

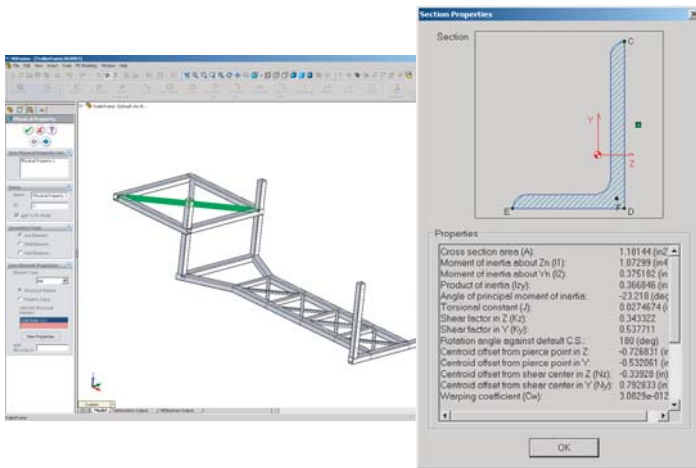
NEiWorks V1.2 New Features

High Performance Embedded Nastran FEA for SolidWorks.

Beam Elements

Beam capability in NEiWorks enables users to simulate and analyze beam models.

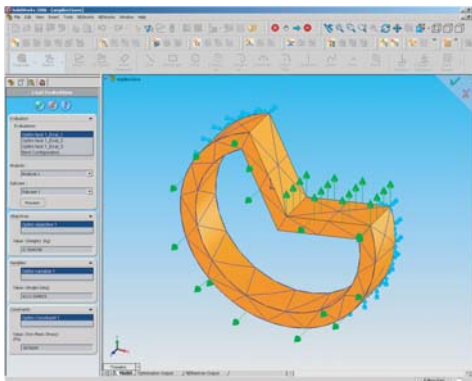
- Curve meshing supports lines and arcs including those used for constructing weldments (structural members).
- All joints are merged and a continuous mesh is created for the lines/arcs selected in meshing.
- Physical properties are available for beam and bar elements:
 - Cross sections properties can be defined by either a Structural Member option or a Direct Property Input option.
 - Section properties and cross section shape are available.
- Load and constraints can be created on a point or along a line/arc for beam analysis.
- Deformation and other results at each stress recovery point can be displayed graphically.



Optimization Analysis

HEEDS Optimization is integrated within NEiWorks.

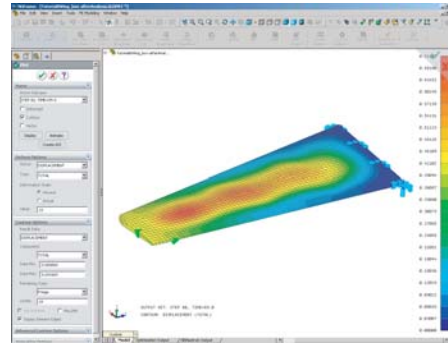
- The user will be able to assign design objectives to minimize, maximize or target the following:
 - Geometric data values
 - Weight
 - Eigenvalues
 - Von Mises Stress
 - Temperature



Dynamic Analysis

Phase 1 for Dynamic Analysis supports:

- Pre-stiffened Normal Modes
- Normal Modes Analysis enhancements
- Modal Transient Response Analysis
- Direct Transient Response Analysis

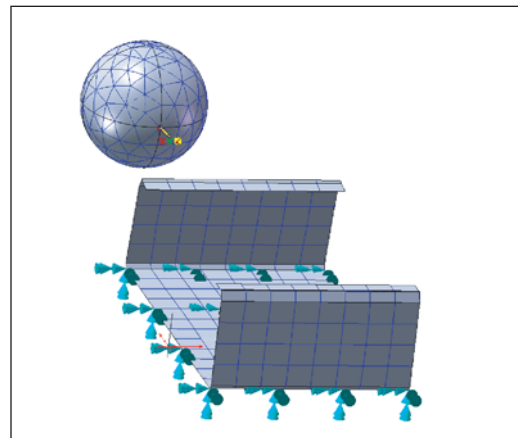


Thermal Analysis Upgrades

- Body Temperature: The user can apply temperature load to the entire body using this option.
- Initial Temperature: Typically this will be an additional body load. If it is not specified, the solver will just use the reference temperature defined on the material.

