



Webinar: **What's New In Femap 11.4**


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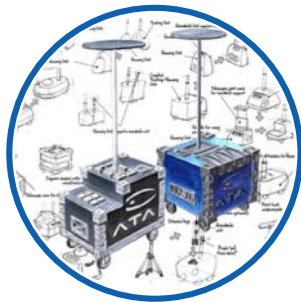


Consumer
Products



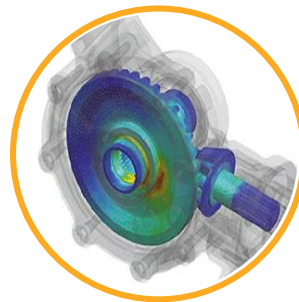
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Whitepapers

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| Changing Units in an Assembly in NX | PDF |
| Assembly-Level Part Design Using Interpart Modeling in NX | PDF |
| Using Synchronous Modeling to Manipulate Solid Bodies in NX | PDF |
| Beam Post-Processing with Cross-Section Views in NX | PDF |
| Basic FEM Checks in NX | PDF |

Macros

| | |
|-----------------------|-------|
| Renumber Groups in NX | MACRO |
| Check Element Quality | MACRO |
| Renumber Labels in NX | MACRO |

Presentations

| | |
|--|-----|
| Design, Analysis, and Manufacturing Success with NX | PDF |
| Analysis Driven Design: Optimization of a Hexapod Isolator | PDF |
| Workflows in NX: Product and Manufacturing Information (PMI) for Design and Analysis | PDF |
| Comparison of Composite Modeling Techniques | PDF |

Other Resources

| | |
|--|-------|
| On-Demand Webinar: Principles and Workflows for PMI Using NX | VIDEO |
| On-Demand Webinar: Introduction to NX CAE Tips and Tricks | VIDEO |
| On-Demand Webinar: Best Practices and Techniques for NX Patterning | VIDEO |

Training Videos

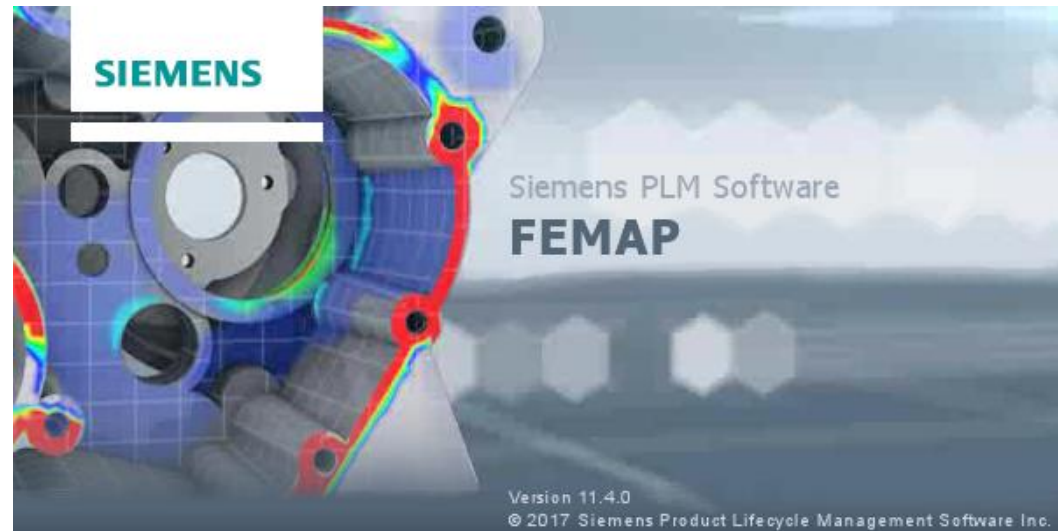
Tutorials

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➤ New functionality and updates

