Migrate Your CAD Data Successfully

Abdul H Shammaa
VP & CTO
Elysium Inc.
Elysium

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- Founded: 1984
- Employees: 95 (56 in R&D)
- Core Competencies:
  - Data Translation
  - Geometry Healing
  - Data Quality Management
  - Simplification
- Off-the-Shelf, OEM, & Migration Services
Locations

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North America
Southfield, MI
Huntington Beach, CA

Europe
Paris, France

Global HQ / Asia
Hamamatsu, Japan
Elysium keeps expert knowledge of all major CAD systems via official partnerships with all major vendors.
Goals

- Preserve the investment made in the legacy data
- Promote current CAD lifecycle
- Maximize skillset of already trained resources
- Lower the cost of conversion to a new CAD system
- Migrate data accurately
- Migrate data that is usable for the desired scenarios
Process Steps

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• **Identify** the data to be migrated and lock it in the source system to prevent modification during the migration process

• **Migrate** legacy data sets to new CAD data sets

• **Approve** new data sets for use after completing repair. The migrated revision should be locked as “read-only” and preserved as a record of the migration process. A new revision will be created for any future change.
Identity - Customer Audit

- Customer background
  - Company overview
  - CAD usage information
- Data management analysis
  - Audit your CAD data and perform statistical analysis to predict migration results
- Part, assembly, and drawing analysis
  - Estimate pass rates
- Conclusions
  - Basis for discussion to develop business and technical migration plan
  - Highlight any special situations
  - On-site for typically 2-3 days
## Identify - Understanding Migration Advantage

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<table>
<thead>
<tr>
<th>Classification</th>
<th>Grouping</th>
<th>Migration Target</th>
<th>Migration Time</th>
<th>QA</th>
<th>Post Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy Part</td>
<td>50-70%</td>
<td>STEP, JT</td>
<td>N/A</td>
<td>NO</td>
<td>Reference Only. Migrate Later</td>
</tr>
<tr>
<td>Regular Part</td>
<td>50-90%</td>
<td>B-rep</td>
<td>Fast</td>
<td>YES</td>
<td>Use direct editing. Option to migrate to features later</td>
</tr>
<tr>
<td>Active Part</td>
<td>5-20%</td>
<td>Features</td>
<td>~2.5*Part Replay</td>
<td>YES</td>
<td>Part Repair</td>
</tr>
</tbody>
</table>
Identity using CADfeature

- Batch Processing with or without UI
- Audit Tool
- Data mining and success rate forecast
Migrate using CADfeature

• Part, assembly and drawing
• Component reuse
• Standard part mapping
• Attribute mapping
• 3D PMI
• Brep, Feature or both
• Associative or static drawing
The Technical Challenge

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Source CAD

Features

Plugin Export Mapping

Supported

Target CAD

Plugin Import Building

Successful
Approve using CADfeature

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• Part fidelity checks
  • Volume, surface area, centroid, and point cloud
  • Exhaustive geometry checks with CADdoctor GVT
  • Curve length
• Assembly fidelity checks
  • Total Volume, surface area, centroid
  • Instance location checks
• Drawing
  • Sheet counts and sizes
  • View counts, locations, borders and geometry score
• 2D & 3D PMI
QA

• Raw XML QA report
• HTML with WebGL QA report
• CADfeature Viewer, CADdoctor GVT
• Dynamic QA (Display QA during rework)
Re-Master Process Management

- Repair of translated data while preserving the associative links

- History
- Update
- Import
- Deliver Back
  Repaired model
- Comparison
  With Source
- Operator
- Project Member
- Automatic
  Translation
- Database
- Results
- Export for
  Re-mastering

Component History

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Member Name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue Sep 04 17:17:25 2007</td>
<td>NEW.COM</td>
<td>'Operator'</td>
<td>Component exported and import...</td>
</tr>
<tr>
<td>Tue Sep 04 17:12:20 2007</td>
<td>QA Done</td>
<td>'Operator'</td>
<td></td>
</tr>
<tr>
<td>Tue Sep 04 17:09:00 2007</td>
<td>IMPORTED</td>
<td>'Operator'</td>
<td></td>
</tr>
<tr>
<td>Tue Sep 04 17:06:17 2007</td>
<td>EXPORTED</td>
<td>Project.Member3</td>
<td>ziped file enclosed for re-master.</td>
</tr>
</tbody>
</table>
Technology Demonstration

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- Translation
- QA Report
- Re-master tools