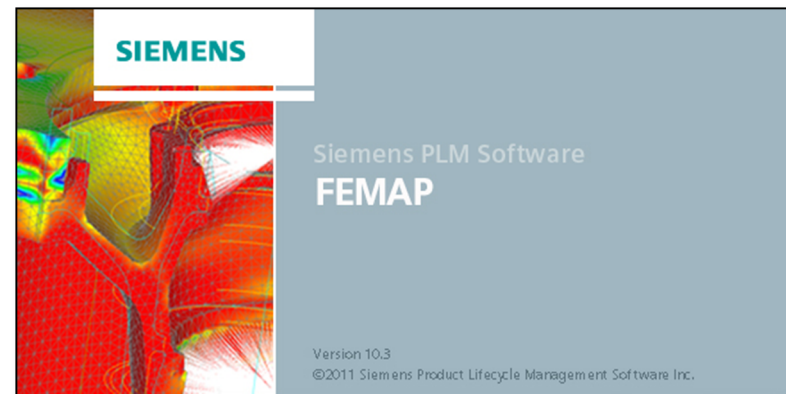


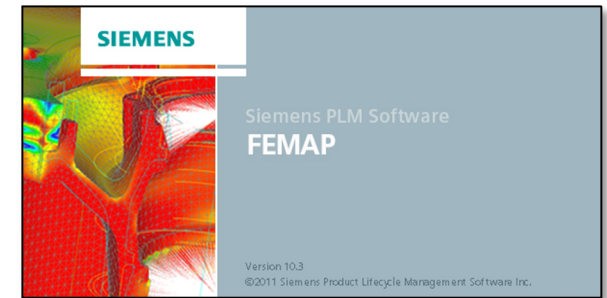


Femap v10.3.1 and NX Nastran v8.1 Update Seminar on Visibility, Hexing and API



Seminar Outline

- What is Femapv10.3.1
- Visibility | Blanking Enhancements
- Hexing Complicated Geometry
- Useful API's
 - PSD RMS von Mises Stresses
 - Blank All (mimics Patran's "Erase Plot All" command)
 - Applying multiple loads from Excel Spreadsheet



