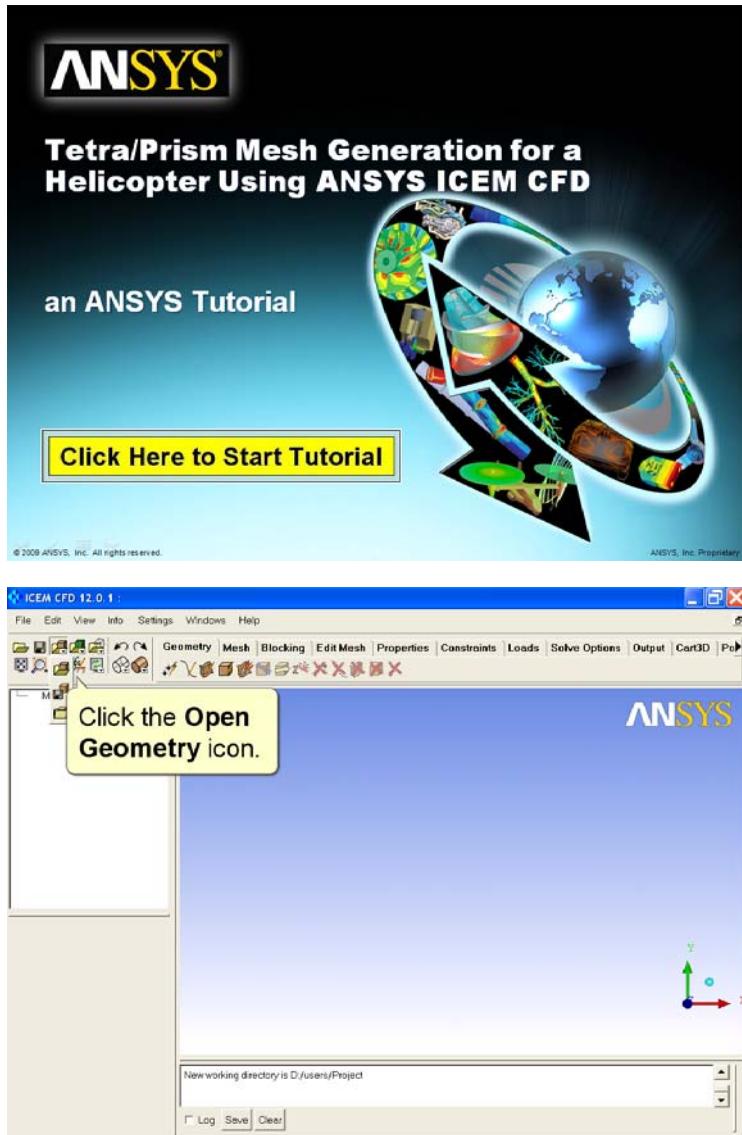


ICEM - Tetra/Prism Mesh Generation for a Helicopter



Tetra/Prism Mesh Generation for a Helicopter Using ANSYS ICEM CFD

This tutorial demonstrates the use of ANSYS ICEM CFD to generate the Tetra/Prism mesh for a helicopter.

Topics Covered in this Tutorial

- Preparing the geometry
- Assigning mesh sizes
- Generating the initial mesh using the Octree approach
- Generating the mesh using the Delaunay approach
- Viewing cut-planes

Click Here to Continue

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ICEM CFD 12.0.1

File Edit View Info Settings Windows Help

Geometry Mesh Blocking Edit Mesh Properties Constraints Loads Solve Options Output Cart3D Project

ANSYS

New working directory is D:/users/Project

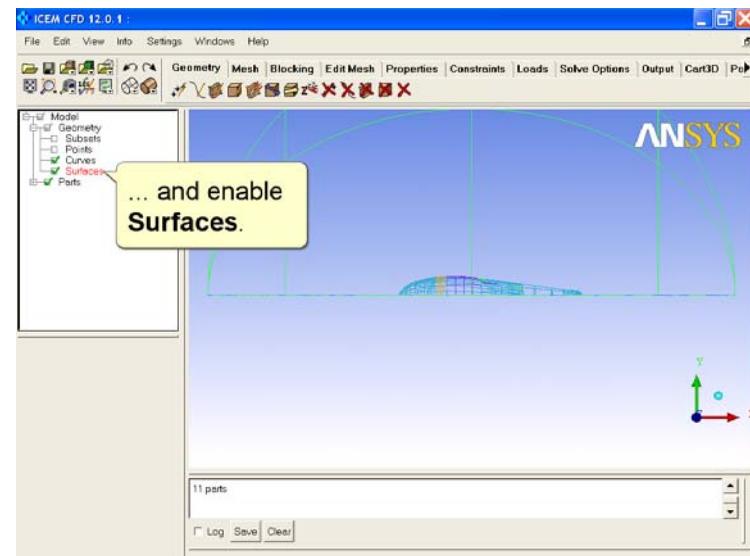
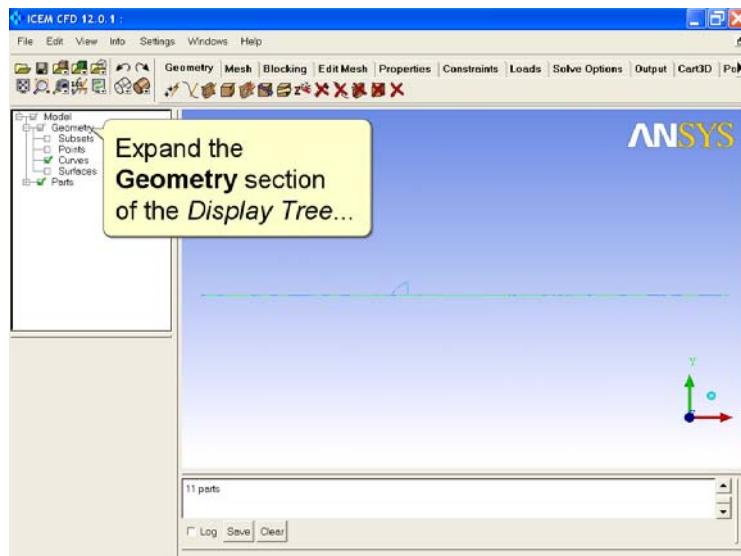
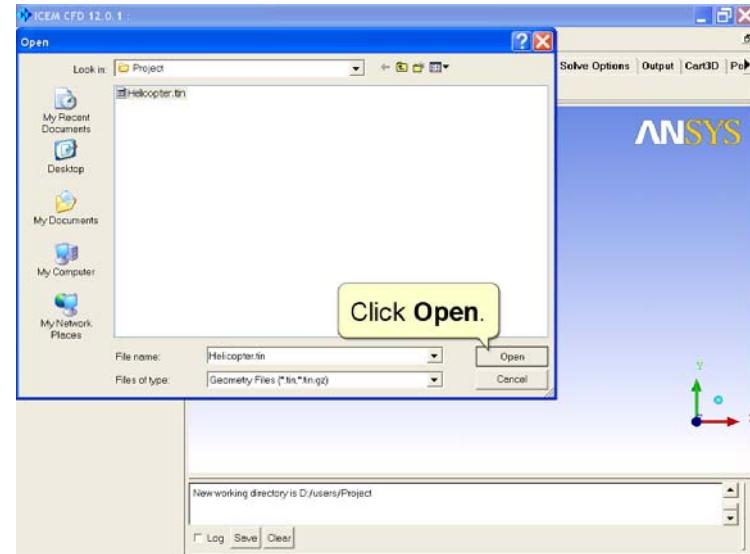
Log Save Clear

The Open dialog will appear.

