

# Product Data Management (PDM)

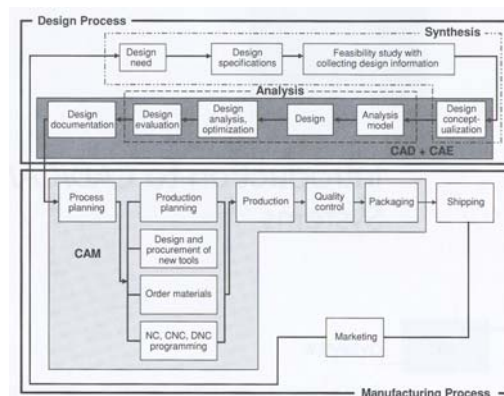
December 10, 2007

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## Introduction of PDM

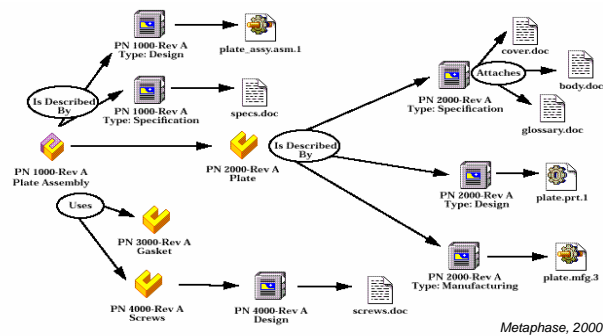
- Product Development Process is becoming more complex



**Increase the needs of management system throughout the development process**

## What is PDM

- Product Data Management
- “Electronic handling and control of product information throughout the whole product life cycle across system and organization boundaries.”



< Diagram of PDM system >

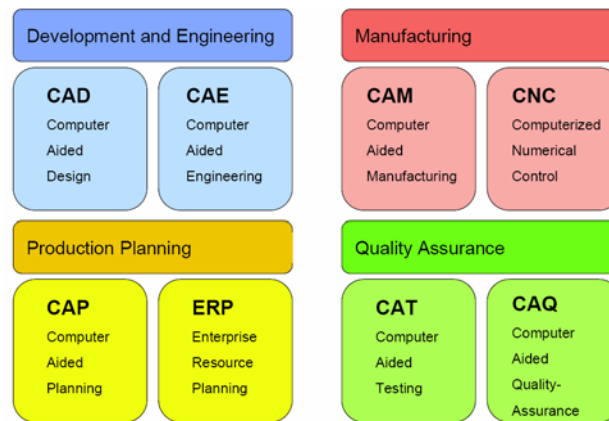
## Related terms

- PLM (Product Lifecycle Management)
- PKM (Product Knowledge Management)
- PDT (Product Data Technology)
- PIM (Product Information Management)

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## Components of PDM

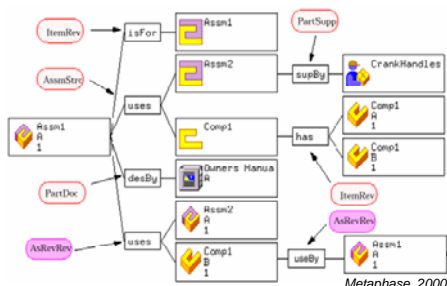
- PDM system integrate most sub systems related to product design and manufacturing domain.



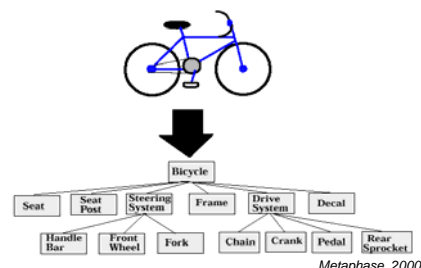
< Sub-systems in PDM >

## Functionality of PDM

- In IT environment
  - Version management
  - Document management
  - Product structure management
  - ...
- Data distribution
- Configuration management
- Search functions



