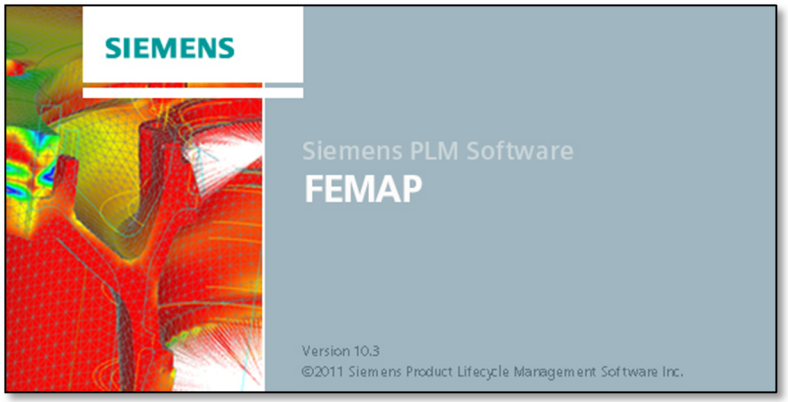
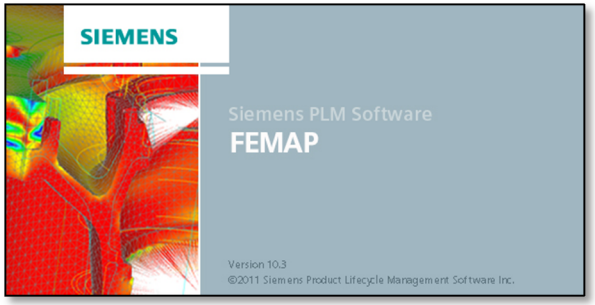
Femap v10.3.1 and NX Nastran v8.1
Update Seminar on Visibility, Hexing and API



