

IBM PLM Relational Product Development Product Data Management integration solutions

Maximising engineering and product design performance



Highlights

- **Enhances CAD solution effectiveness by integrating multiple PDM systems**
- **Ensures cohesive business processes by linking product development data and managing intellectual property (IP) within the enterprise**
- **Leverage the content and richness of the V5 data model and other supporting engineering data across the extended enterprise.**

Integration issues

In many industries, multiple computer aided design (CAD) systems are accepted to meet design requirements. A more recent development is the use of multiple Product Data Management (PDM) solutions. Such diversity is often the result of acquisitions or design evolution, or the recognition that a tightly integrated PDM solution is needed to maximise CAD system performance.

An example of the latter is the implementation of ENOVIA V5 VPM in support of CATIA V5, alongside an existing enterprise PDM system. ENOVIA V5 VPM was selected to manage CATIA V5 data and its associated rich semantics. Only by integrating disparate PDM applications can a company take full advantage of its product data.

PDM integration solutions

IBM Product Lifecycle Management (PLM) offers PDM integration solutions designed to:

- *Connect to the most widely used PDM applications*
- *Automate processes and information exchange across disparate systems*
- *Provide scalability and flexibility to meet expanding needs*
- *Support application upgrades and revisions without rewiring the connections.*

Two common solutions for PDM integration are point-to-point integration and enterprise application integration through a services oriented architecture (SOA).

Point-to-point integration

This approach directly links one PDM application to another through customised programming, using standard application programming interfaces (APIs) or pre-developed integration solutions. Data types that may be exchanged include product structure, configuration, CAD neutral geometry, change management and manufacturing integration.

Third-party software applications support point-to-point integration between the legacy PDM system and ENOVIA Engineering Hub which may lower costs and shorten implementation times. IBM services and middleware can support a company in developing its own integration or in utilising a pre-developed integration.

Enterprise application integration through SOA

SOA is a distributed computing environment designed to enable enterprises to adapt quickly. SOA has the flexibility to treat business process elements and the underlying IT infrastructure as secure, standardised components that can be reused and combined to address changing business priorities.

Underlying SOA is a comprehensive business process management software suite necessary to support the exchange and choreography of services. At the heart of IBM's SOA solution is IBM WebSphere Process Server – a next generation, standards-based middleware.

By exposing each PDM application as a set of services, multiple PDM applications can be integrated into a single end-to-end product design and engineering solution to facilitate critical processes among PDM applications, including:

- *Initiate/act upon engineering change request*
- *Create/update data resulting from engineering change order*
- *Create/update part definition and data*
- *Create/update/modify bills of material (BOMs).*

Which PDM integration option? Both options allow key design information to be shared throughout the enterprise for enhanced CAD performance and optimal PDM system configuration. When choosing an integration option, a company must consider:

- *The number of PDM integrations required (PDM to PDM, ERP or CRM) now and in the future. Multiple integrations would demand an SOA approach*
- *The number of CAD authoring tools being used to define a product*
- *Reasons for integrating, whether for data exchange or the development of new composite services from disparate applications*
- *Long-term maintenance and support costs.*

IBM offers clear methods and processes to assist a company in choosing its PDM integration option or developing a hybrid of two options to meet unique requirements.

For more information

Please contact your IBM Representative, IBM Business Partner or visit the IBM PLM Web site at:

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