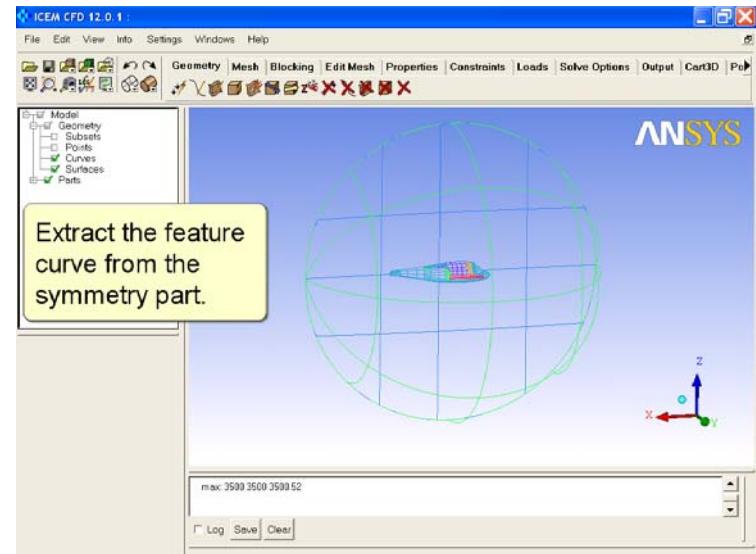
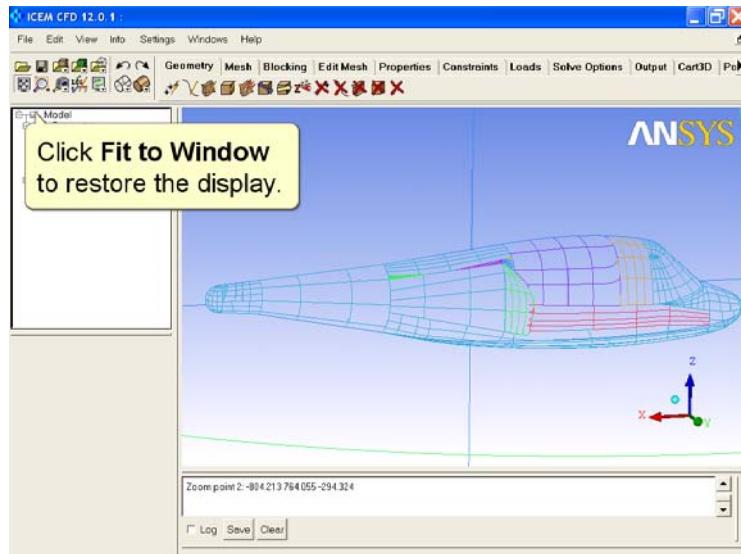
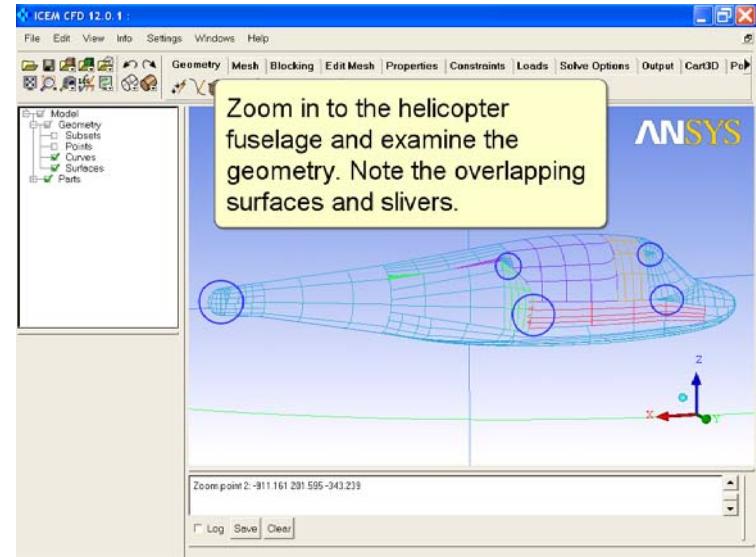
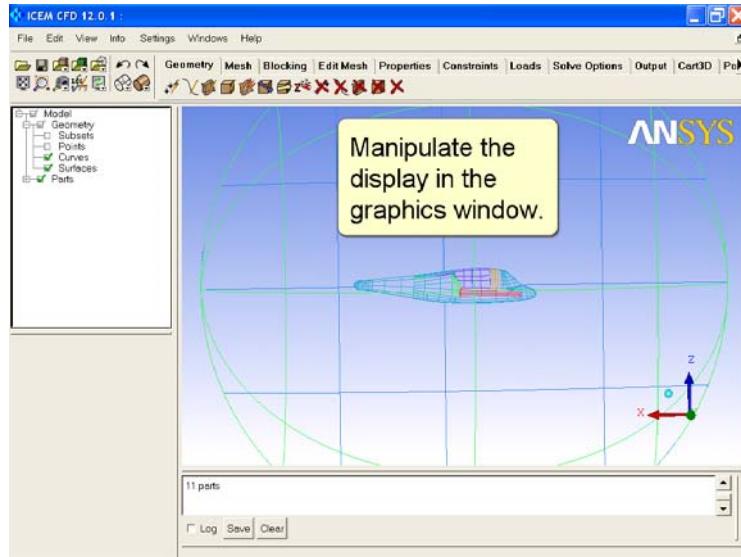
ANSYS

Solve Options Output Cart3D Project

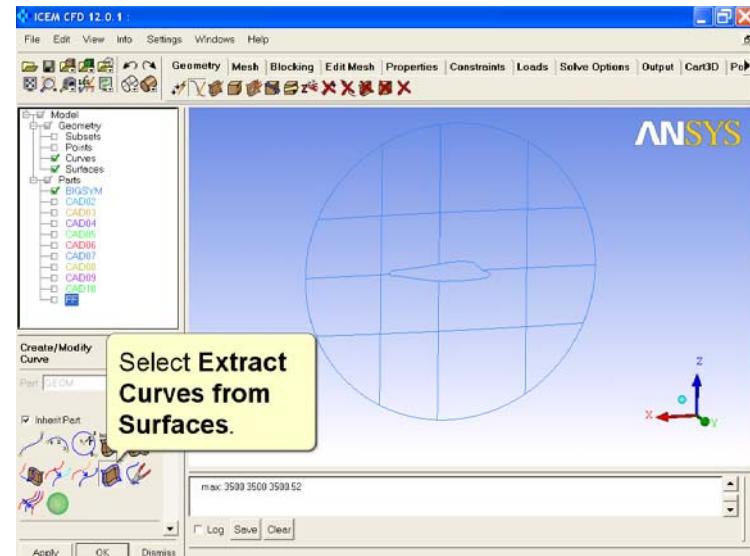
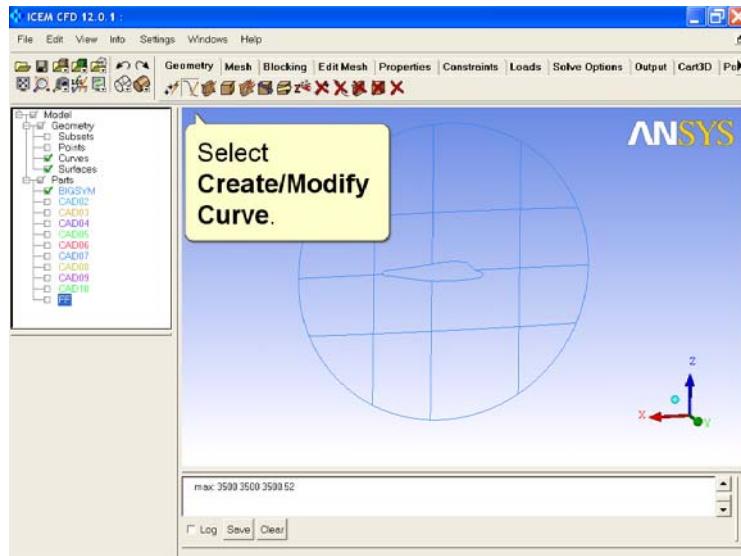
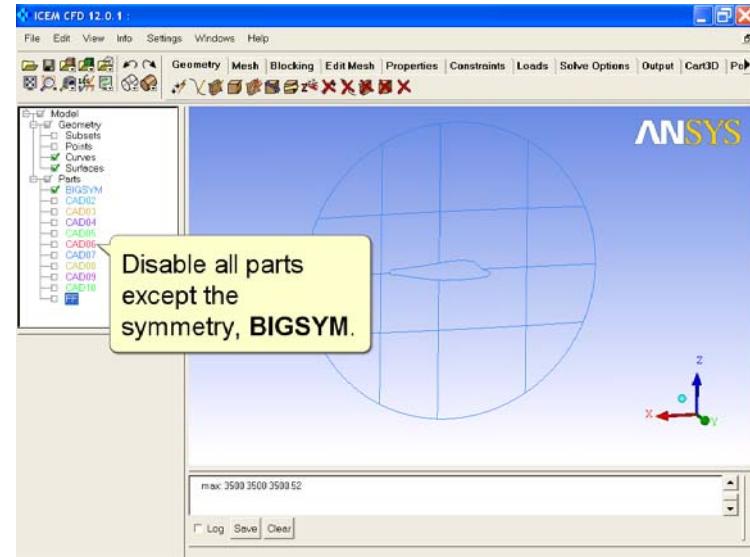
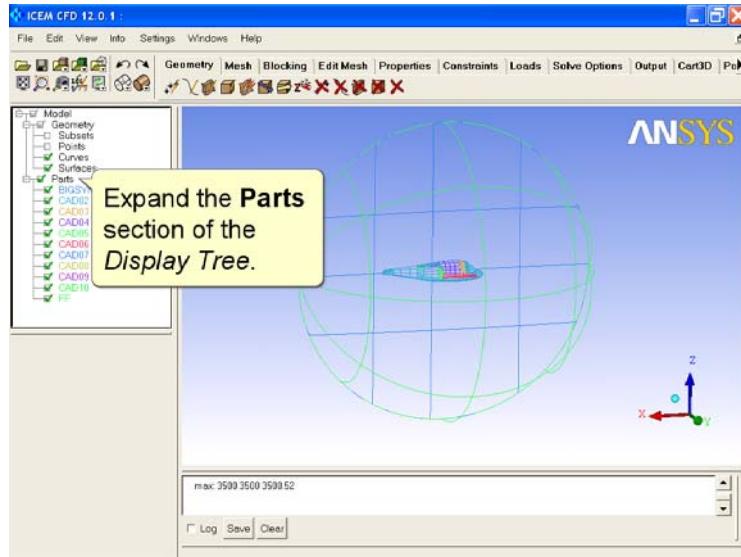
ICEM - Tetra/Prism Mesh Generation for a Helicopter