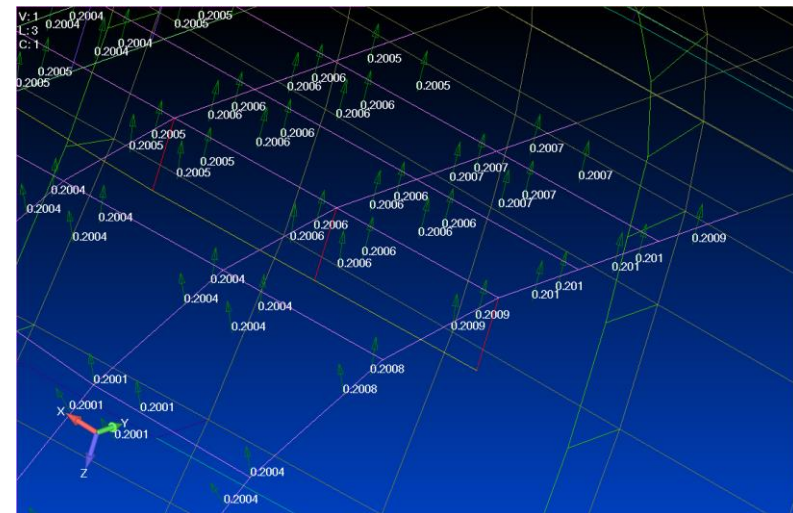
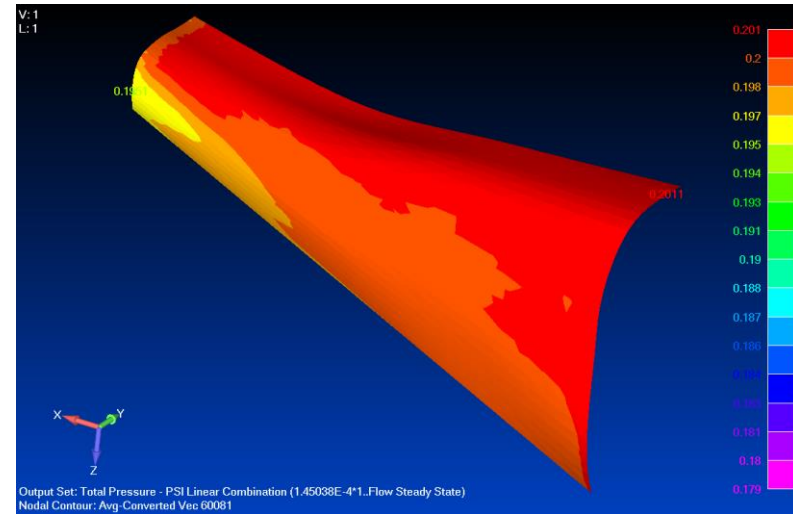
- Visualization
- Meshing
- Preprocessing
- Geometry Manipulation
- Data Mapping
- Charting
- Nastran Solver Support
- New API
- ATA created Macro



Data Mapping

High performance data mapping

- New performance algorithm for extracting data from Output Map Data Surfaces and Model / Load / Map Output from Model (direct model to model)
- **1,000x faster!**
- Added Data Conversion method for Source model
 - From View – uses current settings in Active View
 - Specified option – Average, Maximum, or Minimum (Centroid Only or with corner data)
- Ongoing development on new source options, matching Criteria Plots and Contour Plot options



