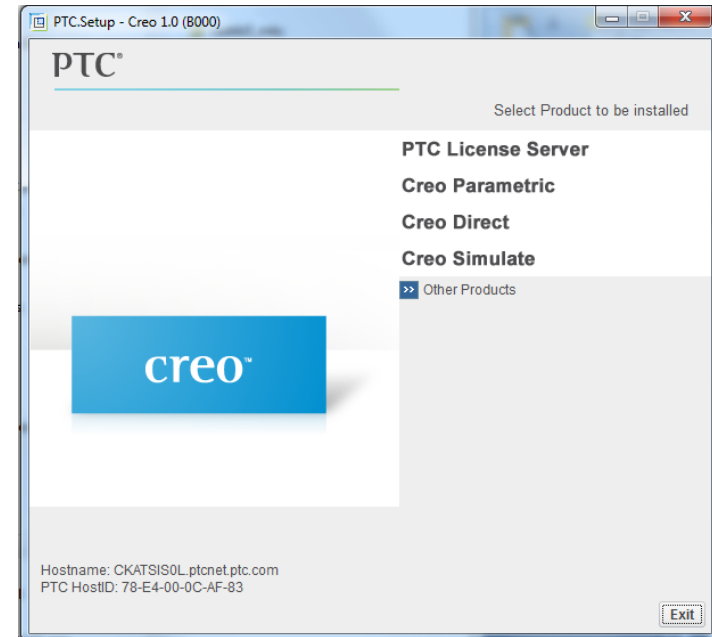


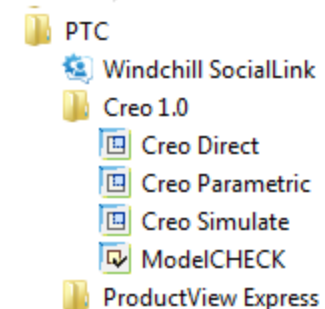
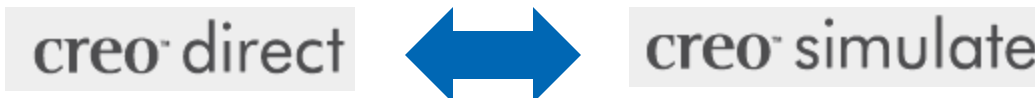
Creo Simulate 1.0

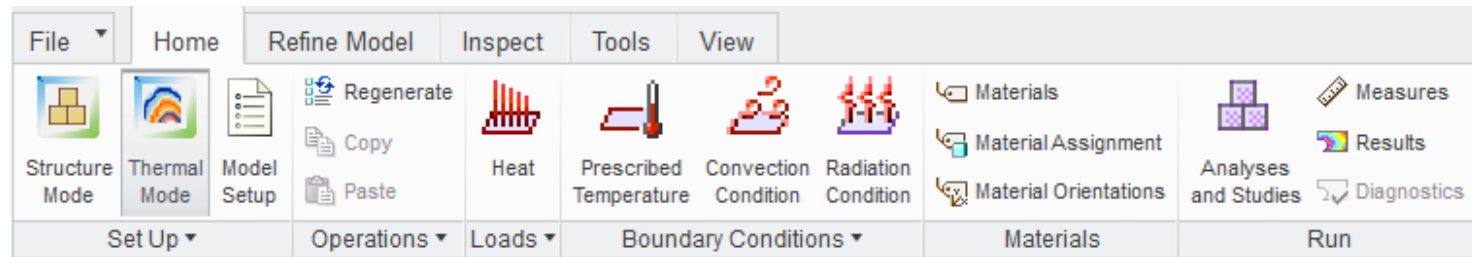
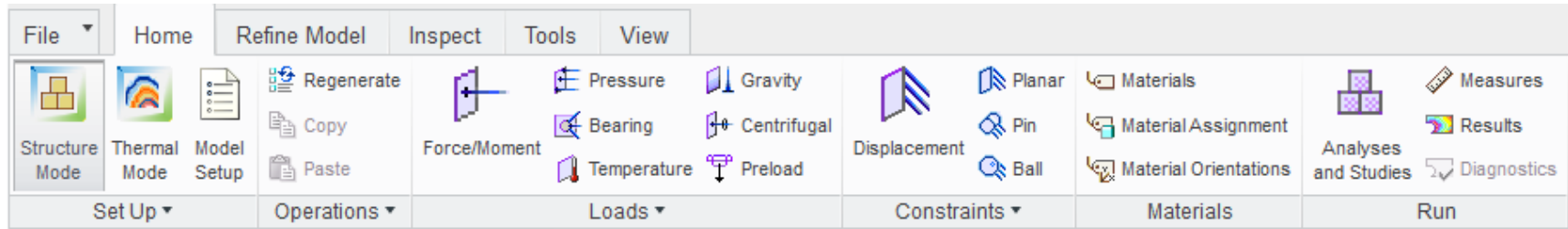


- Installed / Un-installed separately
- Creo Simulate in two modes:
 - Embedded mode – module of Creo Parametric
 - Standalone mode



- In Standalone mode:
 - Start Creo Simulate from the OS Start menu
 - File : Open Creo models and relevant import formats directly in Creo Simulate
 - Drag & Drop or Double-Click model to open in Creo Simulate
 - Automatic App Switching to and from Creo Direct





- **Consistent UI with Creo Apps**
 - Optimized Ribbon UI
 - Access to Creo Simulate commands and tools only
 - Identical UI in embedded / standalone modes

