Product Data Management (PDM)

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Product Data Management (PDM)

- PDM is a tool that helps manage product data and product development process.
- PDM system is used within an enterprise to organize, access, and control data related to its product and manage the life cycle of its products.
- The data tracked usually involves the technical specifications of the product, specifications for manufacture and development, and the types of materials that will be required to produce goods.
PDM (cont’d)

- allows a company to track the various costs associated with the creation and launch of a product.
- manage and track the creation, change and archive of all information related to a product including engineering data such as Computer-aided design (CAD) models, drawings and their associated documents.
- serves as a central knowledge repository for process and product history, and promotes integration and data exchange among all business users who interact with products — including project managers, engineers, sales people, buyers, and quality assurance teams.
PDM (cont’d)

- The central database also manages metadata such as owner of a file and release status of the components. The package will: control check-in and check-out of the product data to multi-user; carry out engineering change management and release control on all versions/issues of components in a product; build and manipulate the product structure bill of materials (BOM) for assemblies; and assist in configurations management of product variants.
Typical PDM Modules

- Part number
- Part description
- Supplier/vendor
- Vendor part number and description
- Unit of measure
- Cost/price
- Schematic or CAD drawing
- Material data sheets
PDM Utilities

1. **Document distribution & Data transport**: For better working practices we need optimum speed which will distribute information to user. This system maintains duplicate data stores or libraries and also maintains distribution lists of them. For the security purpose of data location, all the data is accessed under the control of PDM system.

2. **Document viewing & imaging**: Images, assembly drawings, machine drawings, CAD diagrams as well as video sequences are treated by the PDM, in the same way as other data. So that online access to wide range of information (related to product) which was previously difficult to distribute and archive is provided by PDM.

3. **Data translation & conversion**: Data translators can be predefined by system administrator for the conversion of data between application, displays and other output devices.

4. **Communication & notification control**: For easy access of the current state of a project to all team members, online & automated notification of critical events is provided.

5. **System administration**: It allows user for changing the data and gaining access to it (Security, Data backup, Approval of procedures, Customization of operational features)
Advantages of PDM

- Track and manage all changes to product related data
- Accelerate return on investment with easy setup;
- Spend less time organizing and tracking design data;
- Improve productivity through reuse of product design data
- Enhance collaboration.
PDM in SolidWorks

- Implemented thru PDMWorks Enterprise
- Capabilities:
  - **Organize product or project files** – organizing your companies project files in a clear easy to use manner based on design groups and product hierarchy.
  - **Secure vaulting/retrieval, versioning and revisioning of files** – Your product or project data, including CAD data and supporting documents, are stored in a central secured location on your network. As checked out documents are modified and checked back into the vault, the versions and/or revision is incremented allowing all product history to be maintained.
  - **Change control and sharing** – A multi-user collaboration environment allowing access to project or product data by limiting certain groups and users access to files at different document states.
  - **Searching and reporting** - allowing search of your vault quickly and even creating a report based on your search criteria.
  - **Tracking file references** – ability to track a document such as a part file is being used or what parts are being referenced by an assembly. As you rename and move parts, drawings or assemblies the references are maintained.
  - **Automating audit trails** – Audit trails are very important for regulatory compliance to track when documents were accessed, modified or routed and by whom.
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