Automated Impact Analysis Wizard

Impact analysis such as drop test and projectile impact studies is now fully automated using NEiNastran V9.1 Automated Impact Analysis (AIA) capability. Using a simple input form to define projectile initial velocity and acceleration, the NEiNastran solver will automatically setup surface contact between the projectile and part and calculate the time steps needed to capture an accurate nonlinear transient event simulation.

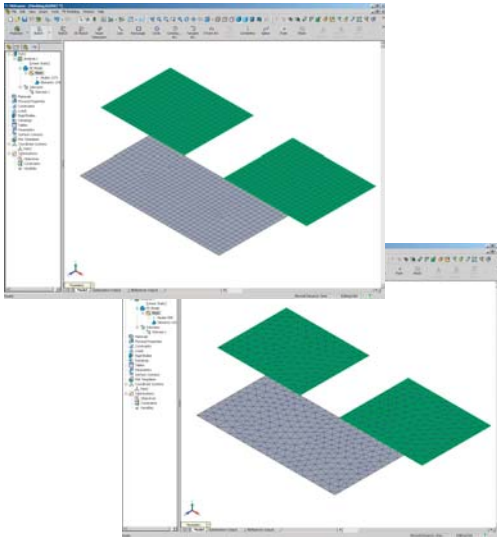


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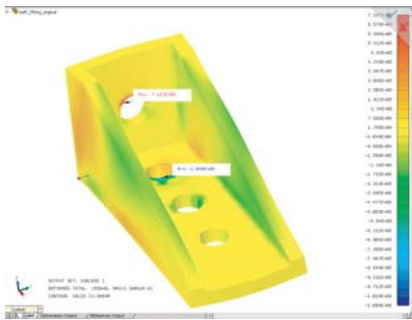
Meshing Enhancements

- Continuous tri and quad meshing across surfaces



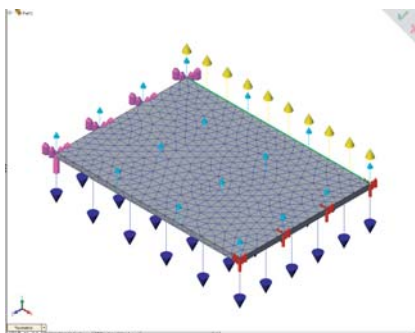
Post-Processing Enhancements

- Single and multi set Animation
- Max/Min Labels



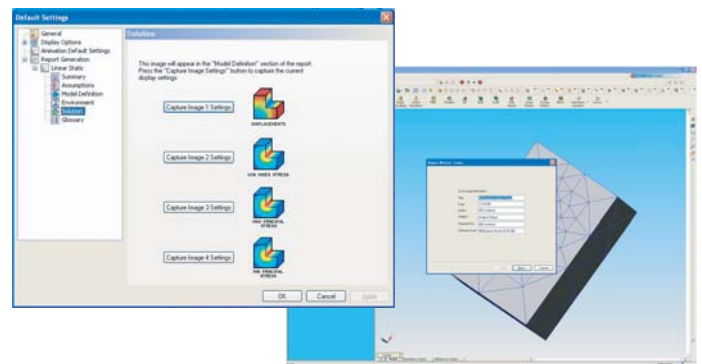
On-screen Display Enhancements and Customizations

- Load symbol display - can change size, color, image based on specific types of load
- Mesh control visualization



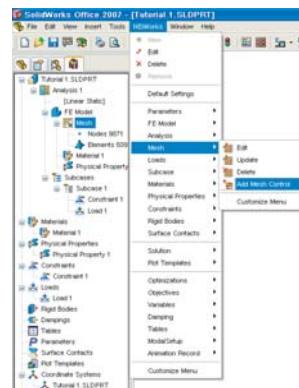
Analysis Report Writer

- HTML formatted reports can be generated for linear static analysis. Other solutions will soon be available.
- The HTML report contains a detailed summary of the analysis including:
 - Model dimension and mass properties by part and total.
 - Element geometry statistics.
 - Tabular and graphical results data.
- User customizable settings allow you to design your own report format.
- Simple, one button, access launches a wizard to guide you through the report generation process.



Other Features

- Menu support for all features



- Extended toolbar support
- Results XY Plotting

