategy. CMI PDM-Workbench.

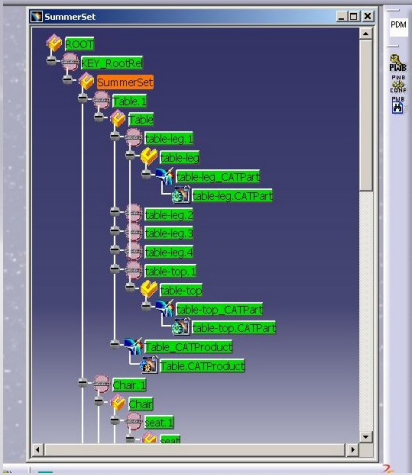
Motivation

- Designer can work as long as possible in CATIA without switching to PDM
- Ability to overcome Teamcenter GUI limitations in classic, rich or thin client technology
- Generic approach to support different PDM clients / systems

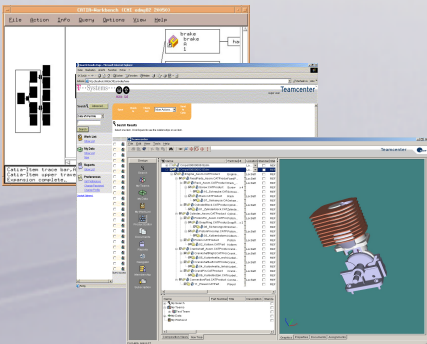


Product Development / Strategy. CMI PDM-Workbench.