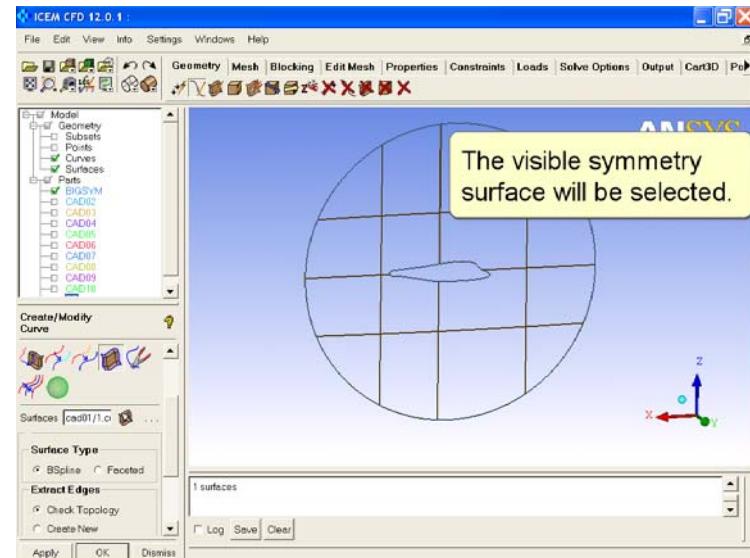
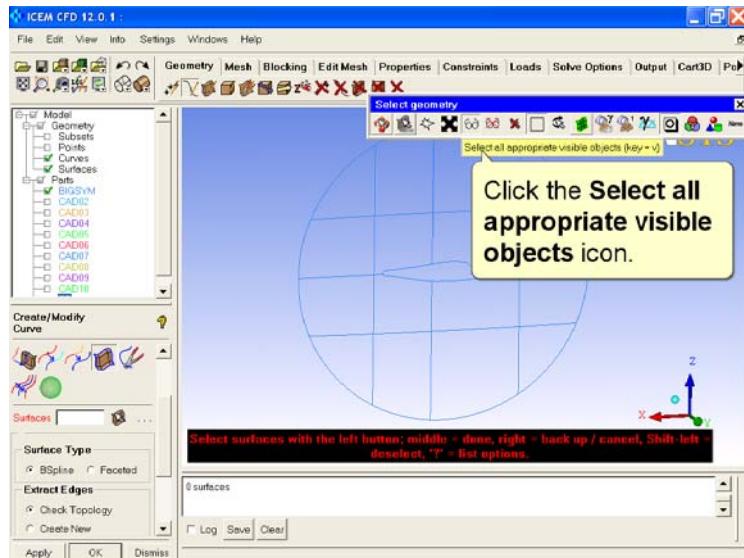
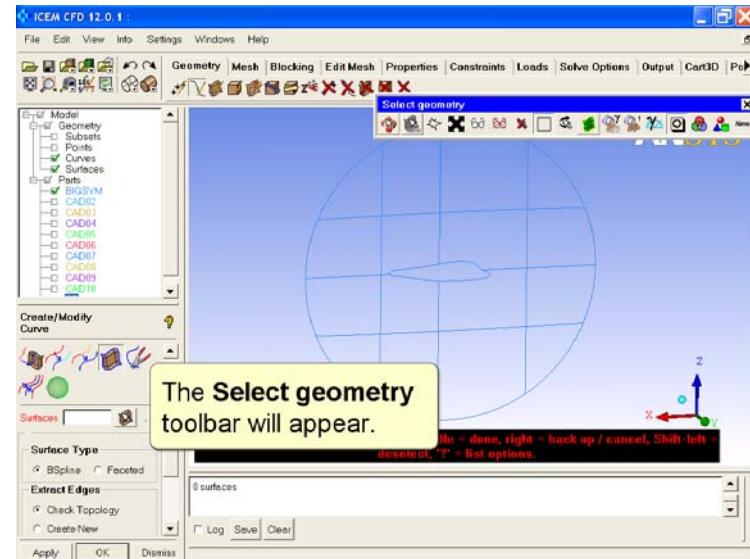
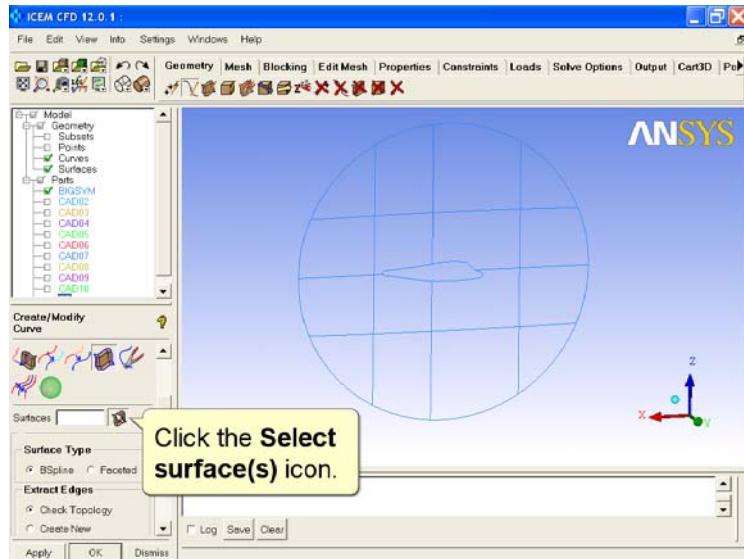
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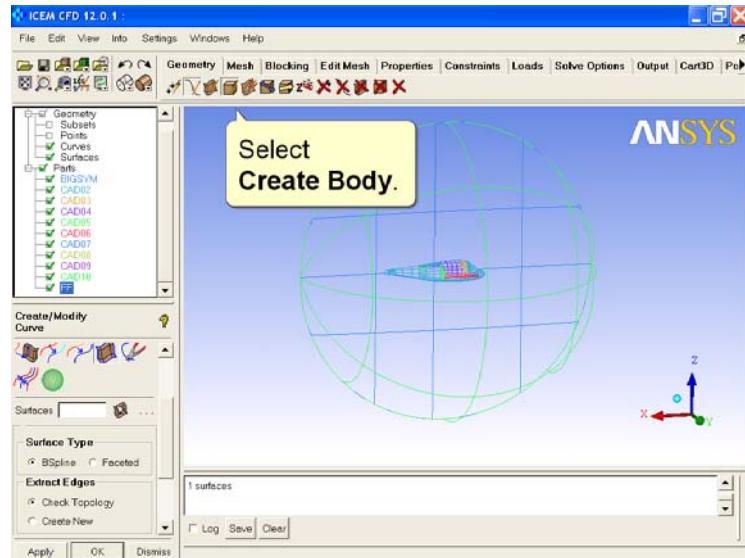
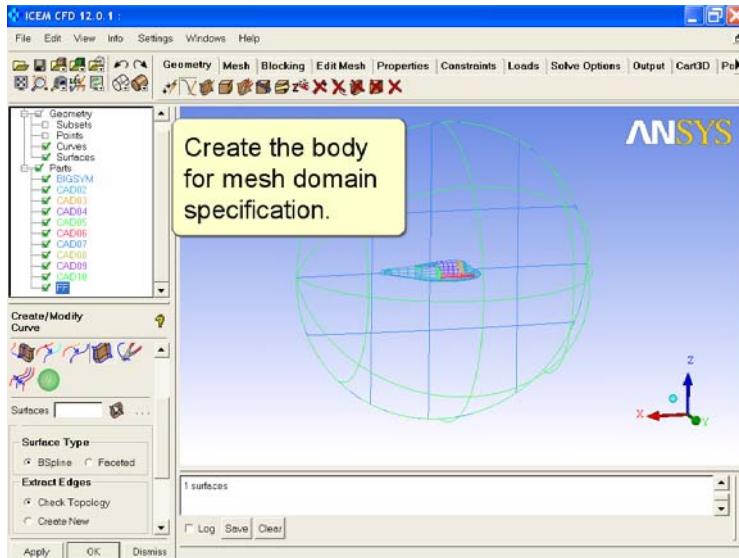
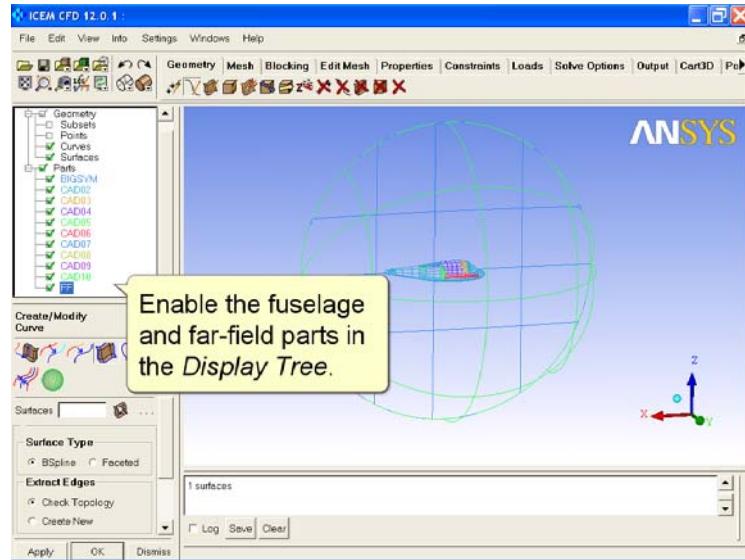
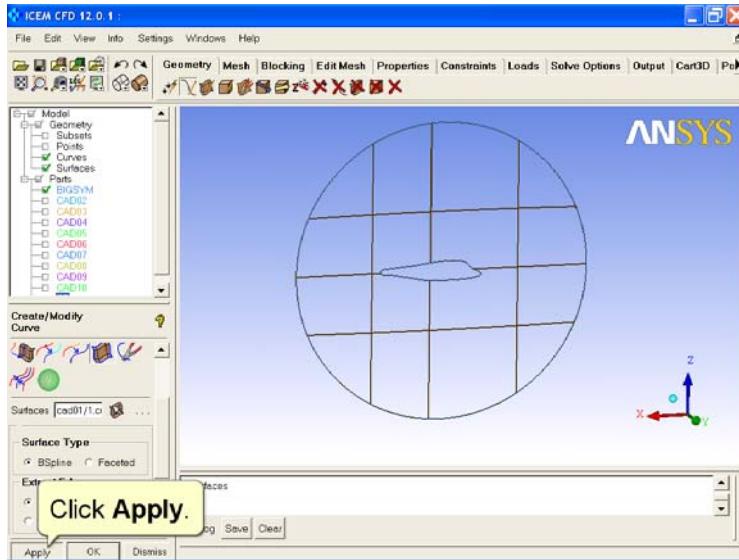
ICEM - Tetra/Prism Mesh Generation for a Helicopter