■ Unit Enhancements

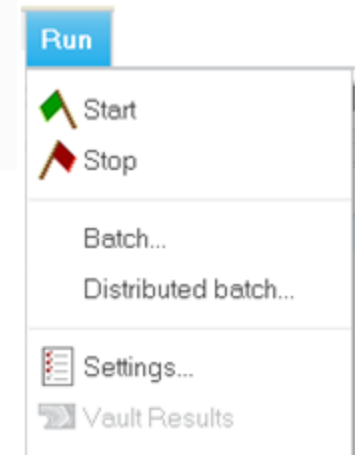
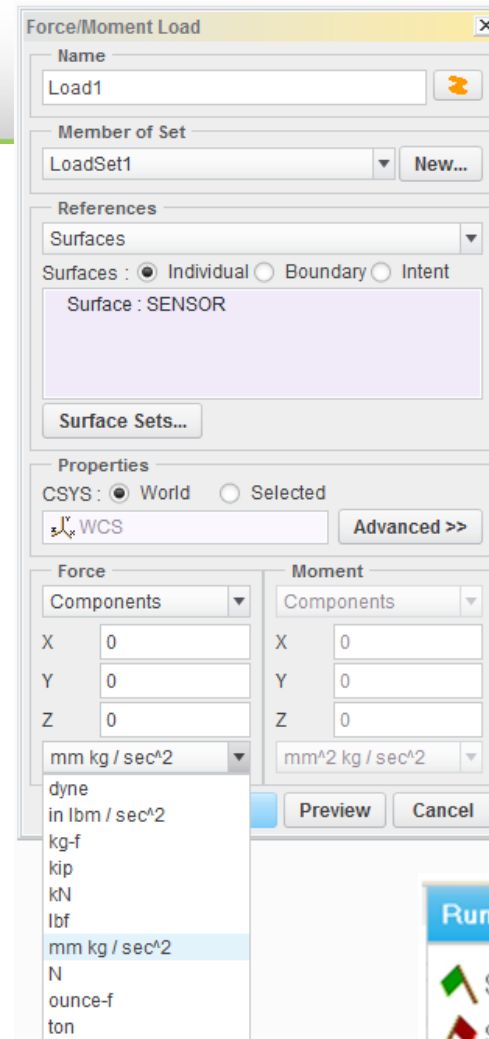
- UnitS support of all dialogs
- Quantities can be entered in any appropriate unit
- Results can be viewed in any appropriate unit

■ Moments/Rotations active where valid

- Hidden for solid modeling
- Available for shell/beam modeling
- Simplified modeling of loads

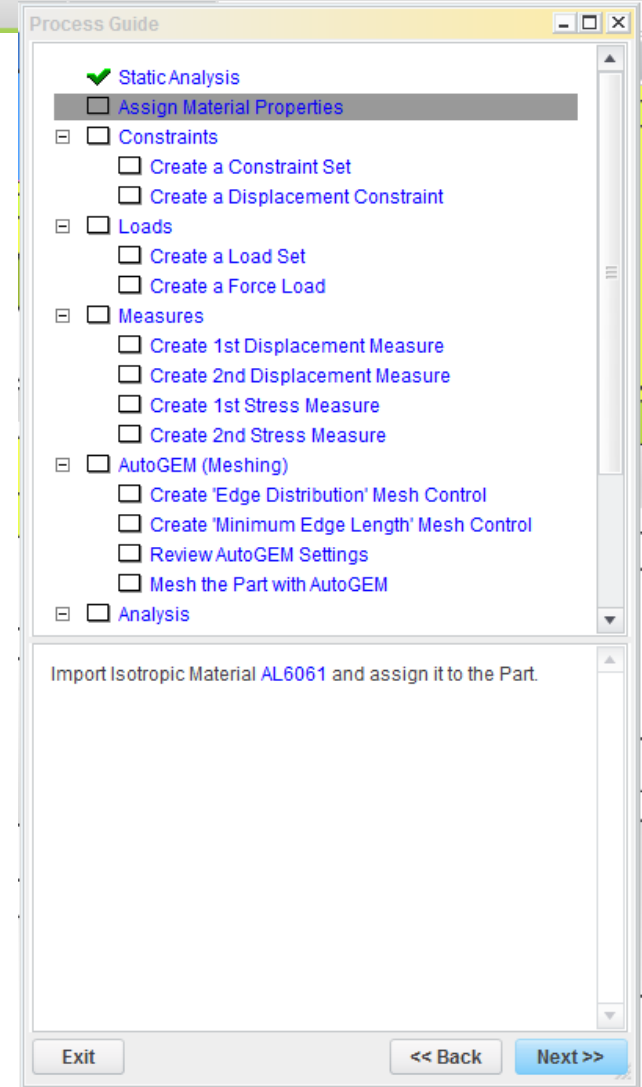
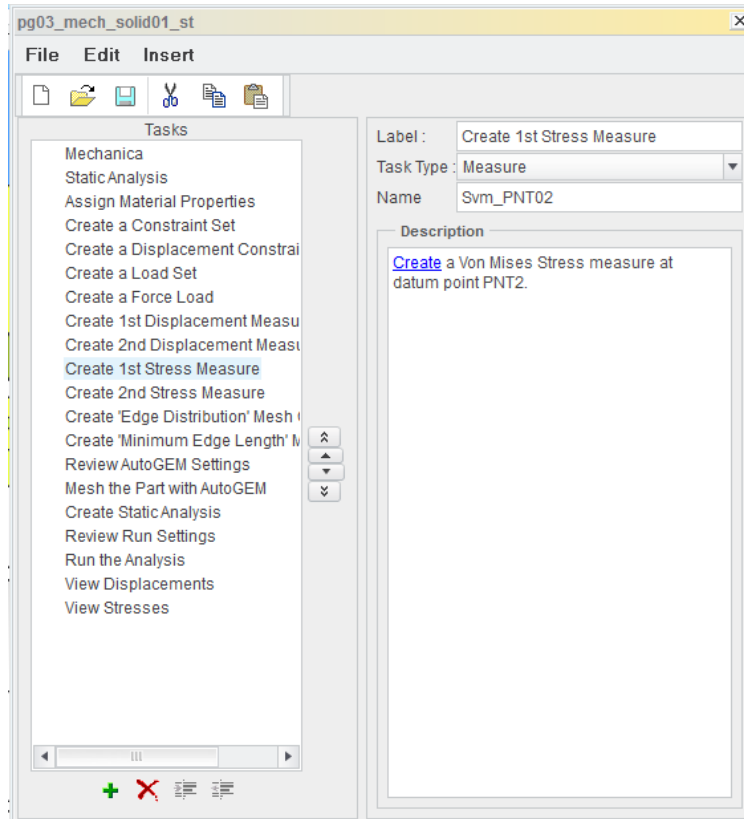
■ Distributed Batch support

- Set up of compute servers through the Distributed Batch utility
- Ability to distribute Creo Simulate jobs to the servers



- **Process Guide Template editor**

- New GUI tool for the creation of Process Guide templates
- Ability to include Map Keys in Process Guide tasks