Characteristics

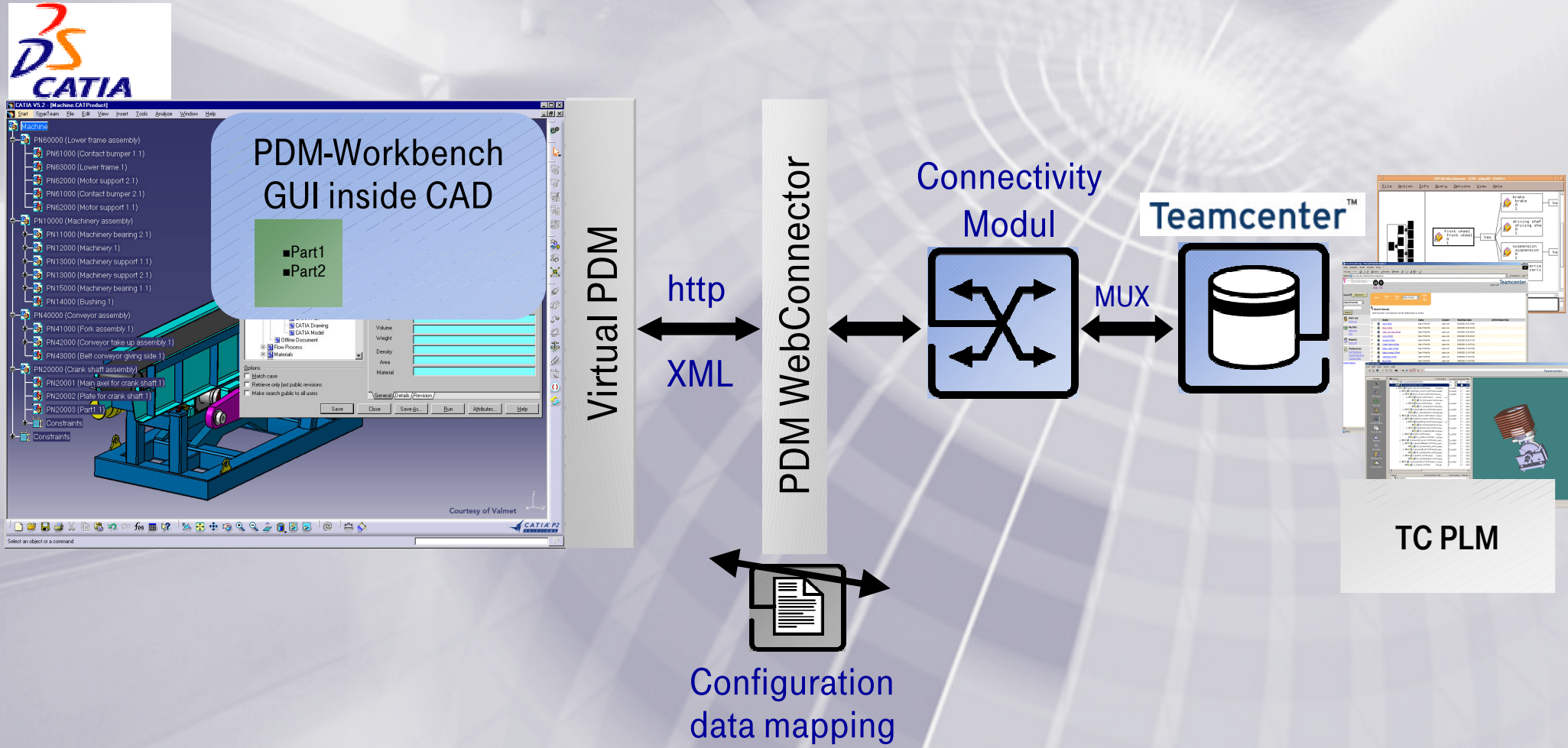


- Is part of the CMI product family
- Completes and extends classic CMI
- Integrates CAD specific PDM functionality in CATIA
- Can be used without PDM client
- Is based on standard CAA technology (CATIA look & feel)
- Customizable (functional behavior, dialogs, icons, ...)
- PDM-Workbench as „native“ functionality of CAD-system
- Uses the customer data model
- Uses relevant configuration context



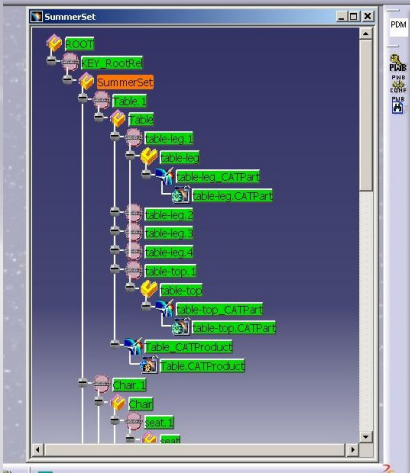
Product Development / Strategy. CMI PDM-Workbench.

Physical Components of PDM-Workbench.

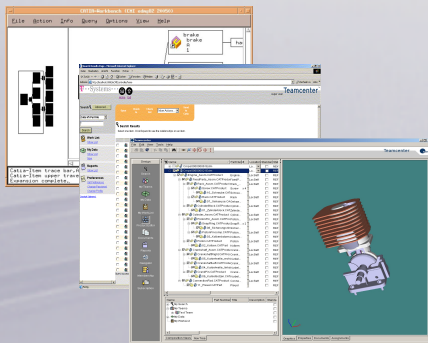


Product Development / Strategy. CMI PDM-Workbench.

Functionality

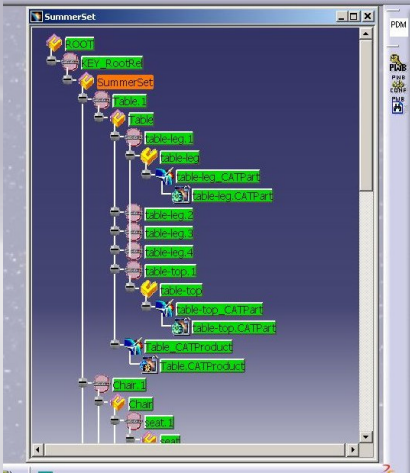


- Login to PDM
 - Without Login no PWB-functionalities
 - Automatic Logoff by PDM-Server will switch off the PWB-functionalities
- Define Configuration usage
 - Dialog will follow the customer's configuration hierarchy
 - Selected Configuration usage data are sent to PDM
- CheckIn/Out

