Track 2: Design Recommended Practice and Model-based Definition

In today's design environment, designers are integrating data that has, over the years, become untraceable to its source information. This continued proliferation of rogue data will bring and Enterprise to its knees. The Department of Defense (DOD) requires traceable source authority data when delivering a TDR and this also applies to standard parts.

In this presentation, you will learn a strategy to mitigate risks in an Enterprise created by the lack of standard part traceability and certification. By exploring the handoff of information between component creator (component manufacturer) and component consumer or integrator (OEMs), we will describe the minimum information needed through that transfer.

Manufacturers (creators) who are producing physical components and assemblies often have unique challenges as compared to challenges the consumers (OEMs) of those same components face. While creators are most concerned with fidelity, accuracy and how well the part will integrate into the consumer's engineering systems, consumers may be most concerned with cost-reduction, CAD format interoperability and product revision history. The area where these common interests intersect, from a Supply Chain perspective, is where Model Based Definition (MBD) as part of a larger Model Based Enterprise (MBE) comes to fruition. Learn the minimum amount of information in the model needed to leverage standard parts within MBD assemblies.
How MBE Powers Your Whole Organization

- CAD / DESIGN
- SUPPLIER
- DOC CONTROL
- ANALYSIS
- PROCUREMENT
- QUALITY
- MANUFACTURING
- SYSTEMS
The MBD Inventory

COMMERCIAL STANDARD PARTS

INDUSTRY STANDARD PARTS

COMPANY STANDARD PARTS
The MBD Inventory

Commercial Parts
The MBD Inventory

Industry Standard Parts
Evolution of Industry Standards
The MBD Inventory

Company Parts

Geometry:
The 3D shape of a product.

Annotations:
Visible dimensions, tolerances or notes about a design. Priority on machine readable geometric tolerances is preferred, over human only readable basic dimensions.

Attributes:
The "hidden information" such as metadata, e.g., part number, description, and revision. This information is not visible (or displayed), but is available upon interrogation of the annotated model.

Presentation:
A combination of saved views (snapshot of orientation and zoom) of the model and groupings of selected annotations (displayed tolerances and notes).
MBD/MBE Inventory Summarized

- **Commercial Standard Parts**
  - Geometry: ✔
  - Annotations: ✔
  - Attributes: ✔
  - Presentation: ✔

- **Industry Standard Parts**
  - Geometry: ✔
  - Annotations: ✔ (Limited Use)
  - Attributes: ✔
  - Presentation: ✔

- **Company Standard Parts**
  - Geometry: ✔
  - Annotations: ✔
  - Attributes: ✔
  - Presentation: ✔
45% of engineering time is wasted searching for or redrawing parts that’s non-value added time

- Aberdeen Group
Thank You

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eBook
How Engineering Teams Achieve MBD Using Parts Management Tools

http://go.partssolutions.com/parts-management-301-mbe-mbd-for-manufacturers