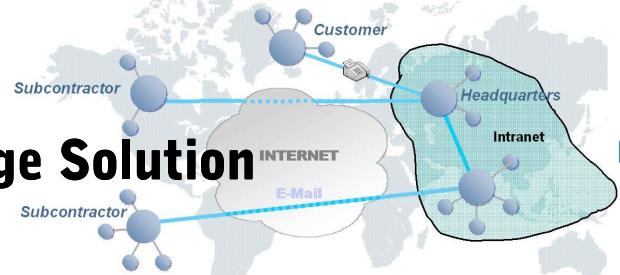


The Multi-CAD Data Exchange Solution



Manufacturing companies are facing increasingly tough challenges in a global economy. Cost pressure and the demand to manufacture close to the customer base, e.g. in the automotive supplier industry, have forced companies to go global and to create globally distributed production facilities. At the same time, working in distributed engineering and development teams has become common practice. Thus, the exchange of engineering and design data has become a vital and integral part of core business processes.

Your Situation

You have implemented the my-SAP PLM solution. CAD models are stored and managed by one (or several) of the CAD integrations in the SAP document management system.

Your CAD data exchange activities with clients and partners shall become an integral part of your PLM processes and shall be managed directly within your mySAP PLM environment.

The Challenge

CAD data exchange has changed from pure part exchange to the exchange of complex assembly structures. Also, additional PDM meta data have to be exchanged.

Your clients demand from you to meet an increasing variety of data exchange conventions, both on the basis of native as well as neutral CAD formats.

You intend to establish standardized data exchange conventions with your engineering and design partners to achieve a closer integration of their work into your PLM processes.

The combination of these challenges creates a demand for new productivity tools to manage and execute your data exchange activities. Flexible import functions for external, customer and partner generated data as well as data export functions are required.

The Solution

As a joint initiative of the SAP development partners for the CAD integrations of CATIA, Pro/E and Unigraphics a multi-CAD data exchange solution is being developed.

Enterprise Connector for mySAP PLM provides a common data exchange infrastructure with plug-in connectors for the different CAD systems. All data exchange processes are driven from the SAP PLM environment.

Data import into and export from SAP is supported in native CAD as well as neutral formats. CAD models are mapped to SAP documents and vice versa.



Advanced data analysis tools allow to automatically investigate CAD models and to determine the internal structure and content of CAD data packages. The management of the data exchange activities is supported through detailed activity logs and dedicated administrative functions.

The solution in a Nutshell

Enterprise Connector for mySAP PLM is a modular data exchange platform that is composed of connector components for SAP and the different CAD systems, as well as a data mapping tool. It provides the following functions:

- Exchange of CAD model data including material master, bill of document and bill of material information.
- Data import into and export from mySAP PLM
- Mapping of CAD models onto SAP document structures (and vice versa)
- XML based data exchange infrastructure
- Format conversions
- Integration of data quality tools
- Management of exchange partner information
- Management and control of data exchange processes
- Integration into collaboration platforms such as SAP cFolders

Mapping Tool

The mapping tool allows to manage different data exchange conventions on the basis of so called "mapping rule environments". These environments are "recipes" to map external, client or partner specific data representations onto internal SAP document structures. The data mapping rules can be defined specific for a partner, client or project.

Data mapping is executed through an interactive graphical user interface and can be adjusted and adopted to ad hoc exchange requirements.

CATIA Connector Pro/E Connector Unigraphics Connector

The CAD system connectors provide complete analysis functions for CAD model files and their internal structure:

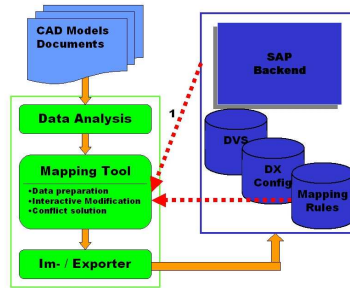
- Assembly structure resolution
- Assembly/part/drawing relations
- File naming and internal naming
- Model properties
- CAD object links

In addition CAD models can be renamed and filled with attribute information:

- Mapping of SAP classification characteristics into CAD attributes

SAP Connector

The SAP connector includes functions to create, read, and query SAP documents, document structures and material masters. Also, object links, e.g. between a document and a material master can be created when importing data.



Partner and Process Administration

Comprehensive partner and exchange process management functions are included in the Enterprise Connector for mySAP PLM.

All administrative data are stored in SAP. A complete history of exchange processes and their respective content is maintained by the system. Query functions allow you to track data exchange processes.

Exchange partner profiles including contact and system information define communication details and possible data exchange formats.

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CENIT AG Systemhaus is authorized Special Expertize Partner SAP/PDM and the official SAP development partner for the CATIA integration.

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