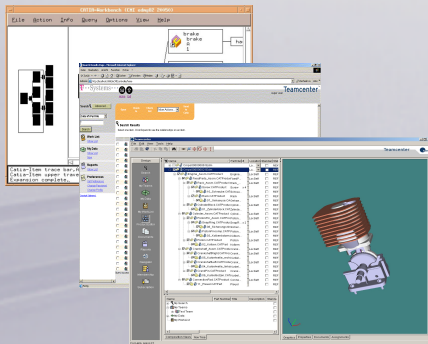


Product Development / Strategy. CMI PDM-Workbench.

Functionality



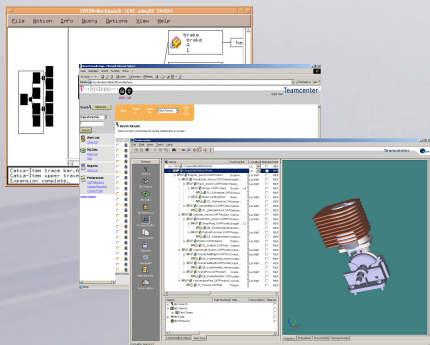
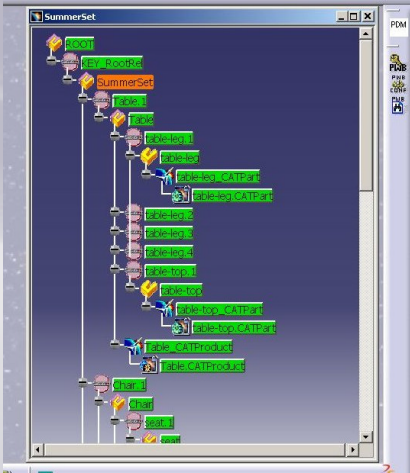
- Load Product Structure from PDM
 - Visualizes it in CATIA as PWB-graph in PWB-Window
 - Permits to load a corresponding CAD-structure into a CATProduct-Window for any (Sub-)Tree of the PWB-graph
- Edit Product Structure
 - Within PWB-Window so that the corresponding CATProduct is modified simultaneously
 - Within CATProduct-Window so that the corresponding PWB-Graph is modified simultaneously
 - Modify Attribute-Values



Product Development / Strategy. CMI PDM-Workbench.

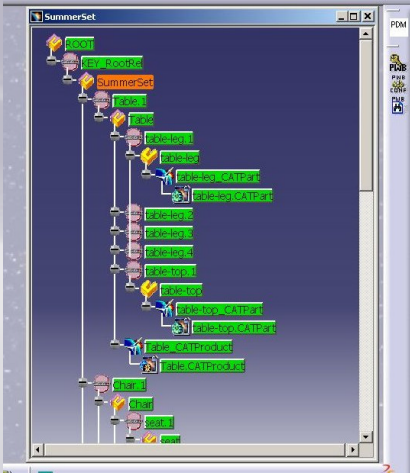
Functionality

- Keep session contents for later reuse as Working Scenarios
- PDM-data are only kept in session memory

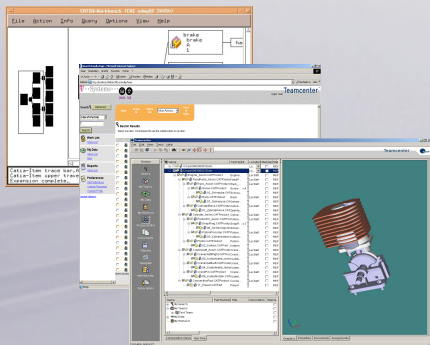


Product Development / Strategy. CMI PDM-Workbench.

PDM-Workbench functionality currently not planned



- LifeCycle functionalities
- Definition of Configurations (only usages)
- Creation of PDM-Parts
- Conclusion: PDM-Workbench will not replace a PDM-System.



Product Development / Strategy. Contact.

..... **T** Systems

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..... **T** Systems