- **3D icons (glyphs) for loads, constraints**

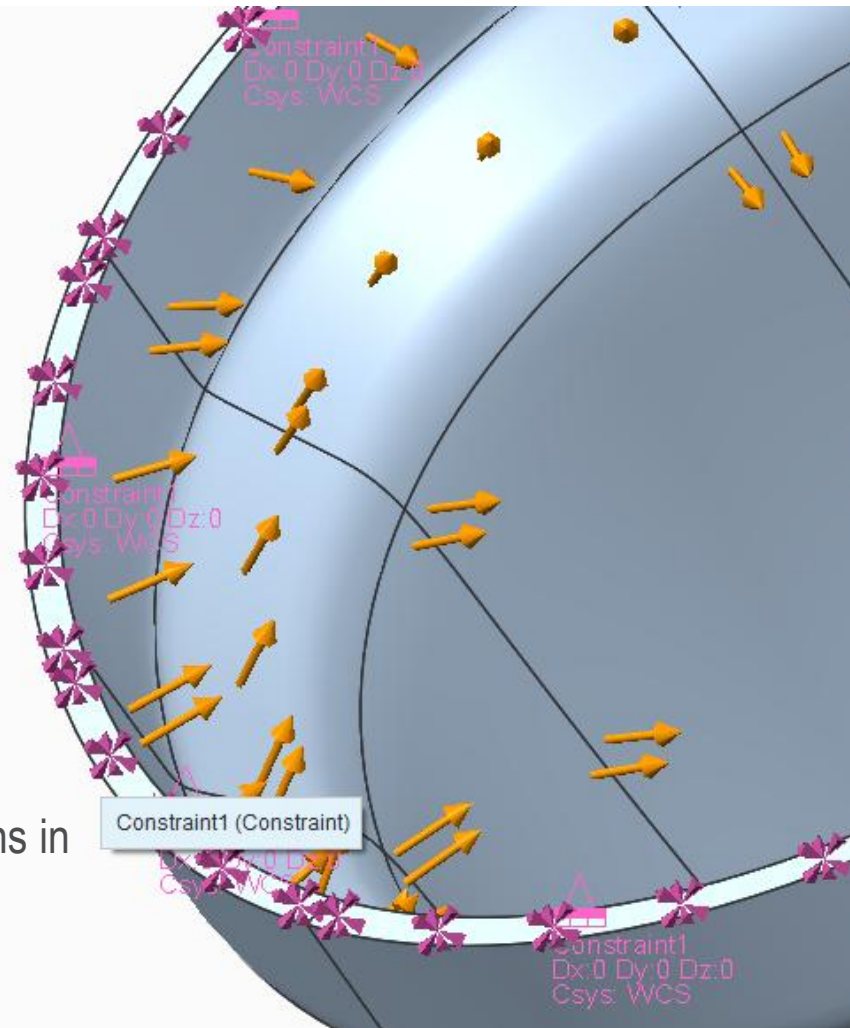
- Modern look of icons
- Z-buffered and optionally zoom variant

- **Command Line Options**

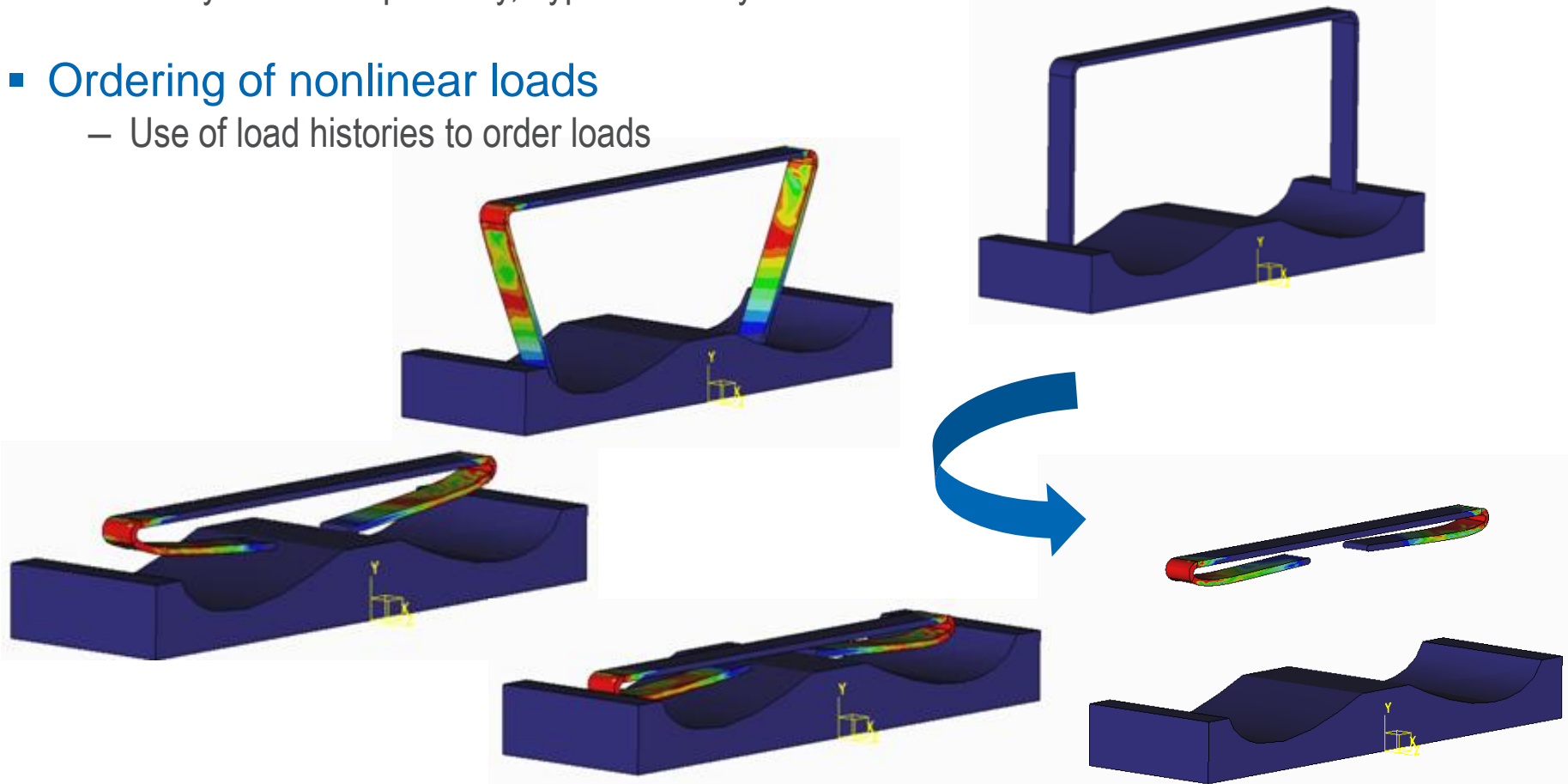
- Consistent config options for all available engine command line options
- Snapshot of config options/ command line options in study directory

