CAD Portal

The collaboration portal for efficient product development
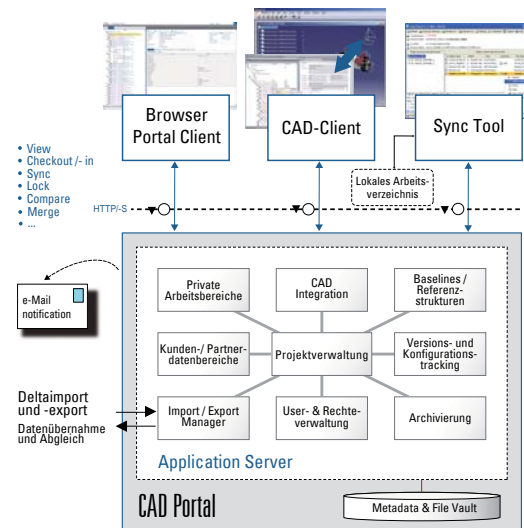
Benefits

- **Greater efficiency in collaborative engineering**
  - Work in one single CAD assembly
  - Immediate availability of all relevant information
  - Decouple CAD assemblies from (partner-specific) PDM assemblies
  - Always use the latest data
  - Configuration and version tracking
  - Tracking of development states
- **Transparency in the development process**
  - Easy and secure integration of external partners
- **Improved process security and quality**
- **Effortless roll-out**
  - Easy to learn
  - Fast deployment
  - High user acceptance
- **Automated data import from PDM**
  - Defined interface with customers and partners
  - Management of customer- and project-specific data structures in separate partner workspaces

Driving product development together

CAD Portal is an add-on to Collaboration Portal, PDTec's web-based portal for managing all the product data, documents, agreements and policies needed for project execution and collaboration. CAD Portal optimizes the management of CAD assemblies, related product assemblies and metadata.

Geometry data is accessed via a CAD client, which serves as an interface between the portal database and the CAD system, such as CATIA V5. The CAD client acts as the designer's user environment, prevents redundancies and ensures data is up-to-date. CAD users can access all the information they need in the CAD client.

The client's key features include permission management, version control, where-used list and access to metadata. The CAD client also helps

CAD users synchronize local data with the portal's current content. Thanks to a locking mechanism, users cannot inadvertently overwrite other people's data. Changes are made in the CAD client and synchronized with the portal on check-in. When CAD users check in data, they see a transparent overview of the local changes and their impact on the assembly in the portal.

PD|Tec.

Flexible support for engineering projects

The cross-company development of complex products with multiple vari-ants represents a special challenge in terms of organizing processes, managing internal data on customer-specific assemblies and constantly synchronizing data with customers, partners and suppliers. Project-based development requires a particularly high degree of flexibility and adapt-ability. Constantly changing project teams are expected to start work quickly and deliver consistently high quality. However, it is frequently difficult or expensive to implement project or customer-specific changes with conventional, often rigid PDM solutions. In these projects, design-ers tend to manage their data in the file system instead of the PDM ap-plication.

CAD Portal enables the management and presentation of customer-spe-cific product configurations, PDM assemblies and attributes. PDM as-semblies sent and possibly configured by the partner are converted into standardized CAD assemblies for internal processing. Since this process preserves the link between the two assemblies – and between the cor-responding version states and configurations – it is possible to trace the current CAD state back to the partner's original data at any time.

Because CAD assemblies are separated from product assemblies, de-signers can work in a familiar CAD environment. Designers manage their drafts and working assemblies in a personal workspace. Central data management in CAD Portal ensures that data is always up to date, enables the rapid retrieval of different version, assembly and configura-tion states, and tracks the inter-enterprise development history. Efficient compare and merge algorithms identify and highlight changes and con-solidate states that have been checked out and modified.

At the same time, CAD Portal provides a single interface to customer PDM systems through import and export mechanisms.

Application highlights

- **Controlled working on a shared database**
  - Role- and team-based permis-sion management
  - Revising and release
  - Locking of checked-out models
  - Various configuration rules for loading a CAD assembly
  - Fixing assemblies in baselines
  - Where-used parts list
- **Personal workspace for managing drafts and user environments**
- **Transparent overview of changes upon check-in**
- **Component history**
- **Management and presen-tation of customer- and partner-specific PDM assem-blies**
  - Trace CAD states back to the original data
- **Easy to integrate with exist-ing IT infrastructure**
  - Communicates effortlessly with existing systems, e.g. for data import
  - Easy deployment