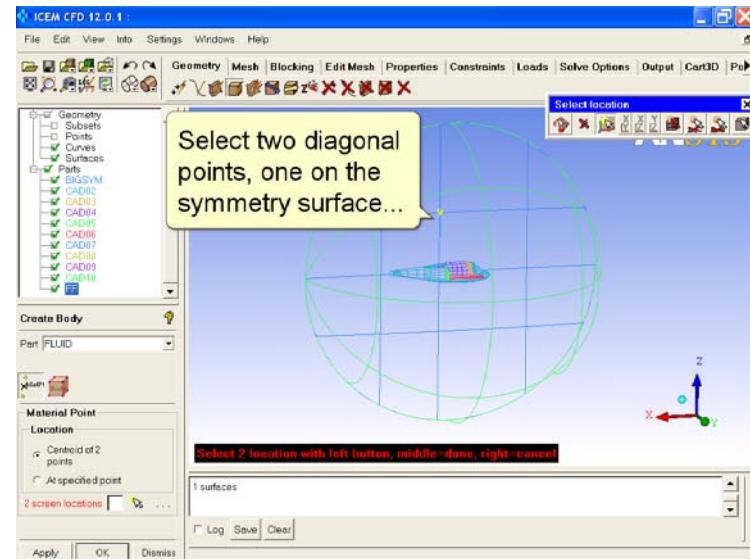
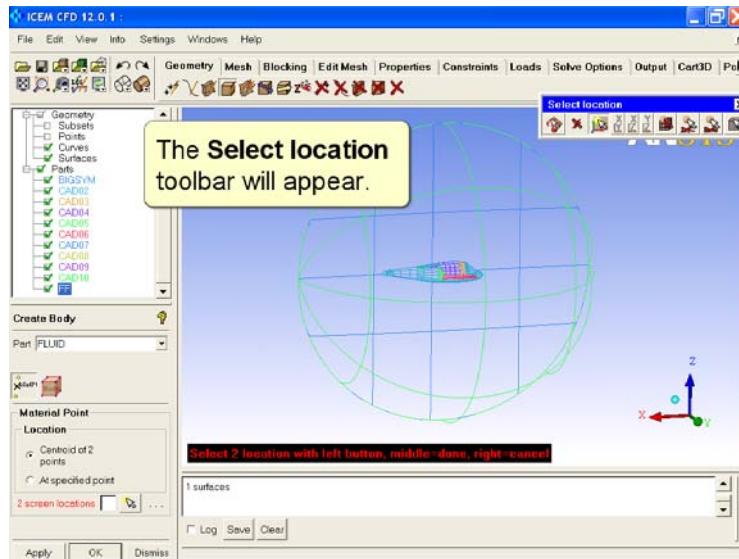
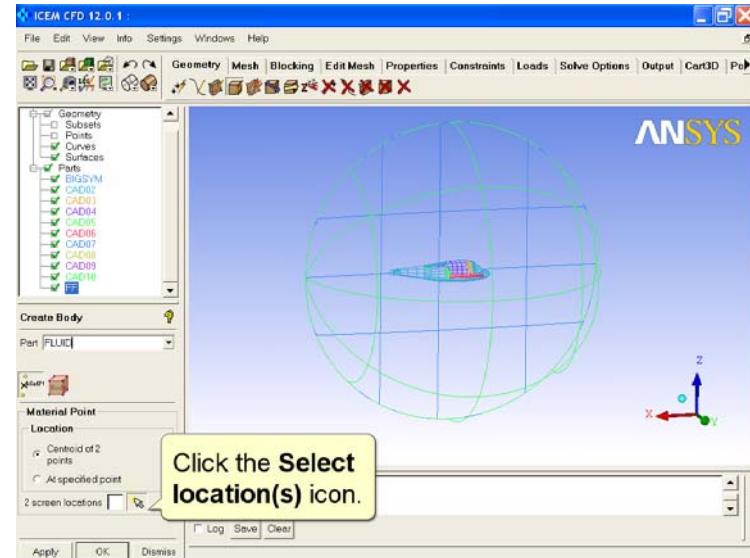
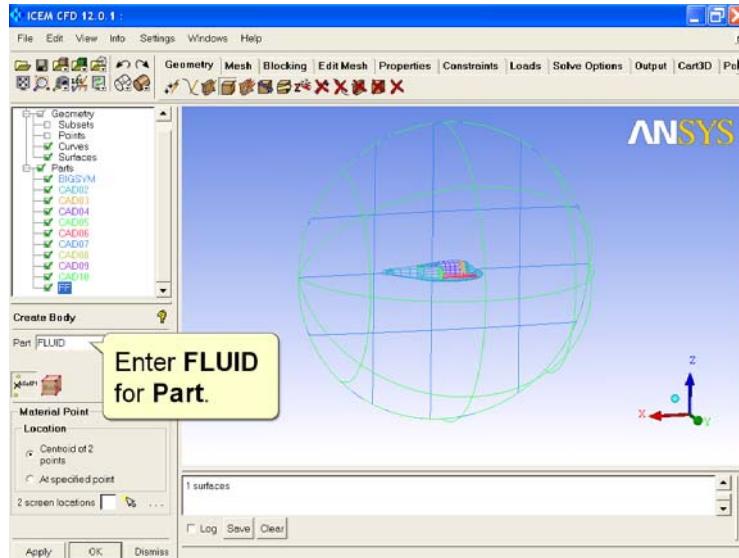
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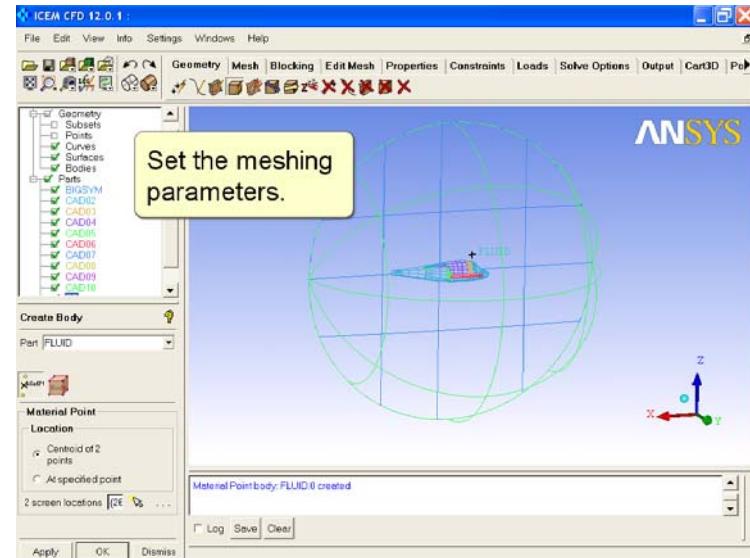
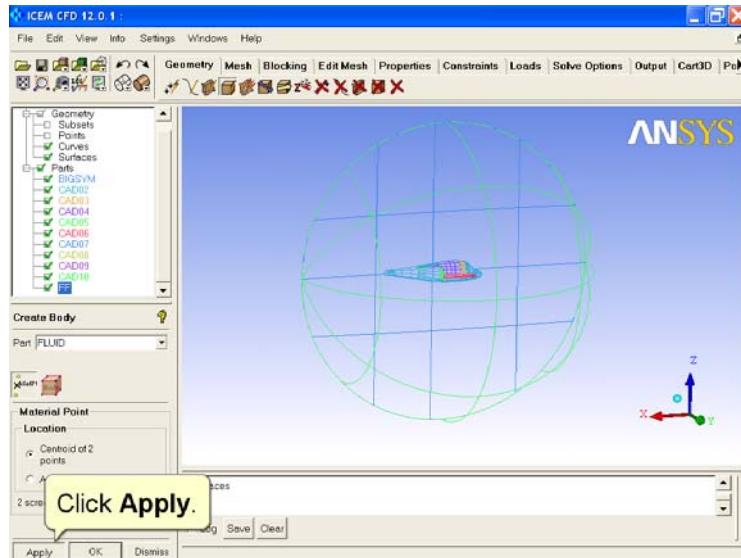
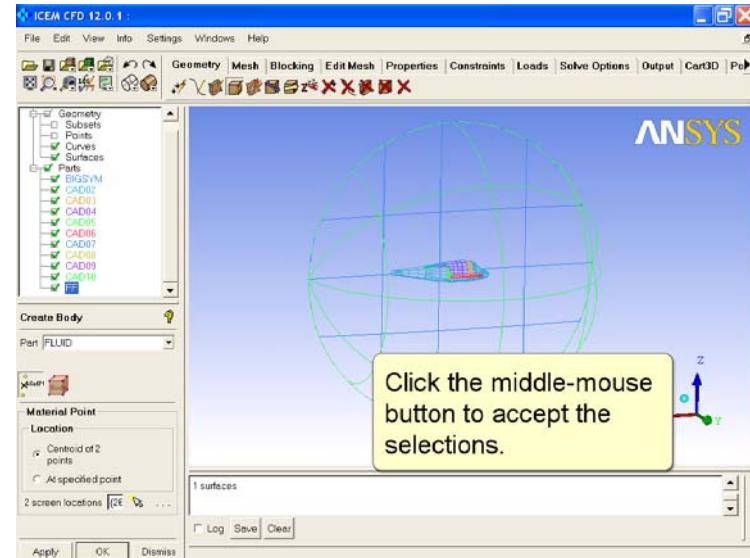