- **Increased Solver Memory**

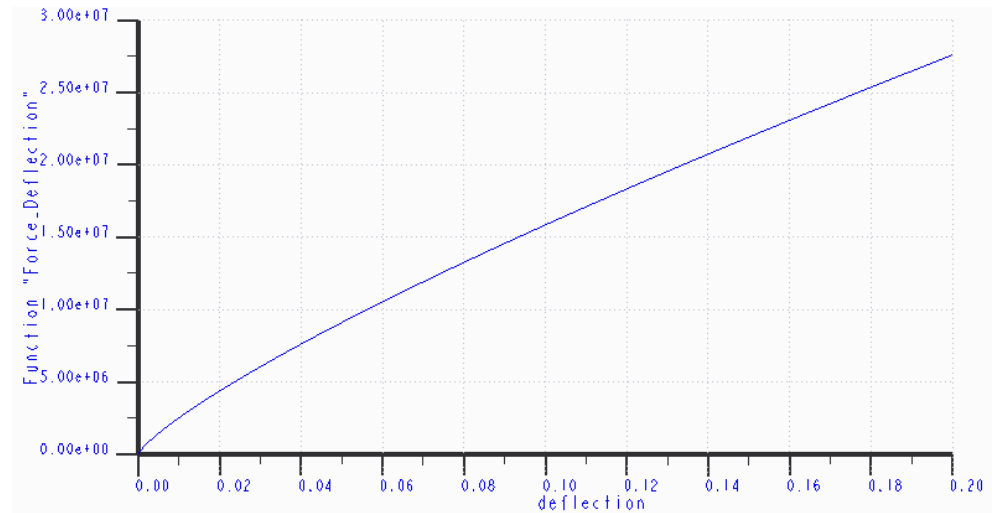
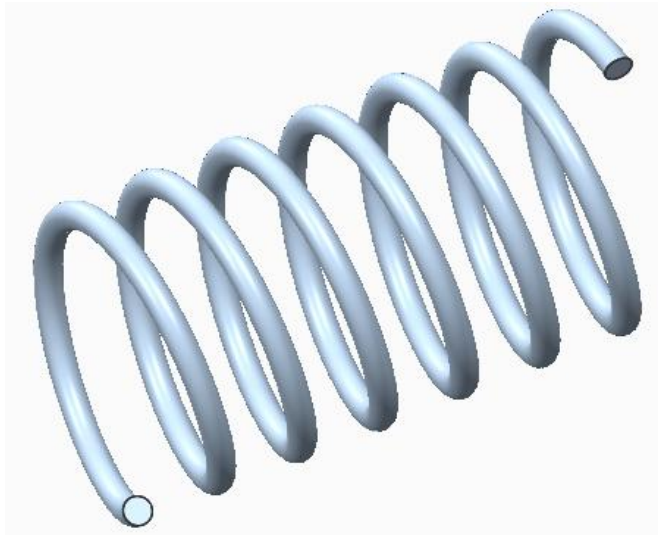
- Improved performance on machines with a lot of RAM
- Better support of 64 bit platform



- **General Large Displacement Analyses (LDA)**
 - Modeling of Contacts in LDA
 - Modeling of Plasticity in LDA
 - Ability to include plasticity, hyper-elasticity and contact effects in the same analysis
- **Ordering of nonlinear loads**
 - Use of load histories to order loads