©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com

Seminar Outline

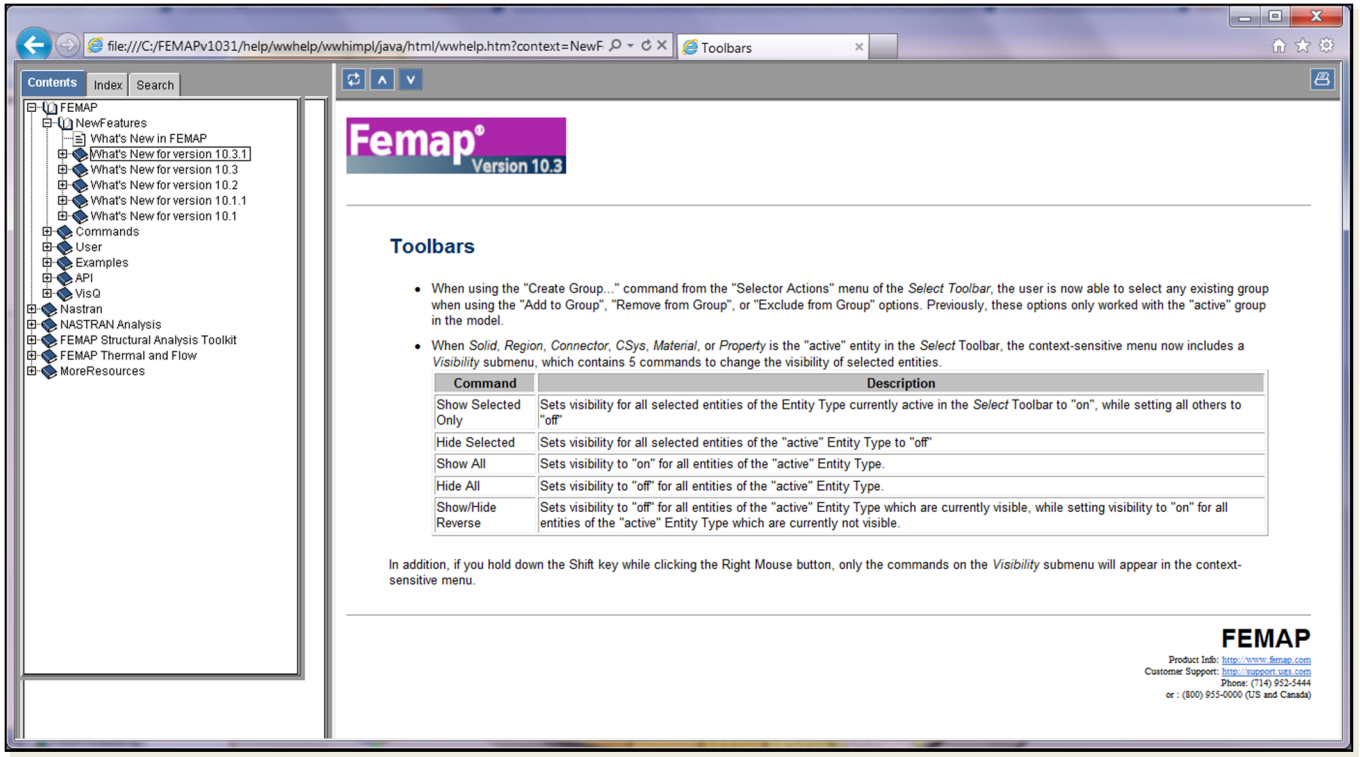


- What is Femapv10.3.1
- Visibility | Blanking Enhancements
- Hexing Complicated Geometry
- Useful API's
  - PSD RMS von Mises Stresses
  - Blank All (mimics Patran's "Erase Plot All" command
