A Sandbox Development for demonstrating BOM Transmission in PLM and ERP Integrated Systems

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Abstract

Companies are learning the value of implementing concurrent engineering (CE) techniques in reducing time-to-market and cost while increasing quality. These changes result from the improvement of coordination within an organization (Abdalla, 1999). One vital part for concurrent engineering practices is having tools for managing information within departments. The tools enable sharing information between various participants in the product lifecycle and ensure this information is consistent and synchronized (Huet, 2009). Two systems that are widely used in manufacturing industries as management systems for concurrent engineering practices are enterprise resource planning (ERP) system and product lifecycle management (PLM) system.

Integrating Product Lifecycle Management (PLM) and Enterprise Resource Planning (ERP) in a company is important. Currently, many companies have difficulties on integrating PLM and ERP systems. This study developed a prototype (sandbox) of PLM and ERP integrated system for demonstrating BOM transmission in a PLM and ERP integrated system, describing key aspects of system integration and BOM transmission. This sandbox will facilitate users' knowledge on how to process transactions in a PLM and ERP integrated system. The BOM accuracy was examined by comparing BOM data in PLM system to BOM data in ERP system after implementing engineering changes. This study was limited to Teamcenter PLM, SAP ERP and Tesis Gateway for SAP.

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