TechniaTranscat:

Enterprise wide 3D data Exchange
I. TechniaTranscat – Introduction
II. Model-based definition with neutral formats
III. TechniaTranscat Software for JT
IV. Q&A
Facts and Figures

Addnode PLM Business Area by Numbers

+30 years in PLM
600 employees
23 offices in Africa, Europe, India and US

More than 400 enterprise PLM projects delivered around the world

5400 customers worldwide, including 43 that are listed on Fortune 500

TECHNIA TRANSCAT
ADNODE GROUP
Facts and Figures

Addnode PLM Business Area by Numbers

With 220 ENOVIA experts & 250 CATIA, SIMULIA & DELMIA experts

TechniaTranscat is making product creation easier
Geographical Reach
TechniaTranscat Software Positioning

- Standardized global workplaces
- Company and industry standards
- Enhanced user experience and upgradability
- PLM mobile
- Integrations to PLM and ERP
- 3D Digital Enterprise

PLM Essentials for CATIA, ENOVIA & JT
Model-based definition with neutral formats
MBD (Model-based definition)

- MBD allows manufacturers to create fully annotated 3D models that include all of the product manufacturing information (PMI)
- People needed to improvise to share engineering data downstream for years
- Result: inefficiencies into the manufacturing process
- Purposes for unlocking engineering data for downstream consumption:
  - to make life easier for customers
  - to make processes more efficient
  - getting products out faster
  - lowering costs
  - increasing profit margins
• Creators vs. Consumers
  • User Ratio ~ 1:10
  • 90% of non-CAD users are using 2D
  • Experts vs. rare use
• Benefits of neutral formats
  • 3D for all processes up to long term archiving
  • Engineering design (CAD) separated from downstream
  • Multi-CAD in product development
  • Reduced license costs
• Openness and Standards: Working groups and initiatives
  • JT ISO → Standardized neutral format
  • LOTAR → Aerospace - Initiative for “Long Term Archiving”
  • SASIG / ProSTEP iViP → STEP AP 242 as common basis of Aerospace- and Automotive standards
Overview of different neutral formats

• Results of ProSTEP iViP Analysis 2013
JT = Process format

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JT

After Sales

PDM

ERP

Supplier

CAE

Service

NC/CNC

Bidding
Content and Downstream Usage

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**JT ISO**

<table>
<thead>
<tr>
<th>Content</th>
<th>Metadata (Properties / PMI / …)</th>
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<tbody>
<tr>
<td>Assembly structure (JT / AP242 XML / PLMXML)</td>
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<table>
<thead>
<tr>
<th>Usage</th>
<th>LOD 3</th>
<th>LOD 2</th>
<th>LOD 1</th>
<th>BREP / exact Geometry</th>
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<tr>
<td>Product Planning</td>
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<td>Bidding</td>
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<td>Data exchange</td>
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<td>LTA</td>
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File size

Not included in JT:
- Design intent from CAD
- Feature creation history from CAD
- Detailed intellectual property definition from CAD
JT Use Cases
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- ProSTEP iViP Workflow Forum has elaborated 30 JT use cases so far
JT is everywhere
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Source: ProSTEP iviP Workflow Forum Survey 2016
Lite3D

With Lite3D we help customers to establish 3D as an affordable common collaboration language beyond engineering throughout the extended enterprise
Technia Transcat software for JT

Lite3D Platform

LiteBox3D
FREE
PRO
Desktop and web-based viewer for JT and TIFF

Easy to integrate, extendible

Process Compliance

Validation

Viewing & Navigation

Apps

LiteMachine
Design to manufacturing

Data Simplification & IP Protection

LiteComply
Data quality for JT and TIFF

LiteDrop
IP Protection and Data reduction

Model comparison V5/JT and JT/JT

Technia Transfer software for JT
**LiteBox3D**

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**Viewer for Desktop**

- **Free**
  - Most User friendly JT viewer on the market
- **Pro Version**
  - Enhanced functionality
    - Edit Properties
    - Create and manage Redlining
    - Silhouette creation
    - Adjustment of lighting settings
    - Geometry / Topology analysis
    - Image Capture Batch Tool
    - BOM and 3D HTML Export
    - PMI Tree

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Click ➔ **Download**

Click ➔ **Free vs Pro**
Web Viewer

- Viewing of JT data on the web
  - Based on HTML5, WebGL and modern browsers
  - No Plugin required on client side
  - Client-side rendering
  - API to integrate the viewer and add-ons into own web-based application
- Other Lite3D applications will follow in future to be provided by web
LiteDrop
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- Data Clearing – IP Protection and Simplification
- Extract process specific content & IP from a Master JT file
- High performance JTs with just what’s needed and you want to share
- Removal of invisible parts

Master JT file vs. Process specific content & IP

Master JT File
- LODs
- B-Rep
- PMIs
- Attributes

Service
Selling
Finance
Calculating

Bidding & Inquiry
- LODs (low accuracy) only

High end Visualization
- B-Rep only

Manufacturing / Shop floor
- LOD & PMIs

After Sales
- LOD (finest) & Properties

Others.... i.e. viewing by web
- As small as possible
• Validate new revisions and model translation in CATIA and JT
• Geometry and feature based model comparison
• Well documented change reports
- Data Quality for JT and TIFF
- Extensive rule library for geometry and standards
- JT data ready for the extended enterprise
• Lite communication from design to manufacturing
• LiteMachine analyzes the JT model and automatically detects color-coded features to be manufactured.
• Information for NC operations is calculated based on the 3D model and can be saved in an Lite3D XML file.
Use Cases
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Data exchange

- **Daimler JT Supplier Package**
  - Viewing components based on LiteBox3D Desktop viewer
  - JT ISO & Tiff
  - Writing of JT properties with TechniaTranscat software
  - Customer specific functionality for Title block handling in Tiff
  - JT data quality proven with LiteComply
Use Cases
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BOM Manager

- LiteBox3D Web viewer integrated in BOM manager at Safran Aircraft Engines
- Prototype used in production on specific programs
Use Cases
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Management of welding points

• JT web viewing combined with database containing welding point information

• Aim:
  • Reduce CAD usage
  • Easy to use and mobile device ready application
Use Cases
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- Spare part catalogs
- Viewing embedded in PDM/ERP
- Customer specific applications
- Work instructions
  - Using LiteBox3D Pro redlining functionality
**Takeaways**

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- MBD/3D Master is the future – TechniaTranscat offers several solutions to help customers achieving this
- TechniaTranscat provides consulting services and develops custom specific applications in the JT domain
- TechniaTranscat is the 3DExperience partner number one globally
Thank you!

Questions?

Knut Stettnisch
Channel Sales Manager
Software Division / Sales
phone: +49 89 218 960-20
knut.stettnisch@techniatranscat.com