Data Mapping

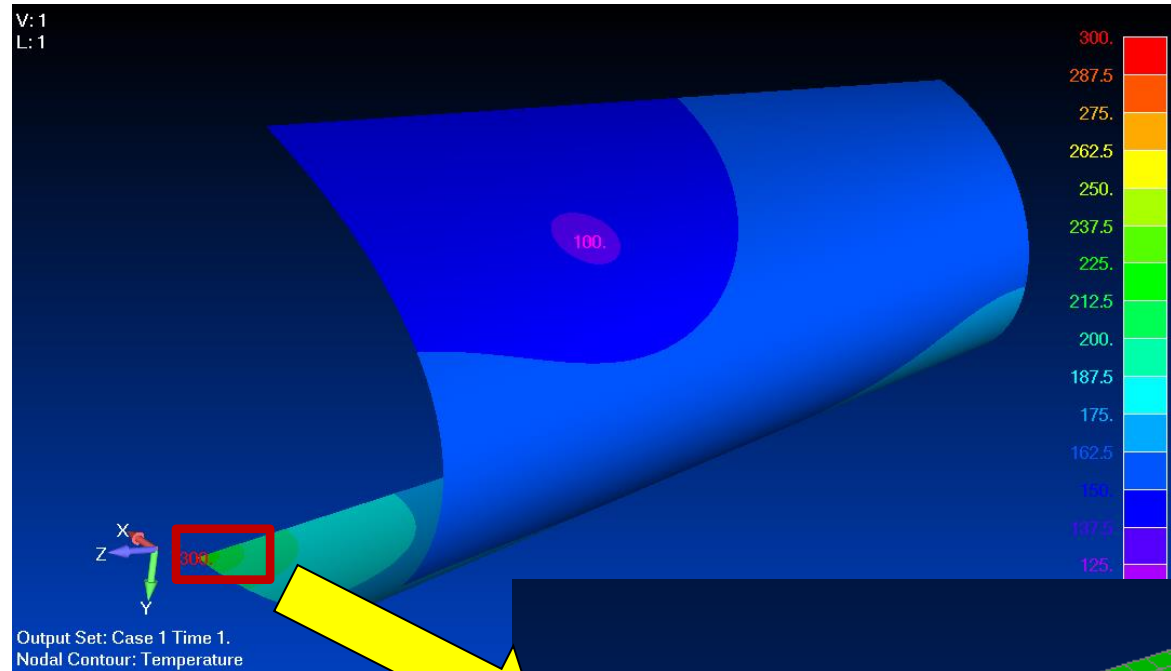
Example

➤ Source model:
1,000,000
elements with
nodal data
distribution

➤ Mapping times

➤ V11.3.2 > 5
hours

➤ V11.4 < 1
minute



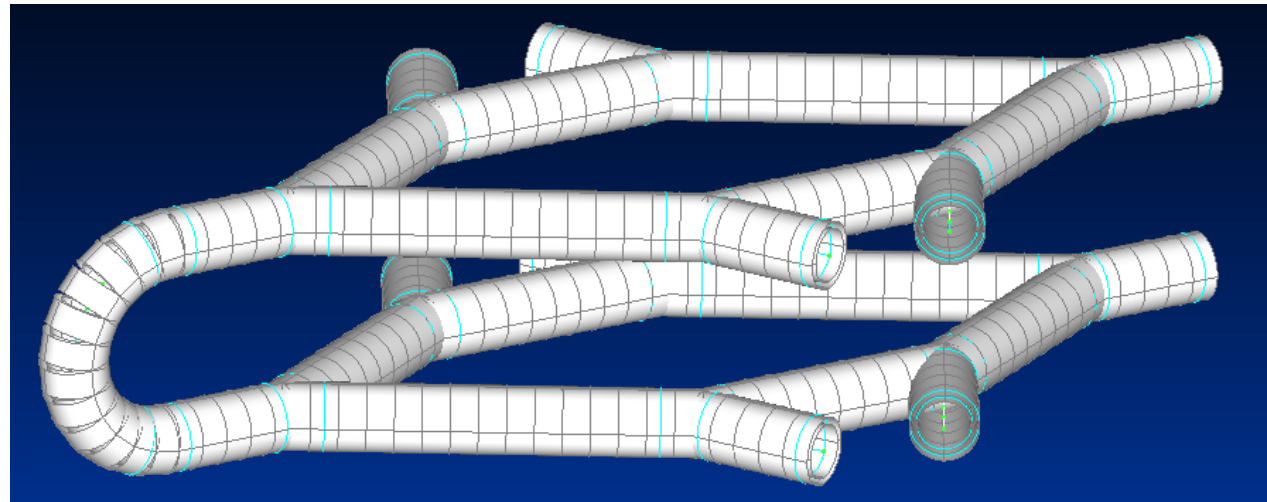
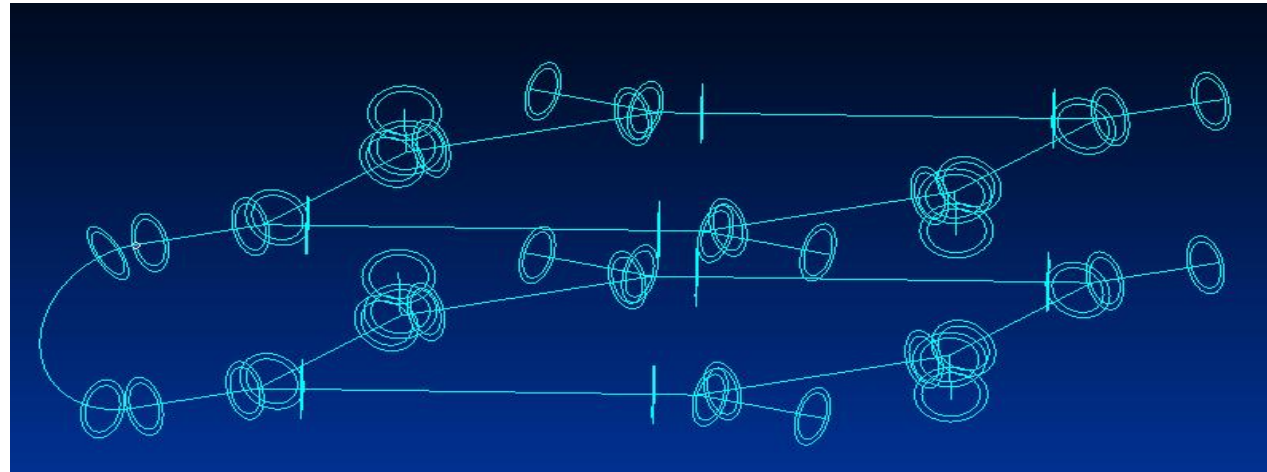
Nastran Solver Support