Femap v10.3.1

It is surprising what you can learn by reading the documentation

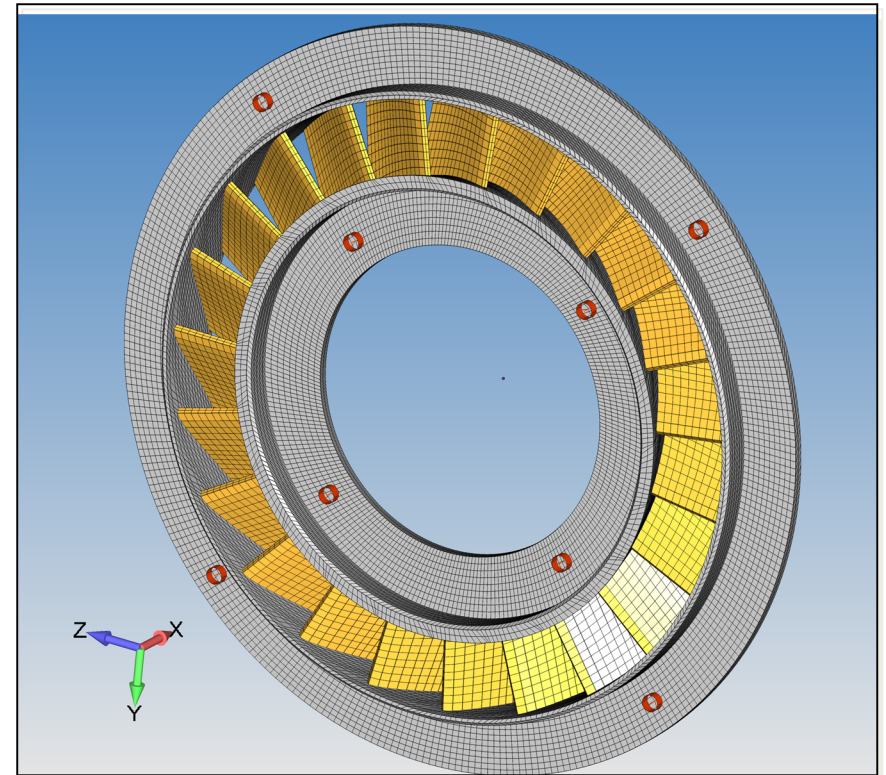
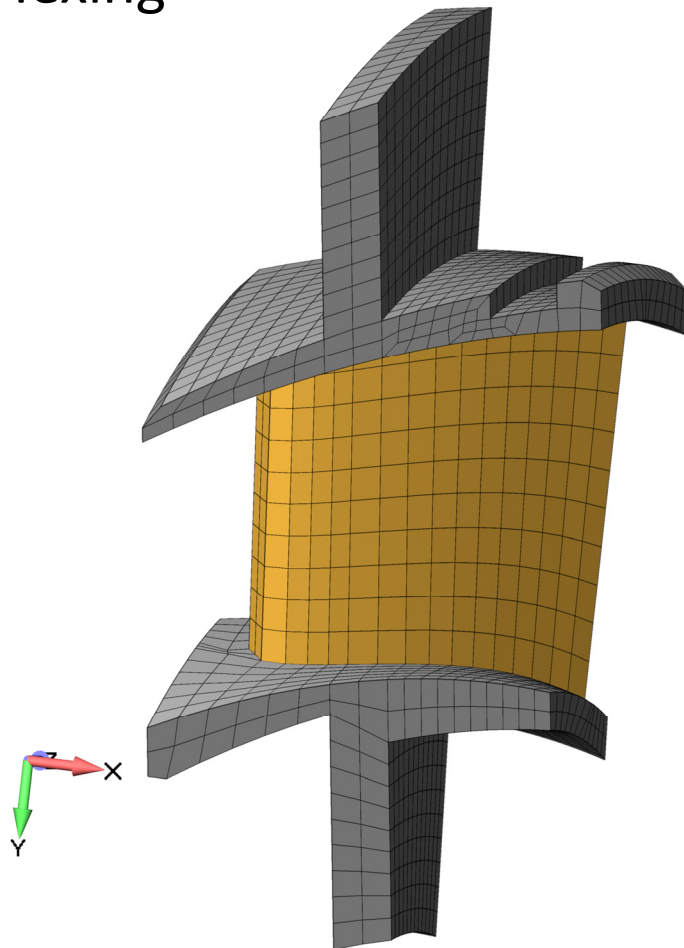
The screenshot shows a web browser window displaying the Femap v10.3.1 help documentation. The left sidebar contains a 'Contents' menu with the following items: FEMAP, NewFeatures, What's New in FEMAP, What's New for version 10.3.1, What's New for version 10.3, What's New for version 10.2, What's New for version 10.1.1, What's New for version 10.1, Commands, User, Examples, API, VisQ, Nastran, NASTRAN Analysis, FEMAP Structural Analysis Toolkit, FEMAP Thermal and Flow, and MoreResources. The main content area is titled 'Femap® Version 10.3' and 'Toolbars'. It contains two bullet points: 'When using the "Create Group..." command from the "Selector Actions" menu of the Select Toolbar, the user is now able to select any existing group when using the "Add to Group", "Remove from Group", or "Exclude from Group" options. Previously, these options only worked with the "active" group in the model.' and 'When Solid, Region, Connector, CSys, Material, or Property is the "active" entity in the Select Toolbar, the context-sensitive menu now includes a Visibility submenu, which contains 5 commands to change the visibility of selected entities.' Below the text is a table with 2 columns: 'Command' and 'Description'.