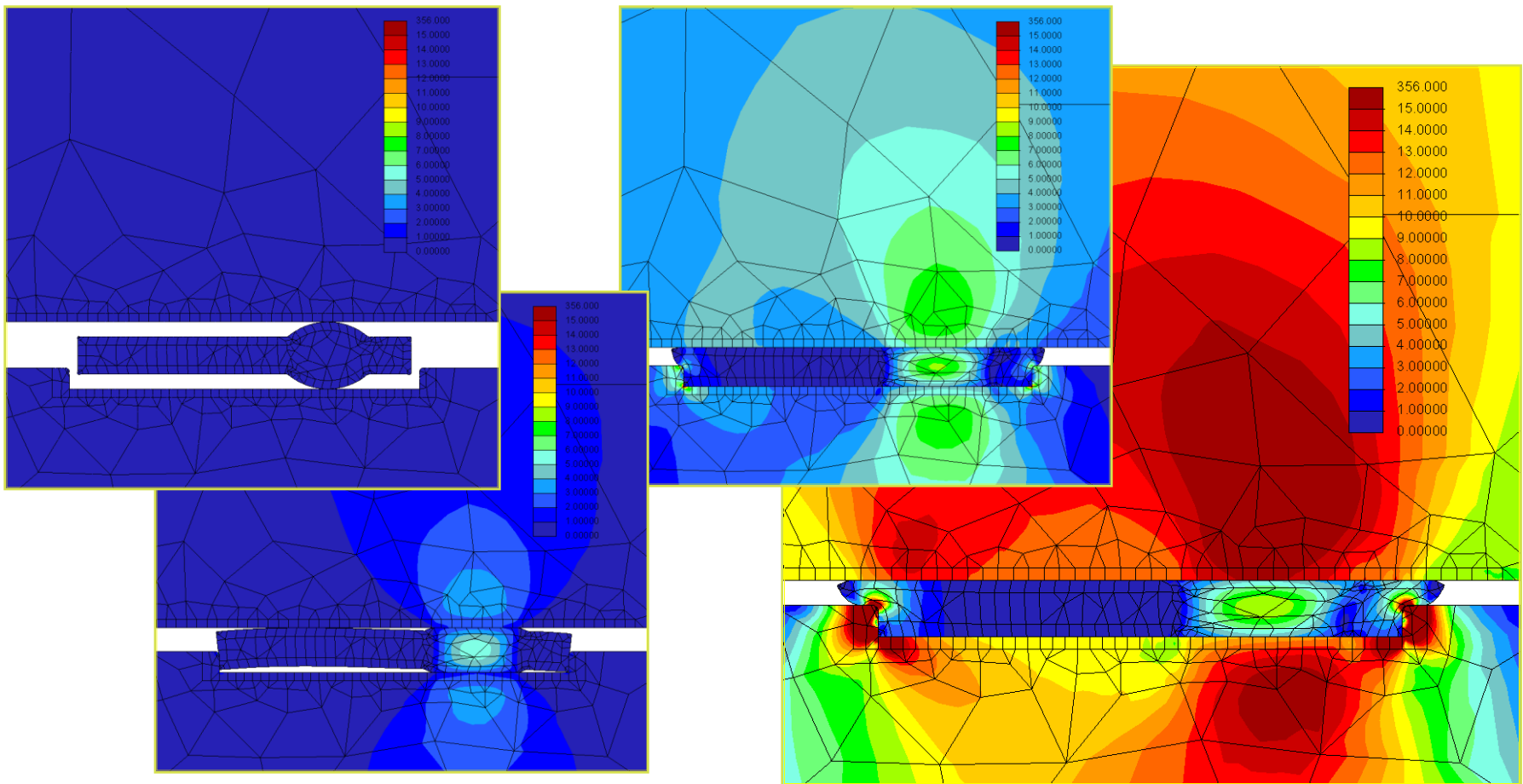


- **Modeling on Nonlinear Springs**
 - Ability to specify a general force-deflection curve

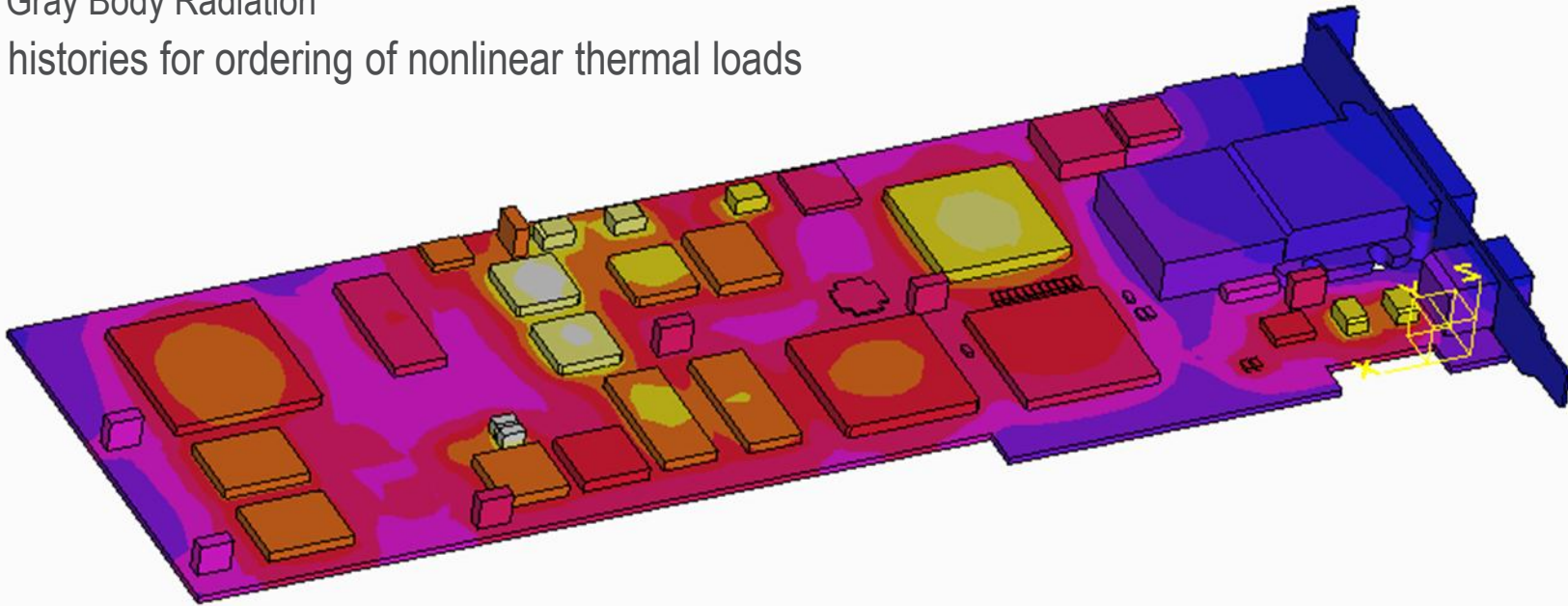


- **Modeling of UCS constraints in LDA**

- 2D axial-symmetric LDA, combined with contact and non-linear material (hyperelasticity, plasticity)



