Data Management – Limiter or Accelerator for Electronic Design Creativity

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Abstract

Data Management is the key to introduce concurrent engineering, configuration management and work in progress control throughout the entire design process. That has been recognized by MCAD and ERP/MRP Software vendors years ago. Product Data Management (PDM) solutions are used and accepted for mechanical designs but not in electronic design departments.

The EDA industry has not been focussing on strategies to fill the gap between business processes and design activities. Therefore today proprietary processes on a directory file level mostly manage variant handling and configuration management. Standard database management solutions or Product Data Management applications could not reach major market shares up to now.

Reviewing the electronic design process, there are already gaps in the information flow from the component manufacturer to the component users, which is limiting the cost effectiveness of product development.

Component and Supplier management applications (CSM) tried to fill this gap with additional services and got widely used in electronic enterprises by procurement and purchasing with the goal to implement B2B capabilities. But electronic designers have not been addressed due to missing integration in the ECAE tools.

Additional gaps appear in the data flow from the designer's desk to Manufacturing Resource Planning systems (MRP) which relay on bill of material information.

Design data management must handle on the one hand side documents such as design files, specifications, application notes and manufacturing information on the other hand side materials declared in part list information and bill of materials.

The Electronic designer's CAD tools don't provide that level of data and process integration required basing the designs on data centric product data models. This seam to belong to Printed Circuit Board (PCB) design as well as to design of entire systems including mechanics, cables and harnesses in the transportation industries.

The members of the panel will discuss:

- The strategy of EDA/ERP SW tool vendors about work in progress and design data/IP management integration in EDA tools.
- If data centricity in the product data model can close the gaps
- The acceptance of designers to work under the constraints of a controlled data centric design environment regardless the performance criteria
- The rule of corporate IT in the decision and implementation process of such solutions
- The expectations of the company management in ROI and productivity
- The current limitations for global vendor independent database solutions
- Applicability of standards and exchange formats
- The need for web portal and information agent strategies with their underlying financial model
- Expectations of the panel participants in future data management applications