Windchill® MPMLink™

Improve Time-to-Market and Reduce Product Costs by Enabling Concurrent Product and Manufacturing Process Definition

Windchill MPMLink helps resolve the daily challenges that design and manufacturing engineers face in ensuring that process plans, manufacturing bill of materials (mBOMs) and work instructions accurately reflect the current engineering model, and that design decisions consider manufacturing best practices.

Transforming engineering designs into mBOMs and manufacturing processes has typically been a cumbersome process that had to wait until the design was completed. With the digital Manufacturing Process Management (MPM) capabilities of Windchill MPMLink, manufacturers can develop both the product and the manufacturing process definition concurrently, thus enabling you to reduce product cost, improve accuracy of manufacturing deliverables, and shorten development cycle time.

Key Benefits

Reduce Time-to-Market

- Enable concurrent product and manufacturing process definition by managing digital manufacturing process plan definitions in the same system used by the design team

- Reduce late-stage changes requested by Manufacturing by providing manufacturing engineers with early access to design information

- Reduce the time required to create manufacturing engineering deliverables through digital modeling and content management of manufacturing process definitions

Enhance Efficiency of Manufacturing Engineers

- Associatively link mBOMs to the source engineering design information, so that mBOMs always reflect Engineering's current design

- Digitally author and manage manufacturing process plans and the associated resources, instead of relying on inefficient, paper-based tools

- Improve manufacturing process consistency by capturing and sharing manufacturing knowledge, regardless of location or time zone, using enterprise-wide collaboration

- Enable reuse of standardized and normalized processes and resources, thus avoiding data duplication
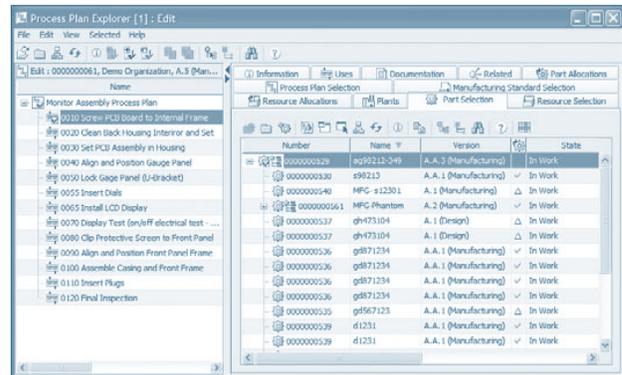
Use Windchill MPMLink to create digital process plans.

Lower the Cost of Changes

- Increase efficiency by providing an integral change management system that supports both Engineering and Manufacturing needs

- Facilitate cost-effective design decisions by increasing engineering visibility into the potential manufacturing impact of a change

Improve Production Ramp-up and Productivity

- Dynamically generate accurate work instructions with embedded 2D and 3D product illustrations

- Accelerate implementation of change in manufacturing deliverables

- Efficiently optimize manufacturing processes with visual configuration tools

- Identify required design changes earlier in the development lifecycle and include timely feedback from Manufacturing

Reduce Scrap and Rework

- Eliminate discrepancies between the latest process definition and the work instructions used on the shop floor

- Effectively and efficiently manage the propagation of changes from design to manufacturing deliverables

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Features

Associative eBOM-mBOM

- Easily transform an eBOM (engineering bill of material) into multiple mBOMs – while maintaining associativity – using traceability links

- Create and manage alternate BOMs describing the different manufacturing variations that can produce the same part

- View engineering designs, eBOMs and mBOMs using embedded 3D visualization provided by PTC's ProductView™ technology

- Create and revise manufacturing parts, with or without the equivalent engineering part

- Dynamically generate 3D representations and digital mockups of the mBOM

- Quickly identify and analyze discrepancies between the eBOM and mBOM

Digital Process Plans

- Define plant-specific process plans in terms of sequences and operations to describe how a part is manufactured, assembled, reworked, repaired and/or inspected

- Define process plan operations by allocating parts, resources, standard procedures, documents, and time and cost breakdowns

- Review and analyze process plan definitions in an easy-to-use, interactive Gantt chart, including resource usage and loading

- Define alternate and parallel sequences of operations, as well as alternate process plans

- Dynamically generate and view the in-process state of assembly at any operation, using embedded 3D visualization

- Directly reuse engineering data, including parts, classification, 3D mockups and manufacturing requirements such as GD &T (Geometric Dimension & Tolerance)

Integral Change and Configuration Management

- Fully manage manufacturing configurations with revision control, lifecycle management, effectivity and access control

- Share common workflow and notification tools between Design and Manufacturing

- Facilitate change impact with visual indicators

Dynamically Generate Rich, Visual Shop Floor Work Instructions

- Generate work instructions, on demand, according to the current process plan configuration

- Access instructions via a simple Web browser

- Directly interact with 3D graphics embedded within the instructions

Manage Libraries of Resources and Manufacturing Standards

- Define and manage libraries of both physical and human resources, along with their compatibilities, which are required to perform a production activity, including plants, work centers, tooling, process materials and human skills
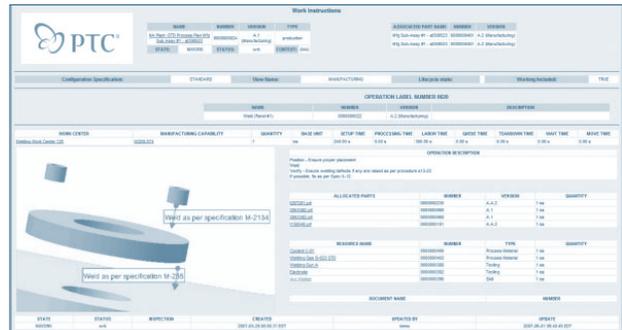
Windchill MPMLink dynamically generates work instructions with embedded 3D lightweight graphics.

- Manage the relationship between a resource and its CAD design, which facilitates the creation of visual aids that include both parts and resources

- Define and manage standard procedures that can be used and/or referenced within multiple process plans

- Manage manufacturing capabilities indicating how the process can be executed in terms of resources, documentation and standard procedures

Integration to Production Systems

- Electronically share manufacturing deliverables with ERP or MES systems using secure Windchill enterprise system integration technology

- Reduce total cost of ownership with out-of-the-box integration to SAP® and Oracle® Manufacturing

Platform Specifications

- Prerequisite: Windchill® PDMLink®

- Server Operating Systems:

  - Microsoft® Windows® (32-bit and 64-bit): XP®, Vista®, Windows 2003 Server

  - Unix® (32-bit and 64-bit): Solaris,® HP-UX®, AIX®

  - Linux® (64-bit): Red Hat Enterprise Linux 4

- Browser: Internet Explorer® v6.0 & 7.0; Mozilla® Firefox v2.0 & higher

- Database: Oracle 10g and SQL Server 2005

- Languages: English, Chinese (Traditional), Chinese (Simplified), French, German, Italian, Japanese, Korean, Spanish

To learn more about MPMLink, please visit:
http://www.single-sourcing.com/

NOTE: The timing of any product release, including any features or functionality, is subject to change at PTC's discretion.

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