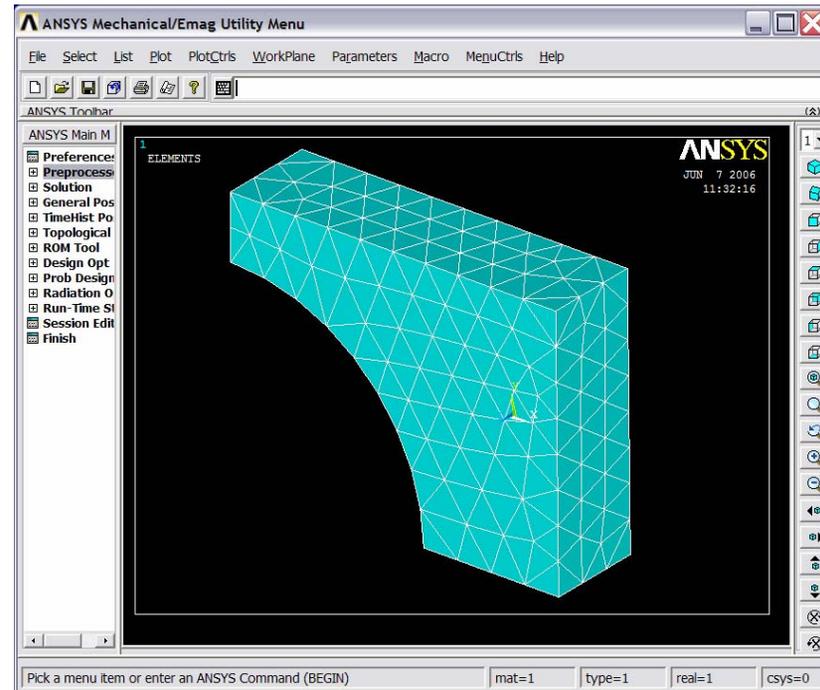
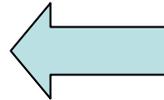
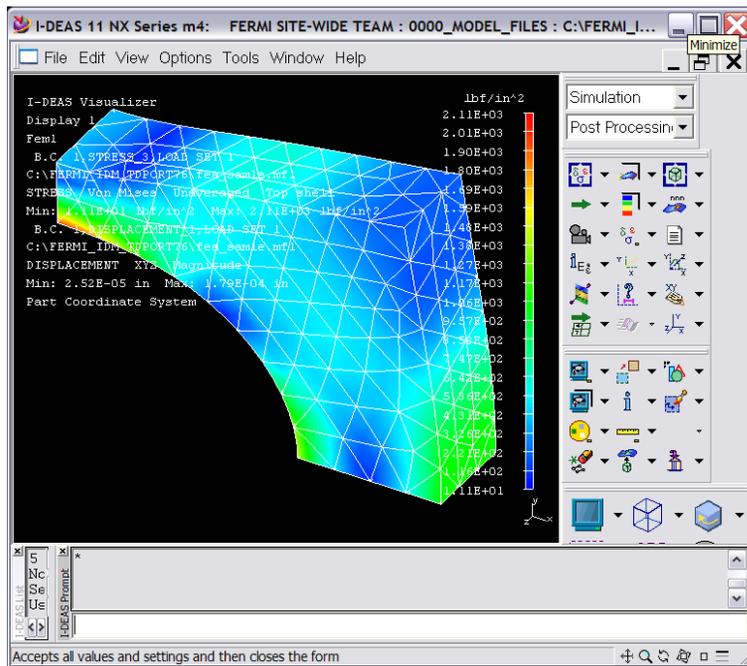


# Making I-DEAS & ANSYS work together - Overview

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7 June 2006



# Purpose of this Presentation

To make I-DEAS Simulation and ANSYS users aware of their options when performing FEA with source geometry located in I-DEAS.

If there is sufficient interest in learning more, we can have an ANSYS users meeting to discuss it in more detail.

# Options for FEA

I have identified 3 different options. There could be more. Any feedback from users would appreciated.

- Use I-DEAS Simulation instead
- Use I-DEAS Simulation for Pre/Post Processing only
- Export Parasolid files directly from I-DEAS to ANSYS

# Use I-DEAS Simulation instead

## Pro

- Most efficient use of time.

Maintains a fully associative relationship between the 3D model and FEM mesh and boundary conditions to speed up creation of iterative FEMs or “What If?” scenarios that require geometry changes. The boundary conditions and meshes automatically update to accommodate changes to the fully parametric 3D model saving much time since most of the time creating an FEM is spent on geometry, meshing, and boundary conditions.

- Can be used for both linear (5 licenses available) & nonlinear (1 license available) problems.

## Con

- May not be able to handle certain types of analyses such as multiphysics problems.
- Requires learning I-DEAS Simulation

# Use I-DEAS Simulation for Pre/Post Processing only

## Pro

- Second most efficient use of time.

Maintains a fully associative relationship between the 3D model and FEM mesh and boundary conditions to speed up creation of iterative FEMs or “What If?” scenarios that require geometry changes. The boundary conditions and meshes automatically update to accommodate changes to the fully parametric 3D model.

## Con

- Requires working knowledge of export/import methods for bulk input/output data.
- Requires learning some I-DEAS Simulation

# Export Parasolid files directly from I-DEAS to ANSYS

## Pro

- Allows ANSYS users unfamiliar with I-DEAS Simulation to create FEMs directly in ANSYS.
- Geometry translates better than using IGES or STEP.
- Can be used to export part and assembly model from I-DEAS.

## Con

- Can waste the most time by breaking associativity between the history-based parametric 3D model and the FEM. Changes to the 3D model require a new Parasolid file be imported into ANSYS and the FEM recreated.