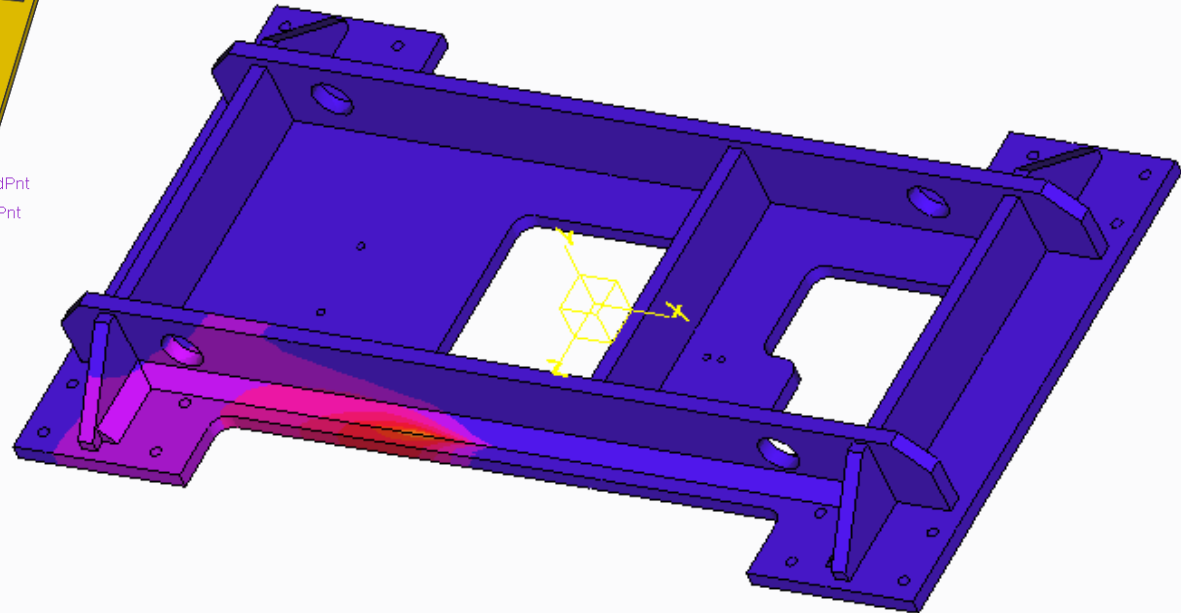
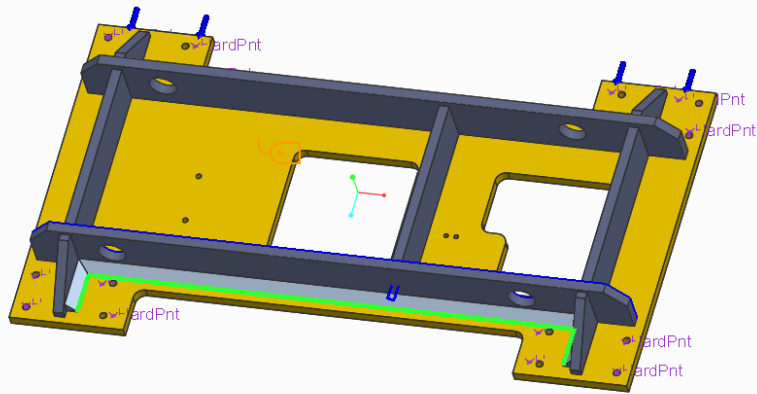
- **Nonlinear Thermal Analyses**
 - Temperature dependent Thermal Conductivity
 - Generalized Convection Conditions
 - h can be a function of temperature
 - Modeling of Radiation Conditions
 - Gray Body Radiation
 - Load histories for ordering of nonlinear thermal loads



- **Generalized modeling of Total Volume Heat Load**

- **Moving Heat Loads, e.g. welding process**

- Ability to model moving loads through combined functions of space and time
- Modeling of Heat Loads on composite curves
- Definition of Heat Loads as functions of arc length



■ Base Excitation Enhancements

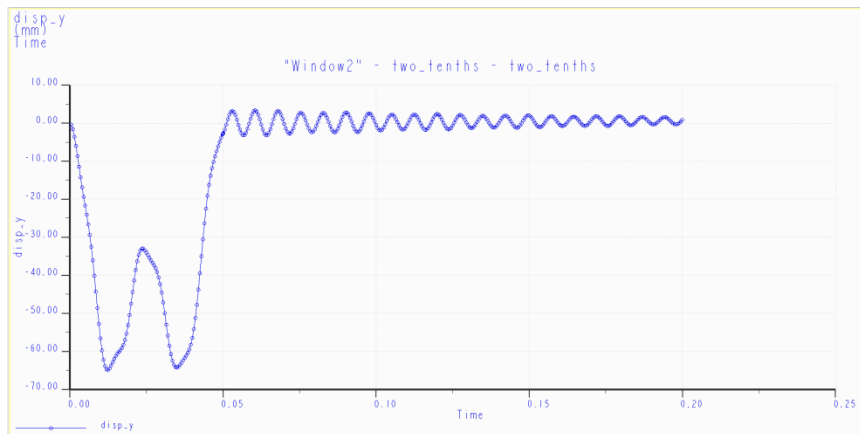
- Modeling of general base excitation with different histories in different directions
- Modeling of linear and rotational motion of the supports
- Streamlined definition dialog
- Support of G^2/Hz units for PSDs in Random Response