- Nastran enhancements
 - Param, POST, -2: reads nodal output in the basic coordinate system
 - Strain Curvature output support
 - Performance enhancements for reading large Nastran input files with many DMIG entries
 - Read, keep and cycle CELAS1 entries in lieu of auto-converting to CELAS2 entries
 - ZTOL entry support for Nastran radiation analysis

Solid Centerline Finder Function

- Solid centerline finder – available via API only
 - feSolidExtractCenterlines
 - Pass in one or more solids

- In this example: one single solid

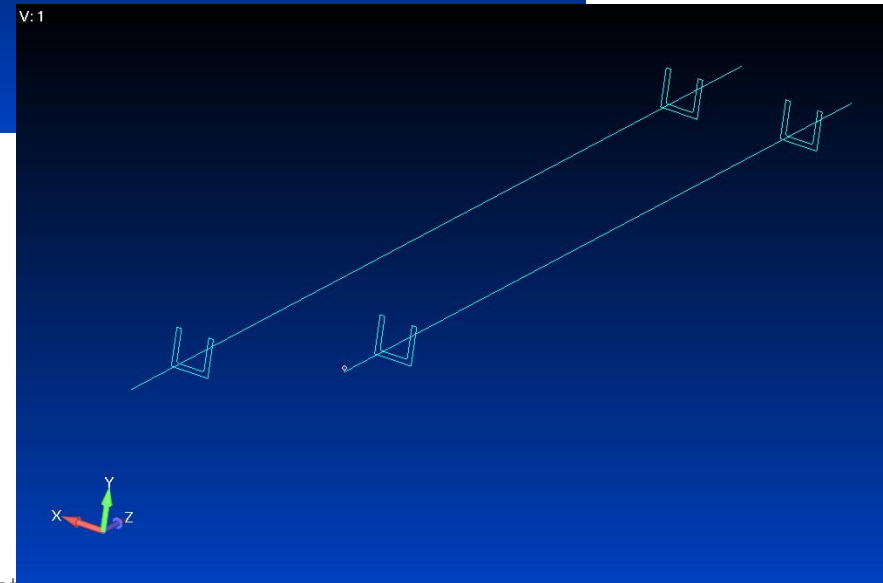
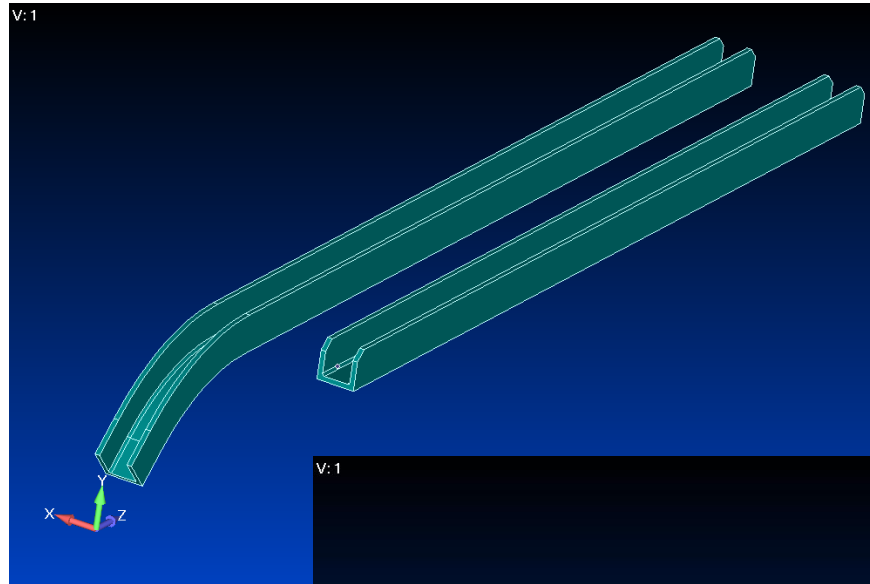


Solid Centerline Finder Function

Limitations

➤ Current limitations

- For non-circular cross section, algorithm creates the cross section based on the longest curve on the solid
- For any straight or circular beam-like section, works great
- For multiple curvature ones, it does not



ATA created Macro

prevGrpBlk.BAS

- ATA created a macro that a user can add to his/her Custom Tools: prevGrpBlk.BAS
- The macro allows the user to preview a bulk data (Nastran) file of the active group in the text editor of his/her choosing
 - This allows the user to either quickly check the format for the group of interest or create a blk file to be added, used alone, or included for future analyses

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