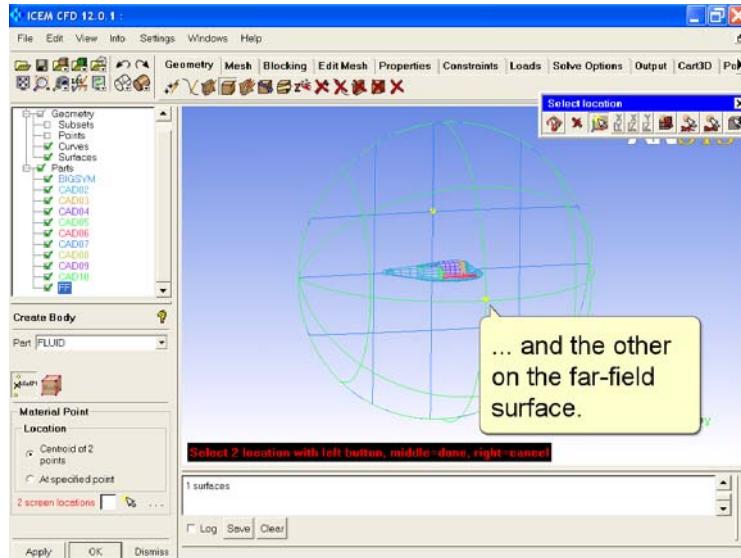
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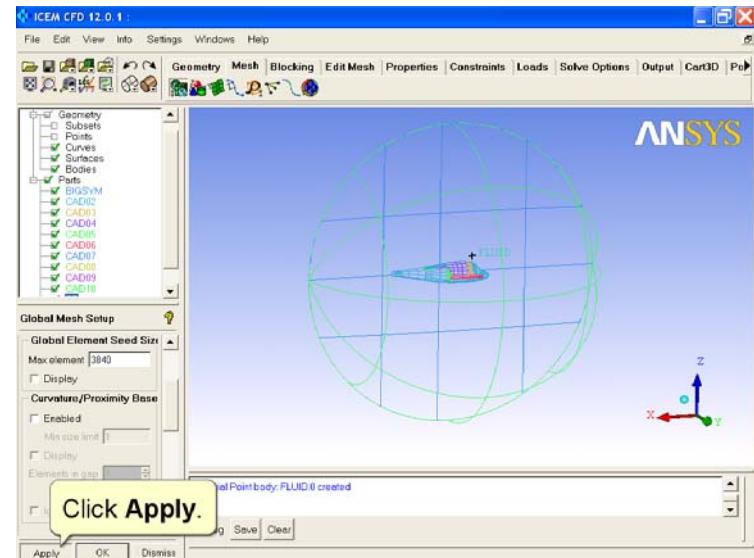
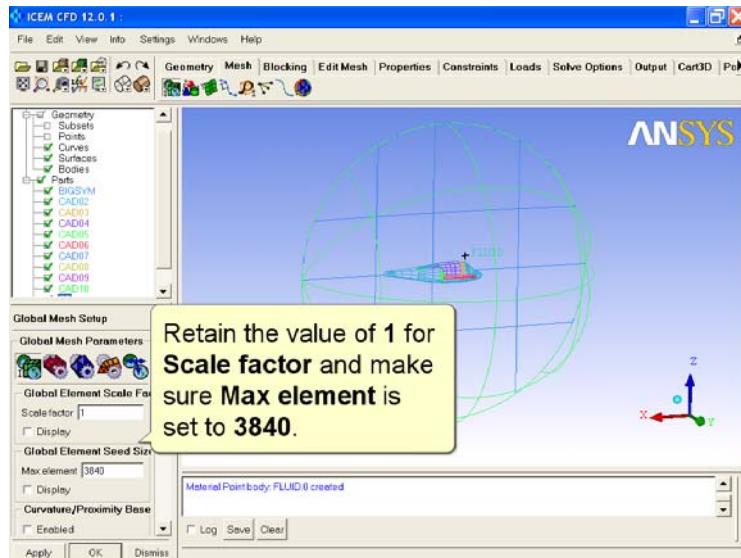
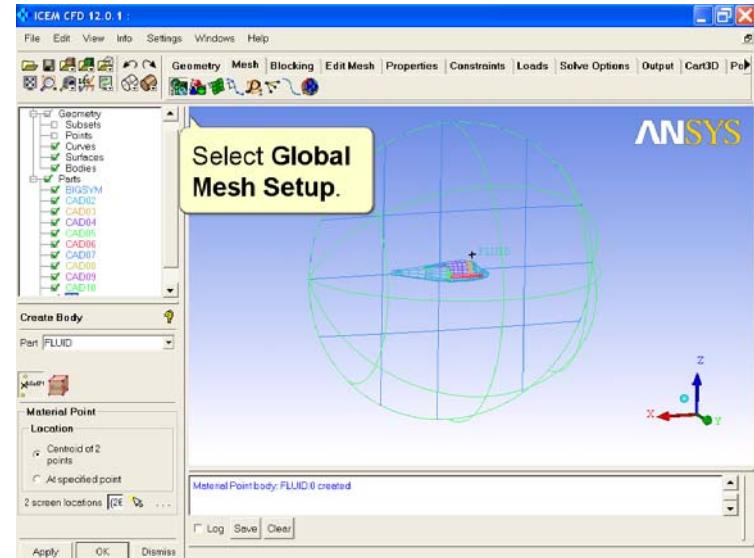
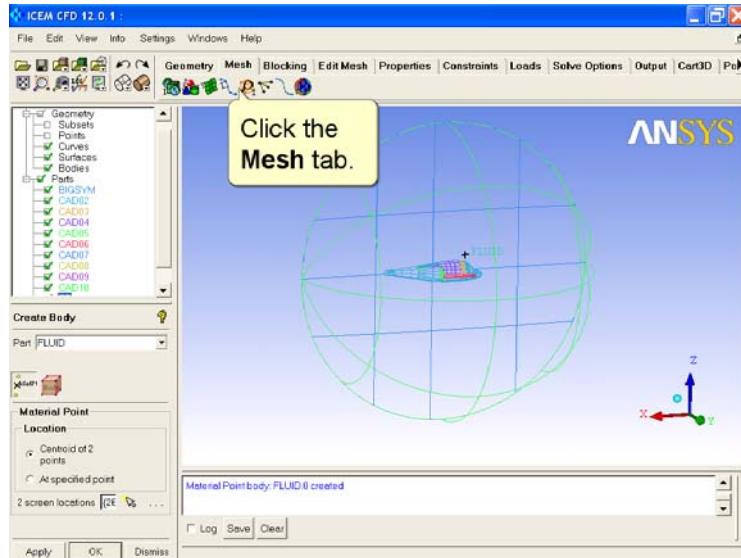