■ Calculation of von Mises results in Random Response

■ Animation of Dynamic Frequency results

- Animation cycles in time at a given frequency

■ Filtering of negative Buckling Factors

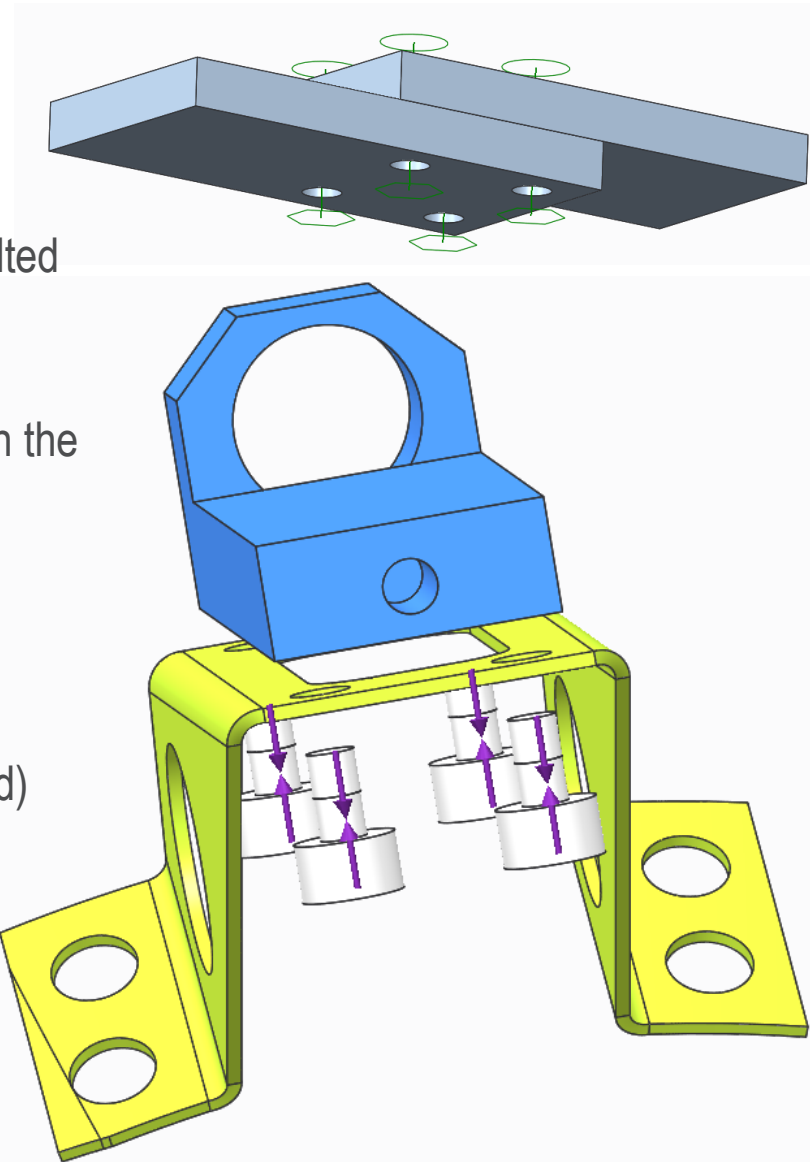


■ Enhanced modeling of fasteners

- Streamlined definition dialog
- More accurate modeling of the interface between bolted components
- Modeling of bending and torsion effects of bolts
- New measure calculations for forces and moments in the bolt and at the interface

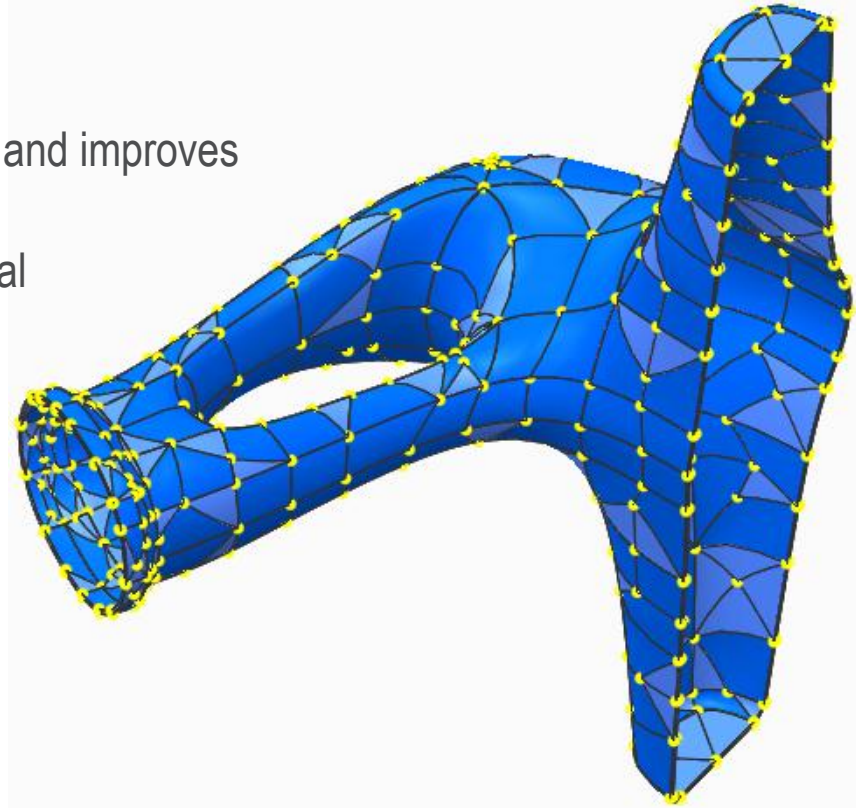
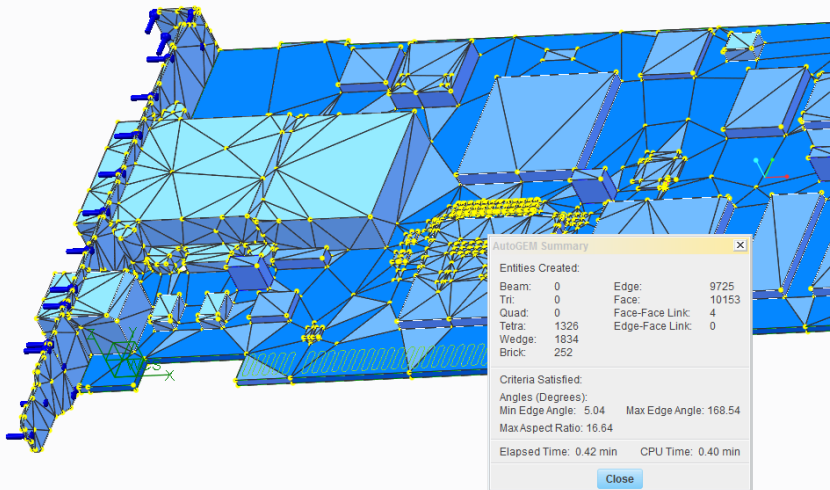
■ Preload on bolts modeled as solids

- Automates complex modeling technique (workaround) for preloads
- Can be applied to any component or volume region
- Automatic detection of bolt axis for prismatic solids



- Ability to mesh thin regions with bricks and wedges

- Automatically detects thin regions
- Can transition to thicker areas meshed in tetras
- Dramatically decreases the number of elements and improves solver performance
- LDA analyses of thin structures are more practical