  - Applying multiple loads from Excel Spreadsheet

©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com

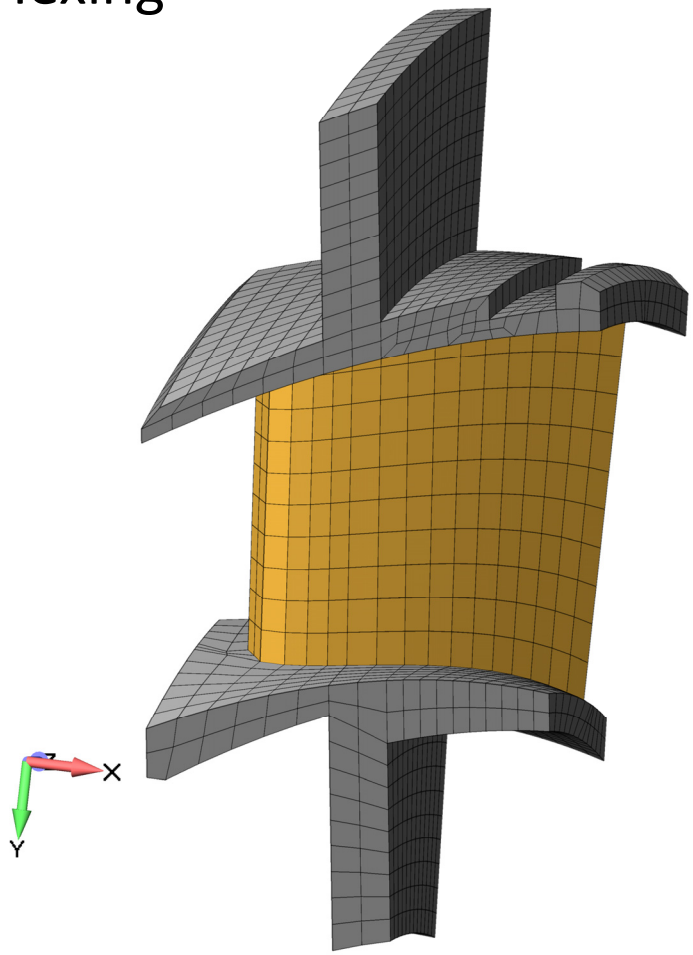
Femap v10.3.1

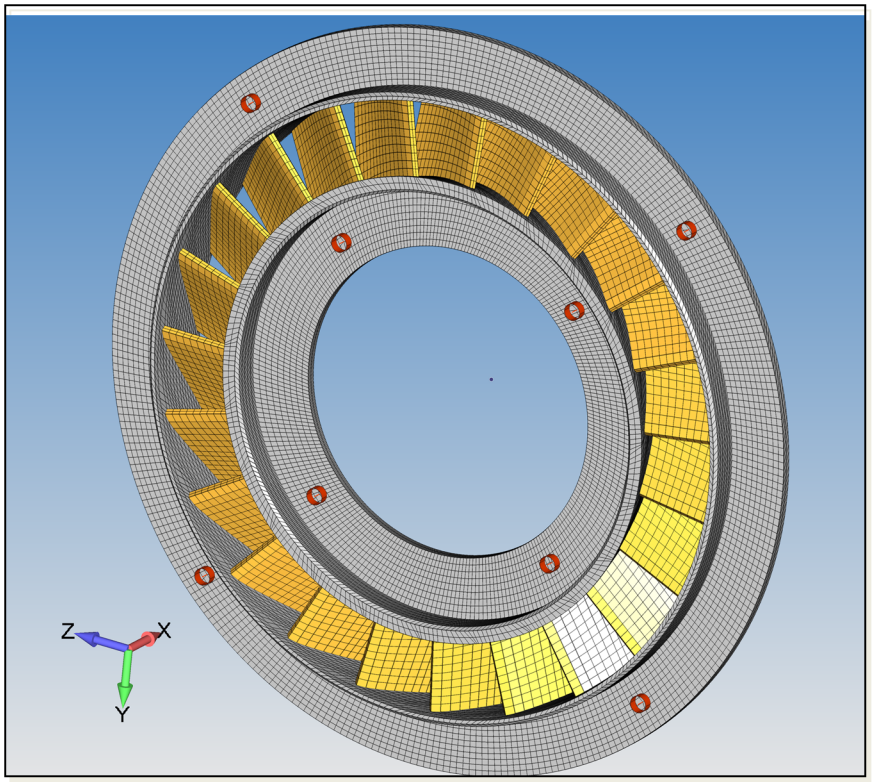
It is surprising what you can learn by reading the documentation