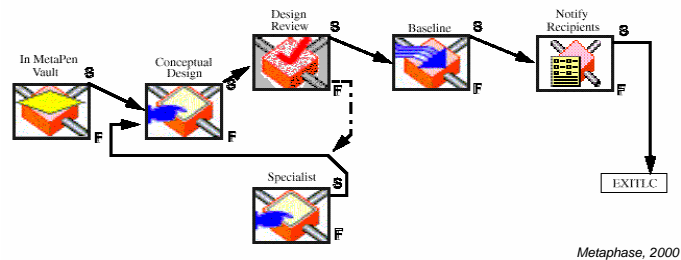
< Displaying Product Structure >



< Part Structure Manager >

## Functionality of PDM (cont.)

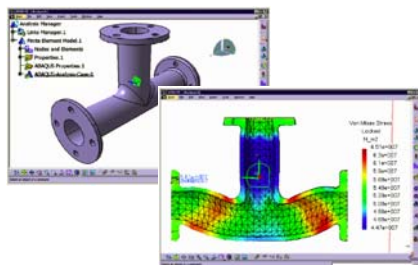
- In product development process
  - Workflow management
  - Process management
  - Project management
  - Demand management
  - ...



< Life Cycle Manager >

## Functionality of PDM (cont.)

- In product design and analysis
  - Parts management
  - Visualizing
  - BOM (Bill of Material) generation
  - ...



CATIA R13, 2005

< CAE with CAM system >

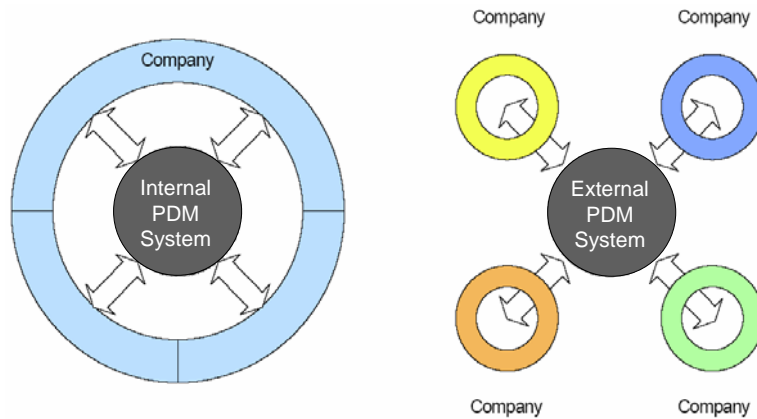


CATIA R13, 2005

< BOM with workflow >

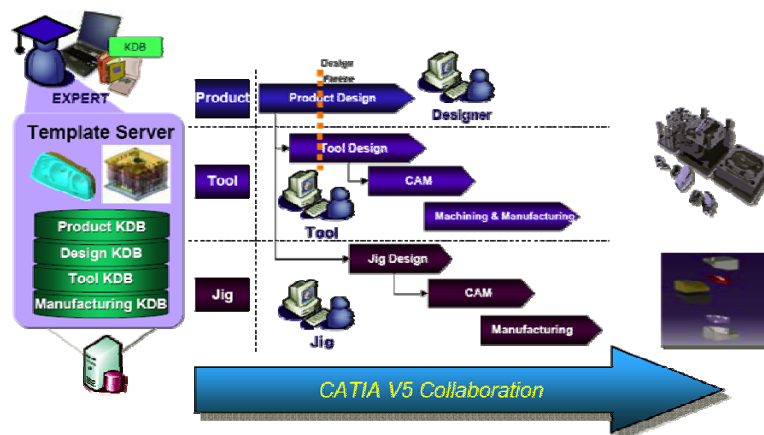
## Range of PDM

- Integrate overall areas of product life-cycle through internet, intranet or etc.