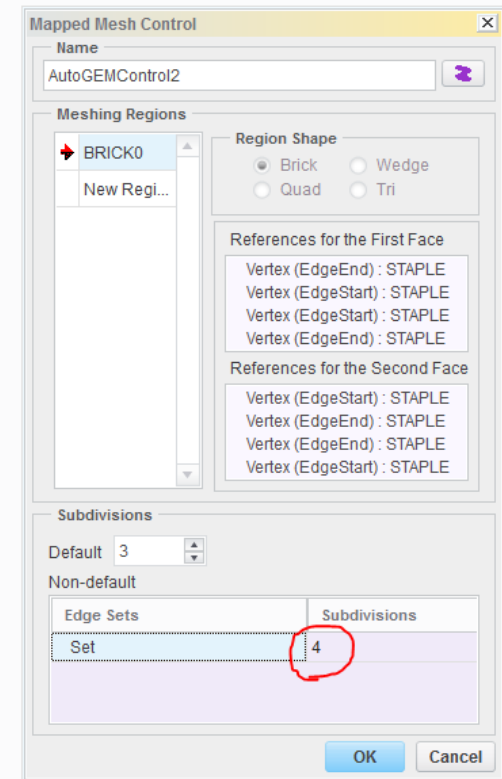
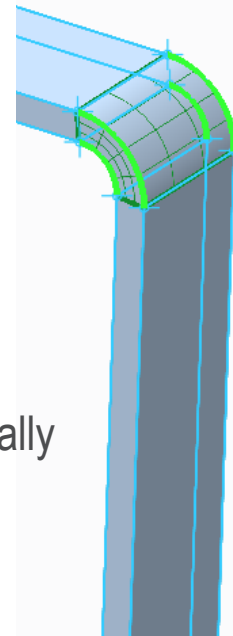
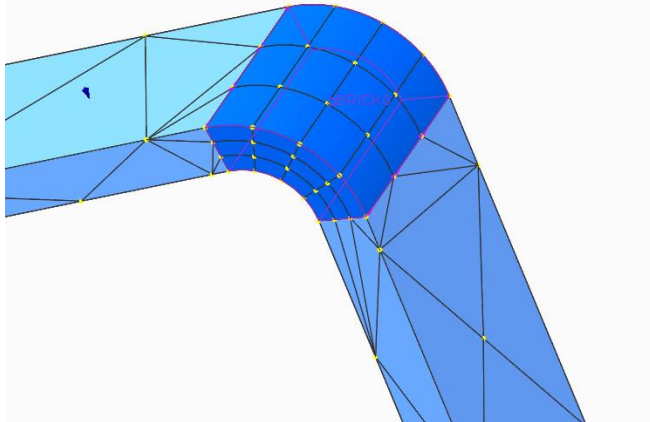


- Ability to mesh prismatic regions with bricks and wedges

- Automatically detects multiple layers of prismatic regions
- Produces far fewer elements than the tet mesh of the same model
- Improves solver performance

■ Mapped meshing

- Manually construct mapped meshing regions by selecting faces, edges or points
- Bricks and Wedges in volumes - Quads and Tris on surfaces
- Element compatibility is automatically maintained across mapped meshing regions
- Improves performance and robustness of nonlinear analyses with the use of a structured mesh in sensitive areas

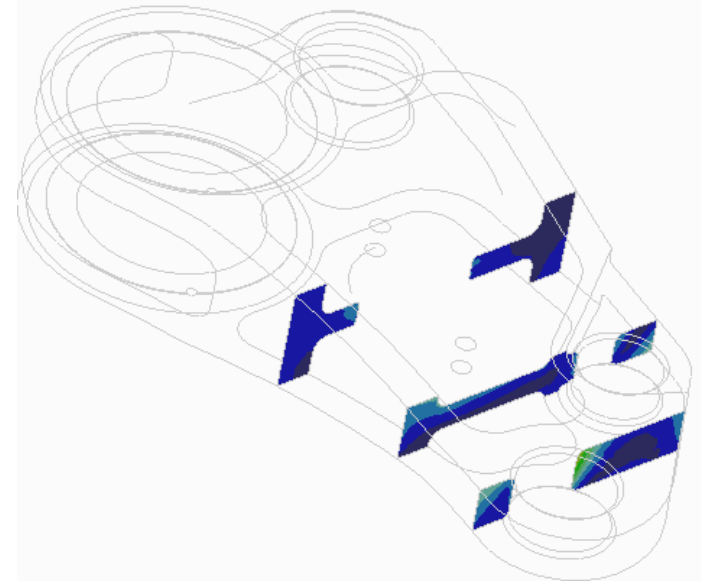
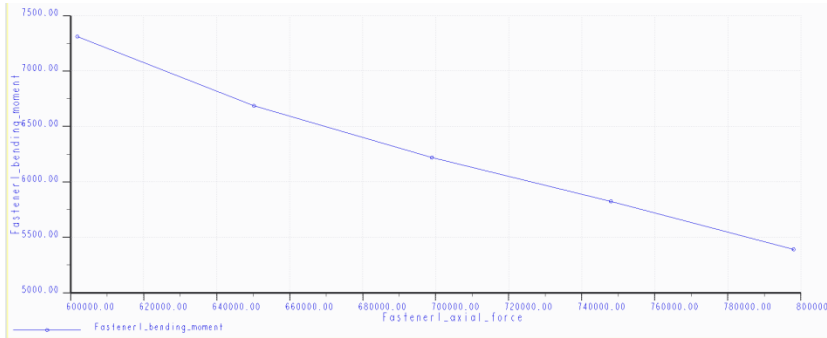
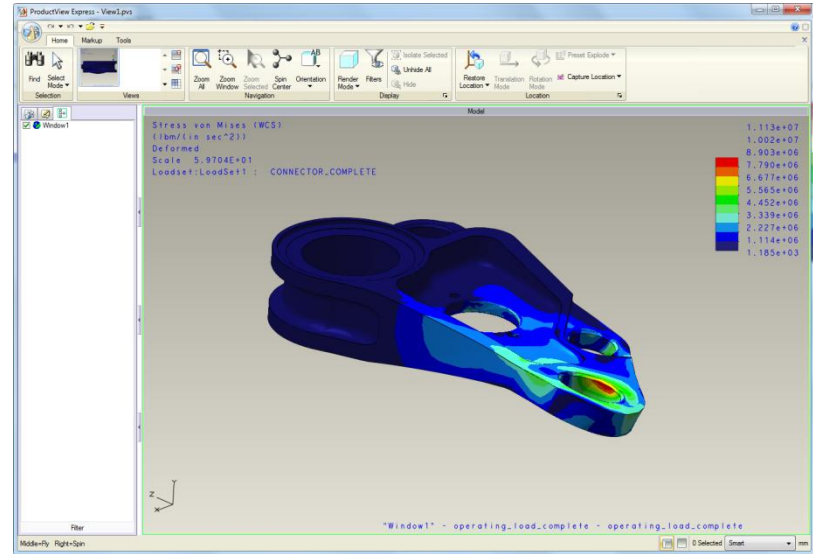


■ Modeling of variable thickness shells

- Variable thickness of compressed solids is automatically calculated and modeled

■ Mesh display in exploded view

- Default Results templates
- Output in Creo View (OL) format
- Measure vs. Measure graphs



- Animation on cutting planes