Linked Intelligent Master Model Streamlines Information Flow Across Disciplines & Environments

Introduction

37%-52% of product development effort and non-recurring manufacturing cost is driven by the process to keep the information in software tools and between organizations in sync.

Engineering and manufacturing teams use a vast array of software tools to design, simulate and reuse data to deliver complex products.

The use of this vast array of software tools creates an urgent need to link and transform information in real time to maintain consistency between tools.

The Solution

The Linked Intelligent Master Model platform includes the following components:

Automation

Updates models and data: Uses standard software tool interfaces.

Checks values: Values input by users compared to valid thresholds.

Maintains and checks links between models: When a value is changed every model that uses the value is updated on demand.

Notification

Notifies users of pending changes: The dashboard highlights when values are being updated.

Notifies users when models are not synchronized: The dashboard marks every model that is out of sync on a continuous basis.

Notifies users when values exceed limits: Constraint flags change to a "red" color when data is modified beyond limits.

Notifies users when predicted values do not meet target: Movement towards target values is continuously plotted anytime the models change.

Notifies users on progress and completion of processes: Progress bars show application status and display current operation.

Changes

Changes reflected across models: Models updated on demand with all changes.

Changes have bidirectional flow that can be configured: Information can flow from physical descriptions to functional descriptions or vice versa.

Changes are tracked between models: Each iteration of each model is traceable.

Changes evaluated across models: All models impacted by change are flagged and updated on demand.

Changes evaluated against targets: All changed models produce values that are continuously compared to target values.

Benefits

Slash Development Costs
- Maximize reuse of engineering data and models
- Resources drive solutions versus building models
- Incremental model updates automated
- Data for decisions continuously synchronized
- Single point of access for development results

Links and transforms data to rapidly propagate information updates across manufacturing environments

Minimize Production Cost
- Manufacturing influence through models and analysis
- Real time updates on cost and key drivers
- Predictive time for computer-controlled processes analyzed
- Errors reduced by ensuring all models are up to date and synchronized
- Suppliers connected to analyze cost in near real time

Accelerated Product Development
- Decisions based on continuously updated models
- Decisions based on continuously synchronized models
- Model update near instantaneous
- Alternatives evaluated concurrently and distributed across many computers
- Design reviews occur continuously

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