## Today's Trends of PDM

- Collaboration environment

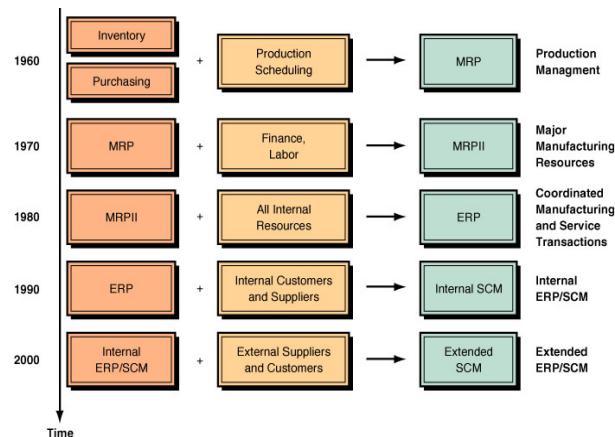


CATIA R13, SAMLIP Co., 2005

< Example of collaboration environment >

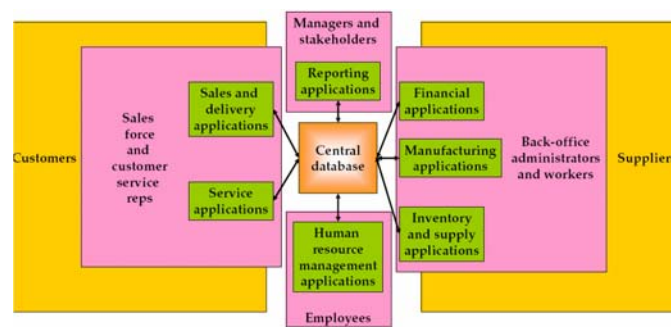
## What is ERP

- Enterprise Resource Planning
  - 1970s MRP: Material Requirement Planning
  - 1980s MRPII: Manufacturing Resource Planning



## What is ERP (cont.)

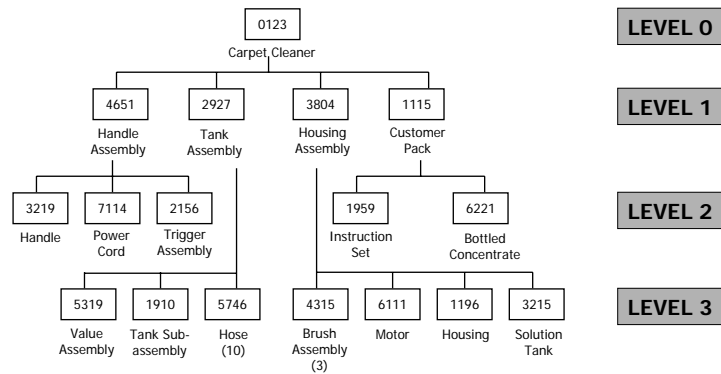
- Client Server Software
- Integrates Majority of Business Processes
- Processes Majority of Transactions
- Real Time Data Access



Source: T. Davenport, Putting the Enterprise into the Enterprise System, *Harvard Business Review*, July-August 1998, pp. 121-131

## Bill of Material (BOM)

- Support to handle product variants in a convenient way



< Example of BOM >

## Master Production Schedule (MPS)

- Plan of the company has developed for production, staffing, inventory, etc

11-14-2000 11:26:17	Demand	Regular Production	Overtime Production	Subcontracting Production	Total Production
Initial					
Period 1	250.00	175.00	50.00	25.00	250.00
Period 2	340.00	175.00	50.00	115.00	340.00
Period 3	400.00	175.00	50.00	175.00	400.00
Period 4	450.00	175.00	50.00	225.00	450.00
Total	1,440.00	700.00	200.00	540.00	1,440.00

OR-Notes, 2000

< Example of MPS >

## Inventory Record

- A detailed listing of the volume, scope, and complexity of an organization's records, usually compiled for the purpose of creating a records schedule

(A Glossary for Archivists, Manuscript Curators, and Records Managers, Society of American Archivists: Chicago, 1992, p. 19)

California Department of Education		Nutrition Services Division		
<i>Perpetual Inventory Record</i>				
Commodity:	Applesauce 10	School Year:	2001-02	
Pack Size:	6/#10 cans	Est. FMV per Unit:	\$10.58	
Section:	Whse. 2, Aisle 14			
Date	Units Rec'd	Units Out	Balance	Name/Notes
08/19/01	15		15	Maria
09/06/01		12	3	John
09/25/01	25	10	18	Suzie
09/30/01			18	Anna, physically counted

< Example of inventory record >