| Command | Description |
|--------------------|---|
| Show Selected Only | Sets visibility for all selected entities of the Entity Type currently active in the Select Toolbar to "on", while setting all others to "off" |
| Hide Selected | Sets visibility for all selected entities of the "active" Entity Type to "off" |
| Show All | Sets visibility to "on" for all entities of the "active" Entity Type. |
| Hide All | Sets visibility to "off" for all entities of the "active" Entity Type. |
| Show/Hide Reverse | Sets visibility to "off" for all entities of the "active" Entity Type which are currently visible, while setting visibility to "on" for all entities of the "active" Entity Type which are currently not visible. |

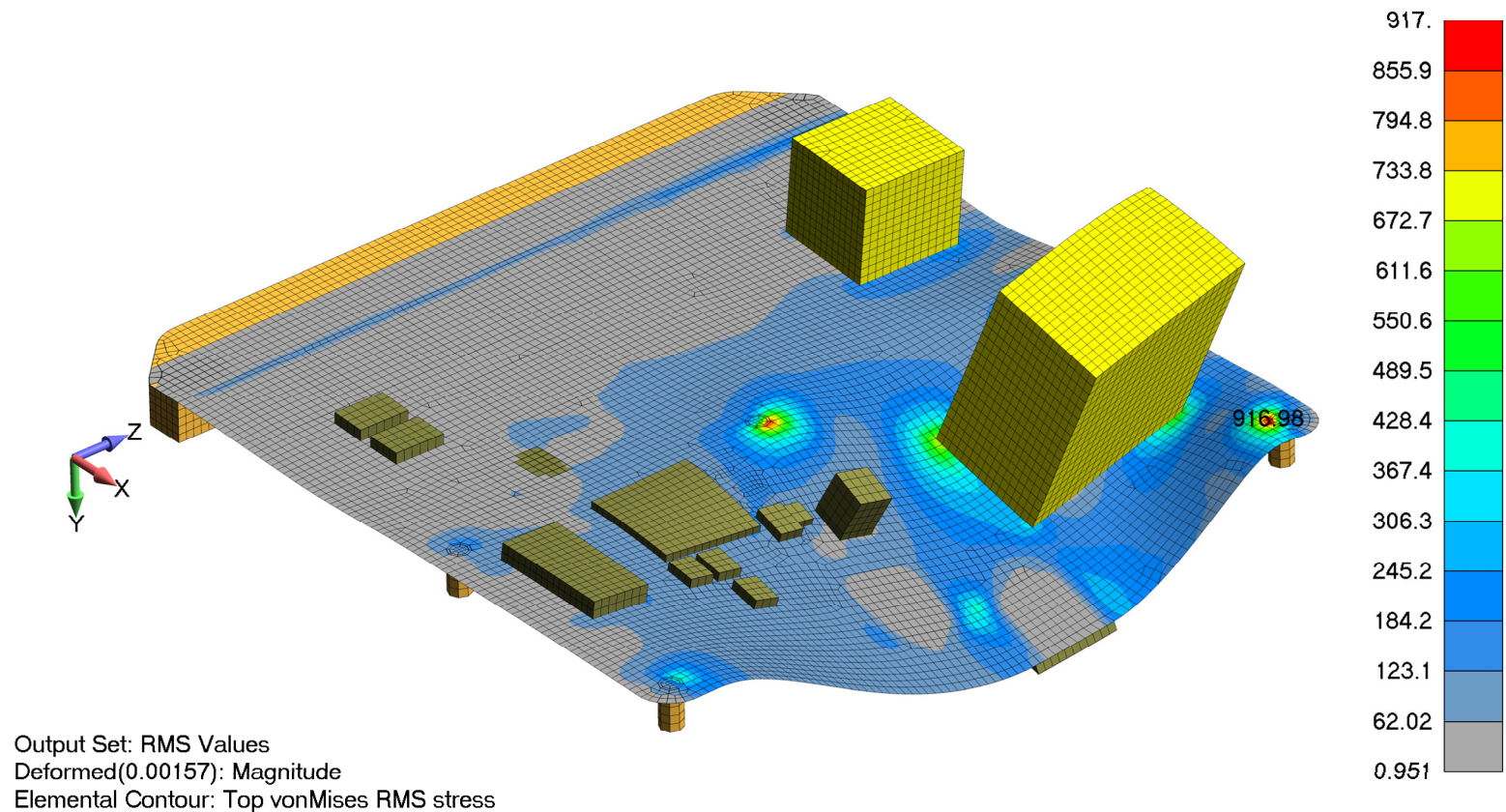
In addition, if you hold down the Shift key while clicking the Right Mouse button, only the commands on the Visibility submenu will appear in the context-sensitive menu.