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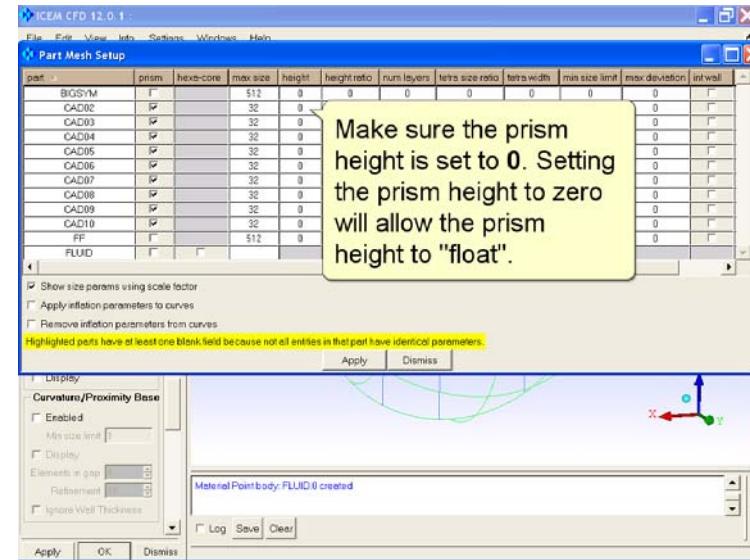
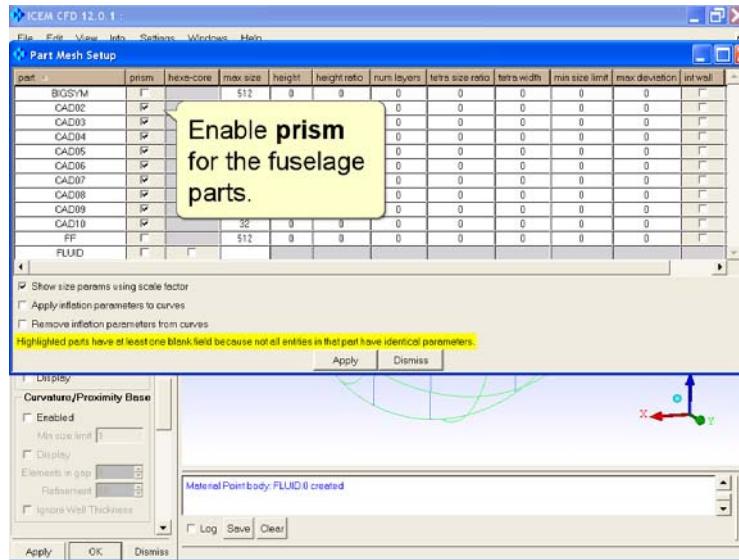
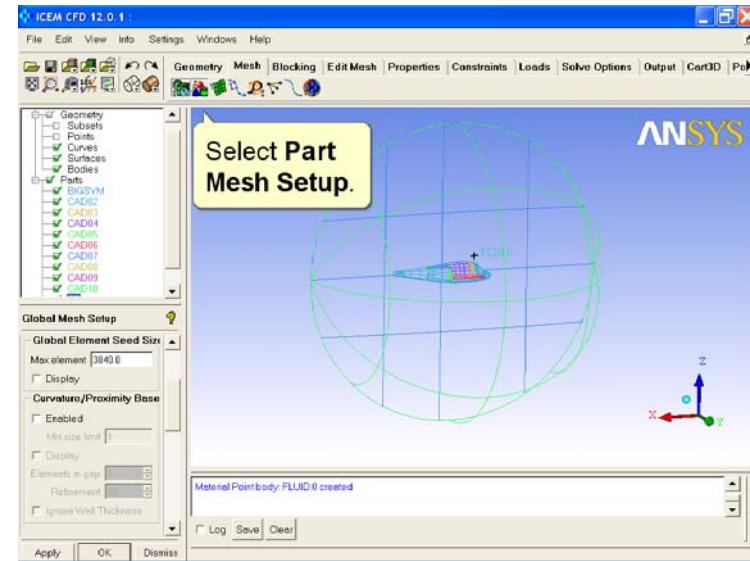
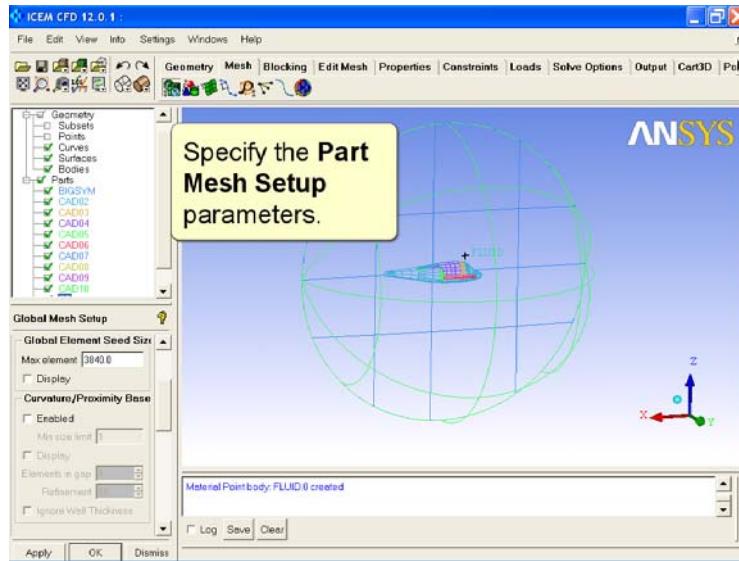
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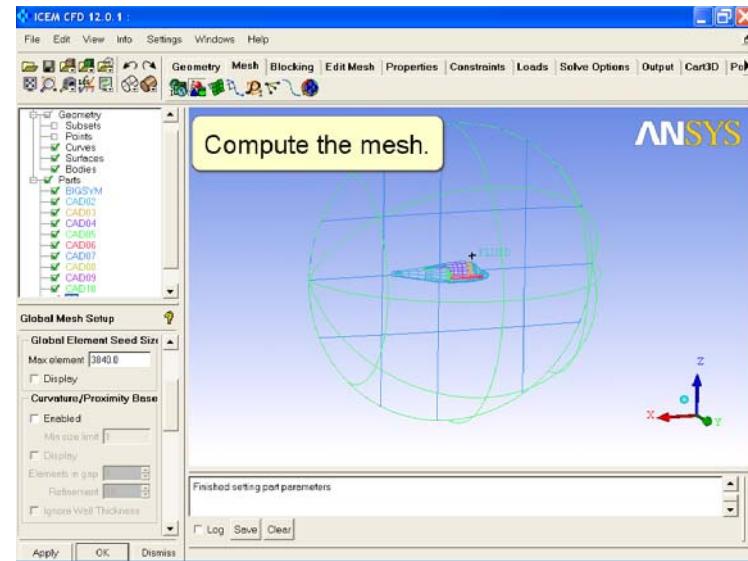
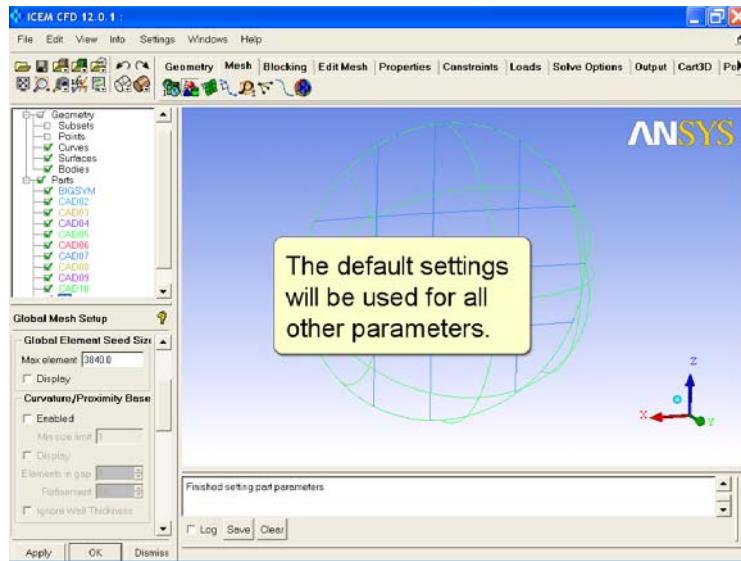
