Material Intelligence for 3DEXPERIENCE

Dassault Systemes User Conference, Dec 2018
Andy Reilly – EMEA Sales Director
Agenda

Introduction

The challenge: Materials information for product engineering

The solution: GRANTA MI + 3DEXPERIENCE

Questions and Discussion

MI:Materials Gateway for Abaqus/CAE and CATIA V5

New! Support for the 3DEXPERIENCE platform
Materials Information Management for Product Engineering

(PLM, CAD, and CAE)
Materials information can be complex data

Ensure single source for:
- Density
- Color
- **Name / ID**
- Owner

100s of properties:
- Mechanical
- Thermal
- Electrical
- Acoustic
- Durability
- Environmental...

Find all related:
- Specifications
- Coatings
- Substances
- Regulations...

1,000s of tests and analysis

RGB/Eurocol/MDL, Scans, Xrite

Aesthetic / Rendering

Polyurethane

In-service data

- Lifting models
- Corrosion, fatigue, creep
- Failure analysis...

Detailed engineering properties

Supplier specs

- Properties
- Process
- Cost
- Substances...

Testing and analysis

CAE models

- Temperature dependent mechanical
- Thermal, electrical
- Elastic, non-linear...
- Solver-specific
Materials information throughout product engineering

Concept
- Aesthetic / Rendering

Engineering Design
- Basic material properties
- Detailed engineering properties

Simulation
- CAE models
- Testing and analysis

Prototype
- Supplier specs

In-service data
- Compliance data

Customer
- Manufacture

Supplier specs
The solution

GRANTA MI +
3DEXPERIENCE
Introducing GRANTA MI

A comprehensive library of material reference information:
Metals, plastics, composites… MMPDS, StahlDat, CAMPUS, QED etc

Features include:
- Specialist materials data structures
- Tools to manage the materials data lifecycle
- Full traceability
- Access and change control, workflow
Digital continuity throughout the lifecycle

Manager  Simulation analyst  Mechanical designer

Engineer  Modeler  Industrial designer

Synchronize

MATERIALS AUTHORITY

All proprietary materials data

GRANTA MI

CORPORATE MATERIALS SYSTEM

Material reference data from Granta Design

GRANTA MI + 3DEXPERIENCE

Material reference data from Granta Design

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GRANTA MI + 3DEXPERIENCE
What GRANTA have delivered

**MI:3DEXPERIENCE v1.0**

- Focused on the 3DEXPERIENCE Designer and Simulation roles
- Synchronize approved materials from GRANTA MI to 3DEXPERIENCE
- Transfer information to core materials and simulation domain behaviours

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MATERIALS AUTHORITY

SIMULATION ANALYST
Synchronizing corporate materials data with the 3DEXPERIENCE® platform
What has been delivered

**MI:3DEXPERIENCE v1.0**

- Focused on the 3DEXPERIENCE Designer and Simulation roles
- Synchronize approved materials from GRANTA MI to 3DEXPERIENCE
- Transfer information to core materials and simulation domain behaviours

**Future**

- Granta/DS joint roadmap
- Short-term:
  - A 3DDashboard widget to allow users to browse/search materials in GRANTA MI
  - Ability to view extended GRANTA MI datasheets
Thank you!
Any questions?

Contact:
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A typical Test-to-Design workflow in GRANTA MI

1. Easy to create & maintain data structures (‘Schema’) for complex, interconnected materials data
2. Fast upload of test results
3. Enable data reduction, statistical analysis, curve fitting… save results
4. Find approved design or simulation data, fast

- Materials
  - Specifications
  - Test Data
  - Test Series
- Projects
  - Test Series
- Reports
  - Design Data
- SIMULATION
  - Find approved design or simulation data, fast