FEMAP
 Product Info: <http://www.femap.com>
 Customer Support: <http://support.sds.com>
 Phone: (714) 952-5444
 or : (800) 955-0000 (US and Canada)

Advanced Hexing



API: PSD RMS von Mises, Plot Erase All and Multiple Load Sets



Femap v10.3.1 and NX Nastran v8.1 Update on Visibility, Hexing and API


6 | 7
February 2012

The screenshot shows a Microsoft PowerPoint presentation titled "Femap and NX Nastran v1031 Update on Visibility Hex Meshing and API Seminar.pptx". The slide content is a table of load data, and an "Excel Load Applicator" dialog box is open on the right side of the slide.

| Load Set ID | Description | Coordinate System | Node | Fx LBS | Fy LBS | Fz LBS | Mx IN-LBS | My IN-LBS | Mz IN-LBS |
|-------------|--------------------------------|-------------------|------|--------|--------|--------|-----------|-----------|-----------|
| 1001 | 10FPS, SPIN-UP, 60KNTS | 1 | 1 | 1000 | 0 | 5000 | 0 | 0 | 0 |
| 1002 | 10FPS, SPRING-BACK, 60KNTS | 1 | 1 | -1000 | 0 | 5000 | 0 | 0 | 0 |
| 1003 | 10FPS, 60 KNTS, NO LOAD | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1004 | 10FPS, SPIN-UP, 30KNTS | 5 | 1 | 1000 | 0 | 5000 | 0 | 0 | 0 |
| 1005 | 10FPS, SPRING-BACK, 30KNTS | 1 | 1 | -1000 | 0 | 5000 | 0 | 0 | 0 |
| 1006 | 10FPS, 30 KNTS, NO LOAD | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1007 | 10FPS, MAX VERT, 0KNTS | 1 | 1 | 1000 | 0 | 5000 | 0 | 0 | 0 |
| 1008 | 10FPS, MAX VERT | 1 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 1009 | 10FPS, LMG OBST +D, 3pt | 1 | 1 | 1000 | 0 | 5000 | 0 | 0 | 0 |
| 1010 | 10FPS, LMG OBST -D, 3pt | 1 | 1 | -1000 | 0 | 5000 | 0 | 0 | 0 |
| 2001 | 10FPS, LMG OBST +S, 3pt | 1 | 1 | 0 | -1000 | 5000 | -20000 | 0 | 0 |
| 2002 | 10FPS, LMG OBST -S, 3pt | 0 | 1 | 0 | 1000 | 5000 | 20000 | 0 | 0 |
| 2003 | 10FPS, RMG OBST +D, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2004 | 10FPS, RMG OBST -D, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2005 | 10FPS, RMG OBST +S, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2006 | 10FPS, RMG OBST -S, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2007 | 10FPS, TLG OBST +D, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2008 | 10FPS, TLG OBST -D, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2009 | 10FPS, TLG OBST +S, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 2010 | 10FPS, TLG OBST -S, 3pt | 0 | 1 | 0 | 0 | 5000 | 0 | 0 | 0 |
| 3001 | 10FPS, VERT, NO LOAD | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3002 | LOW, SPIN-UP, 60KNTS, SDGW | 0 | 1 | 1000 | 0 | 5000 | 0 | 0 | 0 |
| 3003 | LOW, SPRING-BACK, 60KNTS, SDGW | 0 | 1 | -1000 | 0 | 5000 | 0 | 0 | 0 |
| 3004 | LOW, 60KNTS, NO LOAD, SDGW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3005 | LOW, SPIN-UP, 30KNTS, SDGW | 0 | 1 | 1000 | 0 | 5000 | 0 | 0 | 0 |
| 3006 | LOW, SPRING-BACK, 30KNTS, SDGW | 0 | 1 | -1000 | 0 | 5000 | 0 | 0 | 0 |
| 3007 | SDGW, TURNING CW | 0 | 1 | 10 | 100 | 5000 | 5000 | -100 | 0 |
| 3008 | SDGW, TURNING CW | 0 | 1 | 10 | 0 | 5000 | 0 | -100 | 0 |
| 3009 | SDGW, TURNING CCW | 0 | 1 | 10 | -100 | 5000 | -5000 | -100 | 0 |
| 3010 | SDGW, 3-PT MED BRAKING | 0 | 1 | 10 | 0 | 5000 | 0 | -100 | 0 |