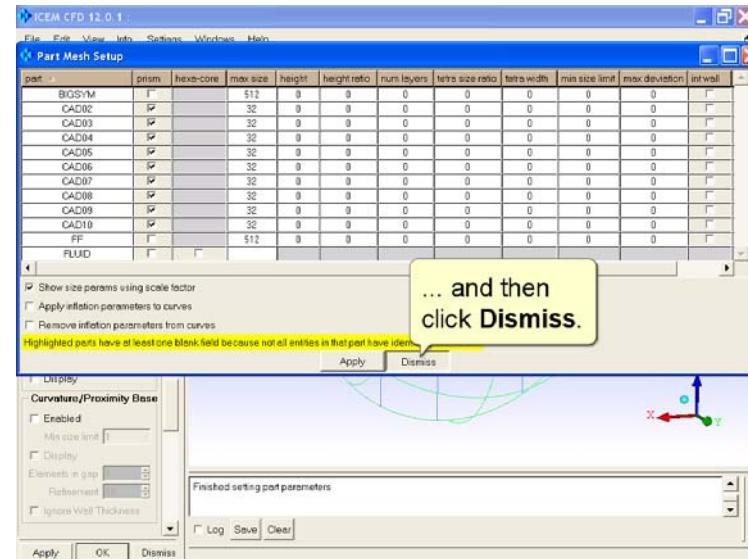
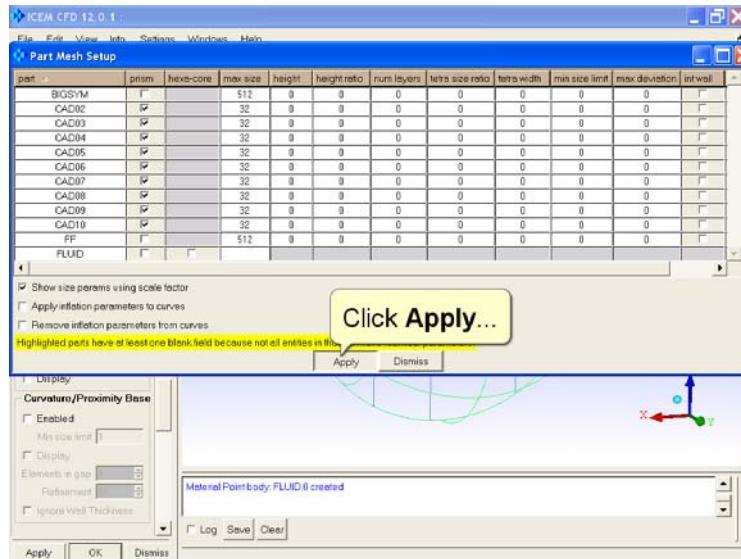
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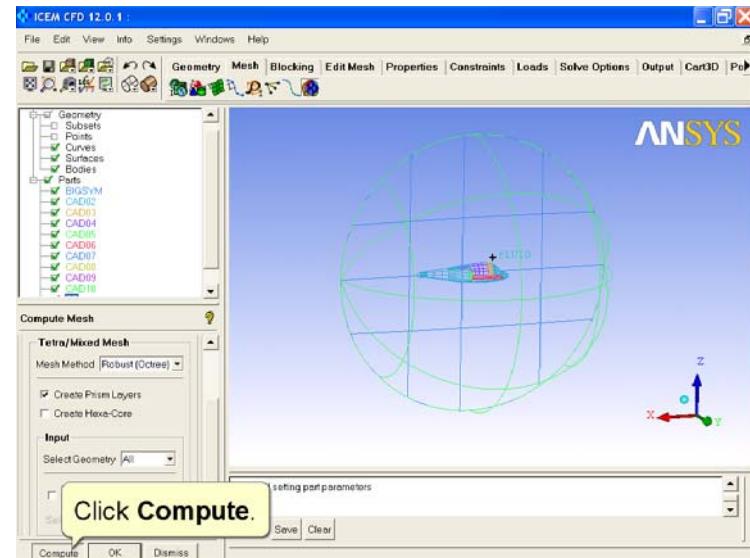
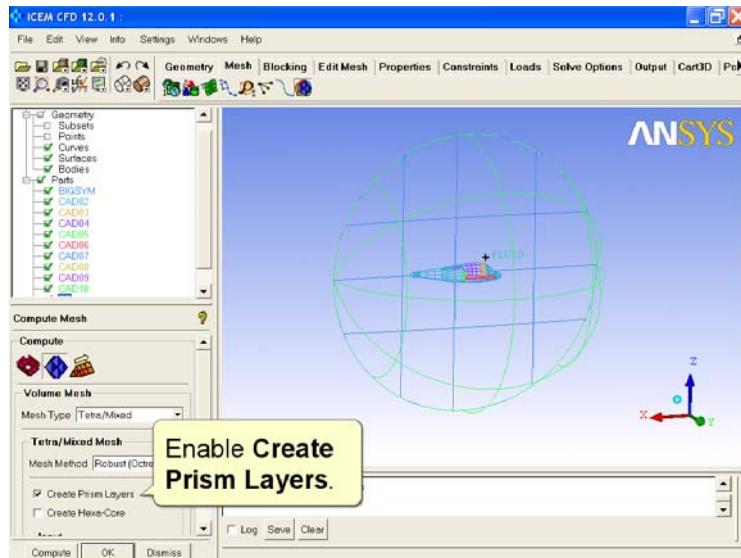
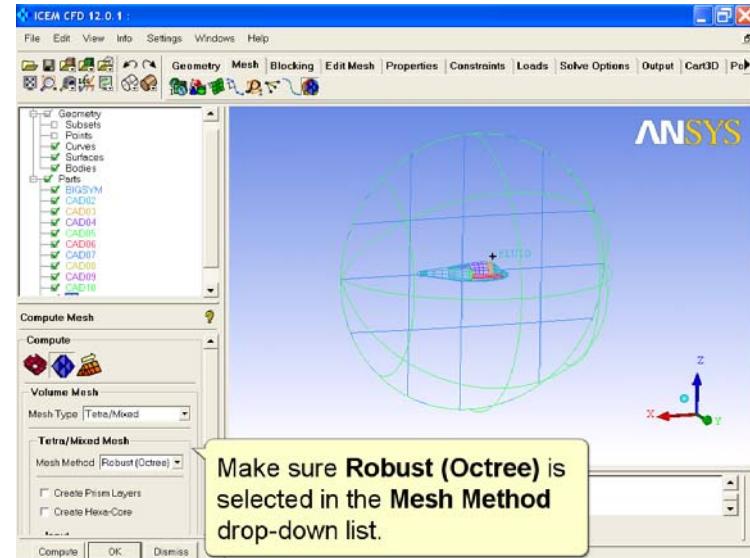
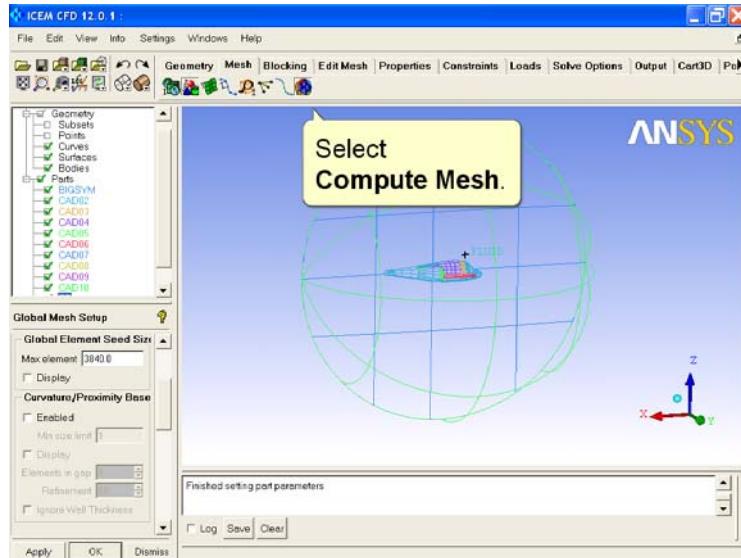