©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com

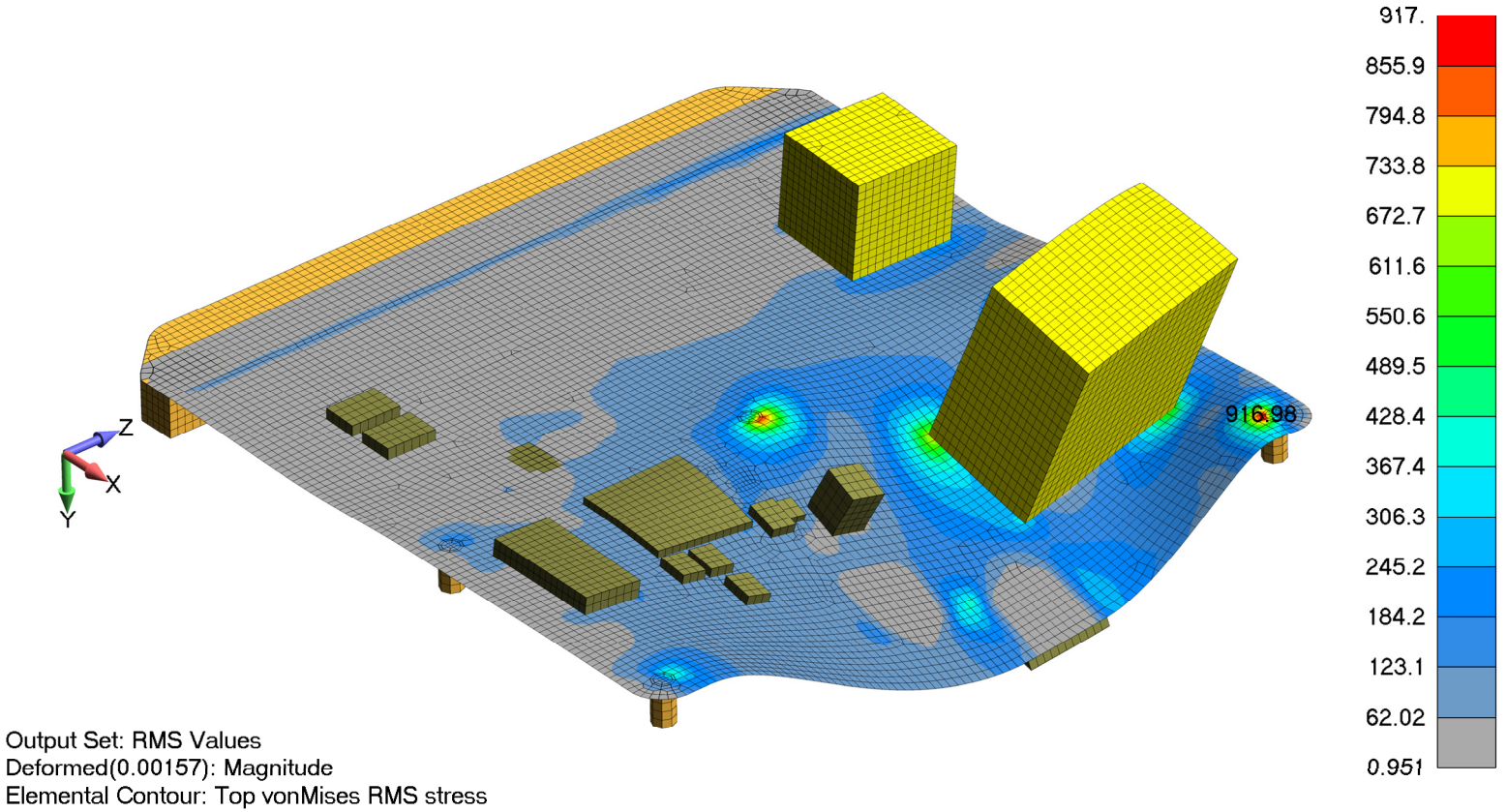
Advanced Hexing





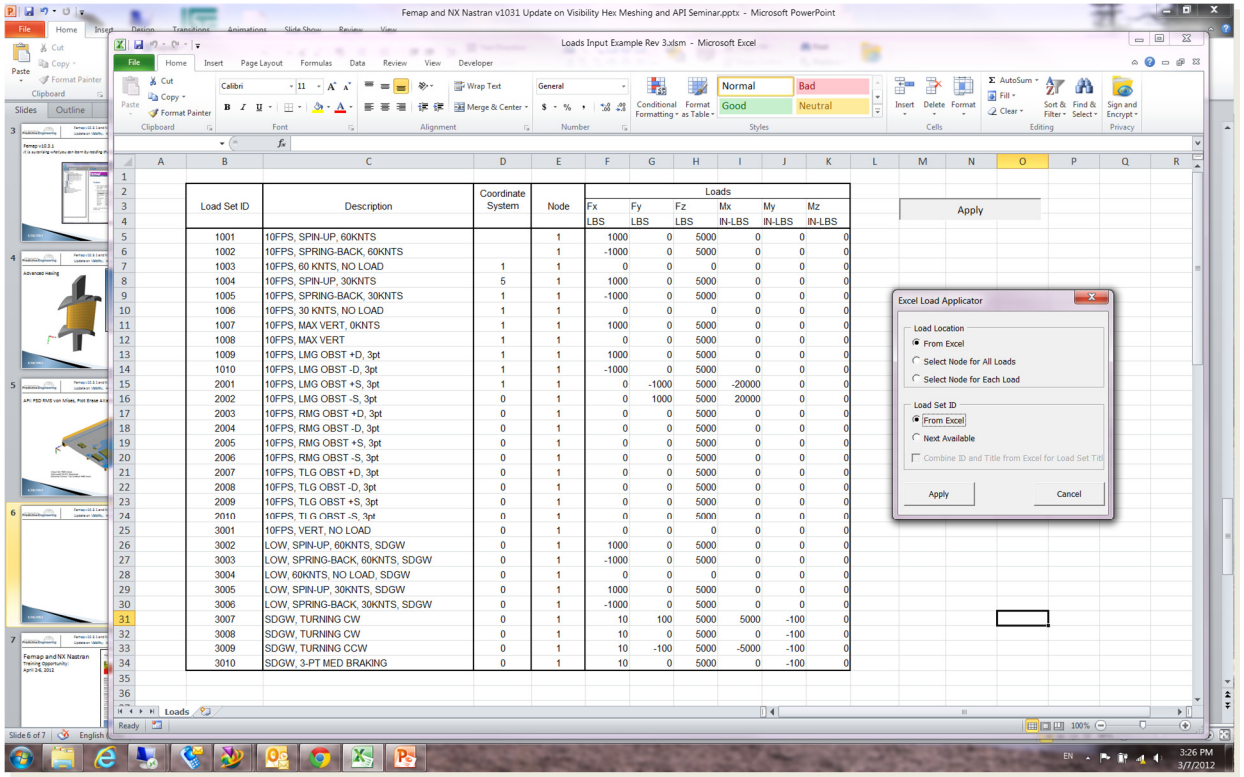
©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com

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



Output Set: RMS Values
Deformed(0.00157): Magnitude
Elemental Contour: Top vonMises RMS stress

©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com



Load Set ID	Description	Coordinate System	Node	Loads Fx LBS	Fy LBS	Fz LBS	Mx IN-LBS	My IN-LBS	Mz IN-LBS
1001	10FPS, SPIN-UP, 60KNTS		1	1000	0	5000	0	0	0
1002	10FPS, SPRING-BACK, 60KNTS		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

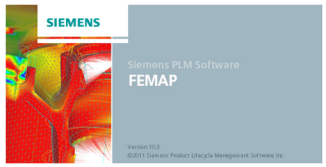
©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com

Femap and NX Nastran

Training Opportunity:
April 2-6, 2012

Predictive Engineering
www.PredictiveEngineering.com

Femap and NX Nastran Training:
Foundation | Advanced | Customization



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.

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.

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 Rigids

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

©2012 Predictive Engineering, All Rights Reserved.
PredictiveEngineering.com