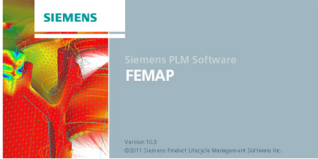
The "Excel Load Applicator" dialog box is open, showing the "Load Location" section with "From Excel" selected. The "Load Set ID" section has "From Excel" selected. The "Combine ID and Title from Excel for Load Set Title" checkbox is unchecked. The "Apply" button is highlighted.

Femap and NX Nastran Training Opportunity: April 2-6, 2012




PredictiveEngineering
www.PredictiveEngineering.com

Femap and NX Nastran Training:
Foundation | Advanced | Customization



When: April 2-6, 2012
Where: Portland, OR (exact location TBD)
Cost: \$475/day. *Students may attend either the Introduction or the Advanced Sections or just the last day of Customization/Automation training.*
What's Included: Course manual with DVD. Two lunches and two social events are provided to encourage class interaction with fellow users.
Registration: *Early registration is encouraged since space is limited to 20 students and it is expected that the classes will fill quite quickly.*
 To register please send email to:
Training@PredictiveEngineering.com
 Attn: George Laird, Ph.D., P.E.
About Predictive Engineering:
 Based in Portland, Oregon, Predictive has over 15 years experience with Femap and Nastran and has developed an international reputation as the "go to company" for Femap training and services. References can be obtained at our website: www.PredictiveEngineering.com.



Welcome Femap Colleague,

This week-long course will take the new user from ground floor through FEA best practices to advanced subjects dealing with manifold and non-manifold surface modeling, detailed plate meshing and tet versus hex meshing. The final day will finish with a focus on customization and automation using Excel and Femap's own API interface. The course will be fast paced and follow a workshop format with theory, practice and Q&A sessions.

Course Outline

Foundation of FEA Modeling with Femap + NX Nastran (Two Days)

- I. FEA theoretical background w.r.t. beam, isoparametric and special elements
- II. Tour of Femap interface: Tips & Tricks, Preferences, Panes, Toolboxes and Help
- III. Femap workflow for Beam, Plate and Solid (BPS) elements
- IV. Static stress analysis and results interpretation of BPS elements
- V. Introduction to plate and solid modeling (Mesh Toolbox)
- VI. Introduction to Assembly Modeling: Glued, Contact and Rigid

Advanced Femap + NX Nastran (Two Days)

- I. Surface modeling using manifold and non-manifold geometries
- II. Advanced surface preparation for high-accuracy plate modeling
- III. Meshing toolbox tips and tricks with Jacobian Optimization
- IV. Building efficient assemblies via efficient solid modeling (tet and hex elements) and linear contact
- V. Introduction to linear dynamics (modal analysis tips and tricks)
- VI. Non-linear analysis: geometric versus material non-linearity and best practices

Customization & Automation of Femap (One Day)

- I. Automation of results processing via Excel
- II. Introduction to Femap's macro capability
- III. Introduction to Femap's API via Custom Tools