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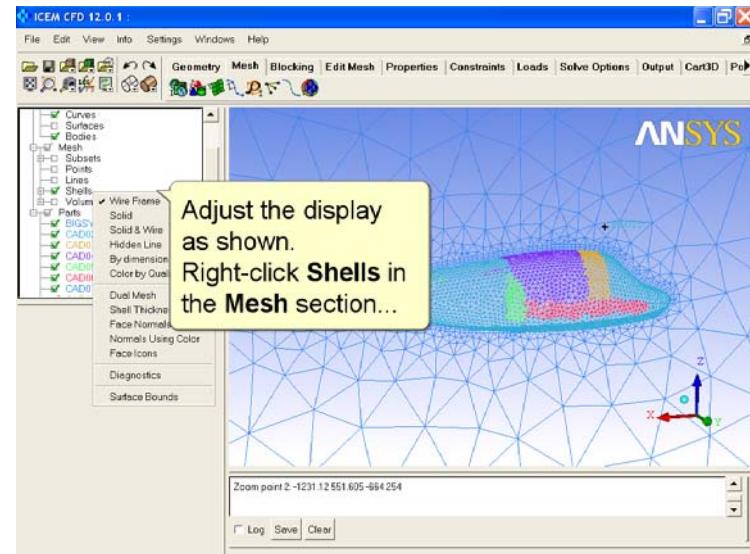
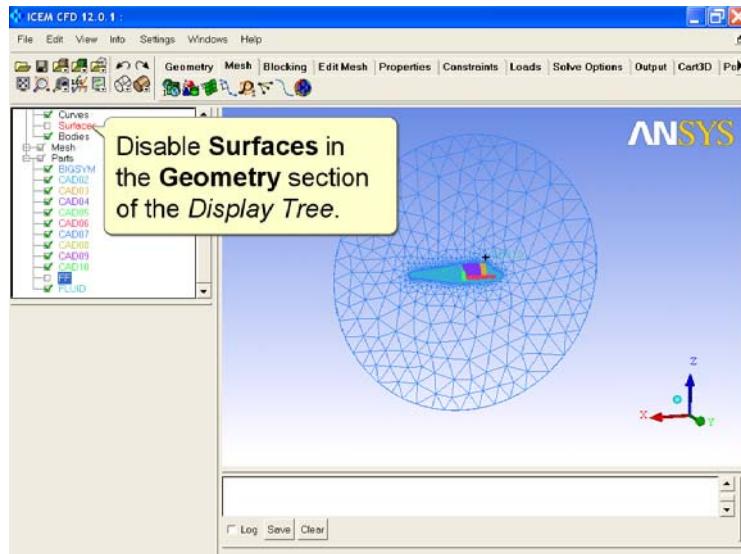
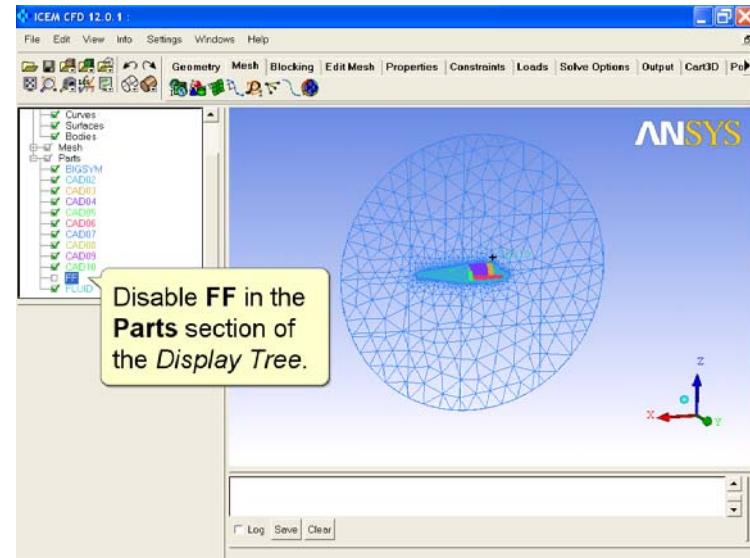
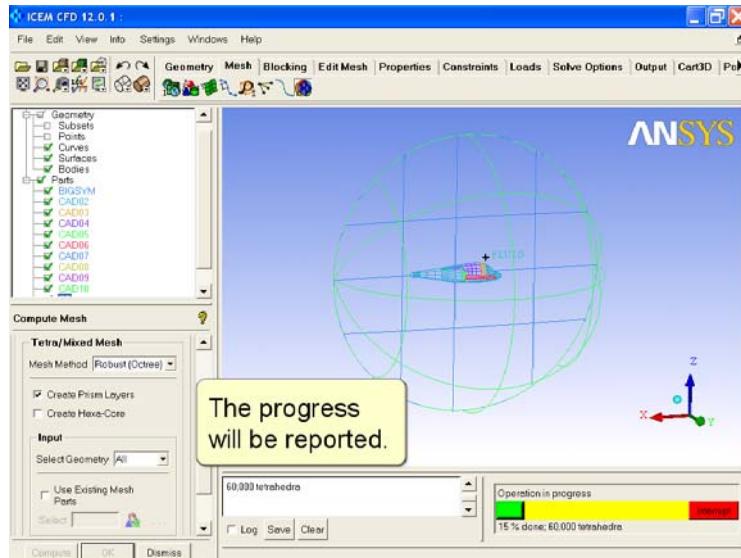
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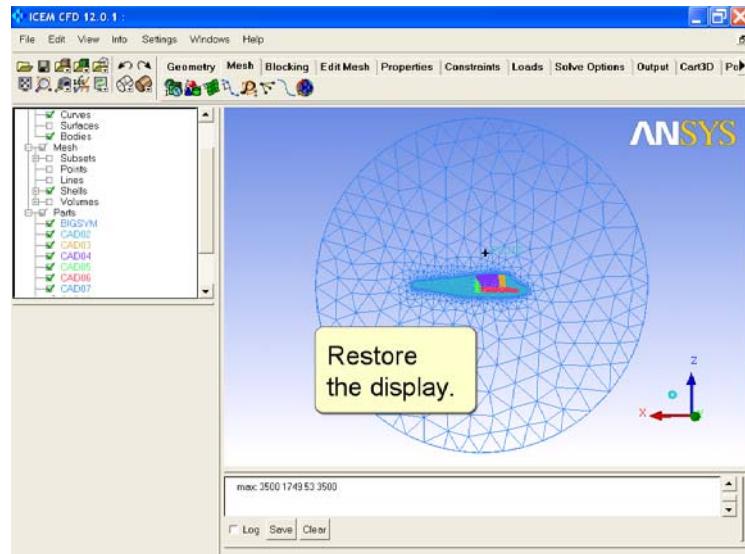
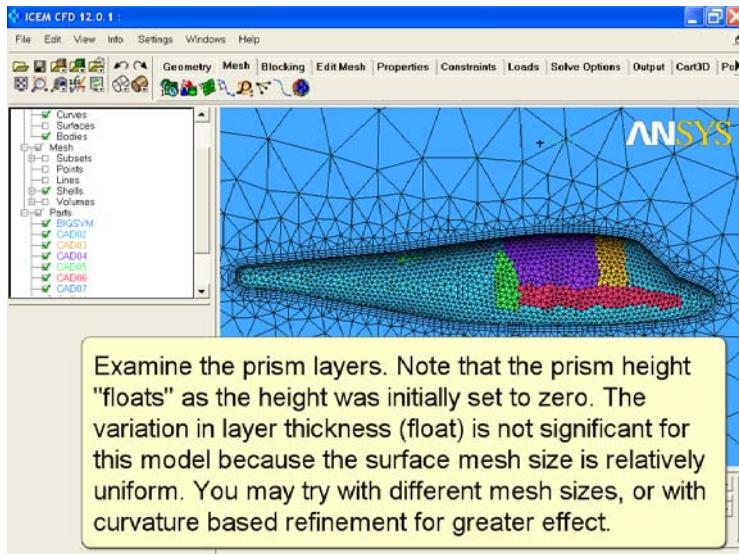
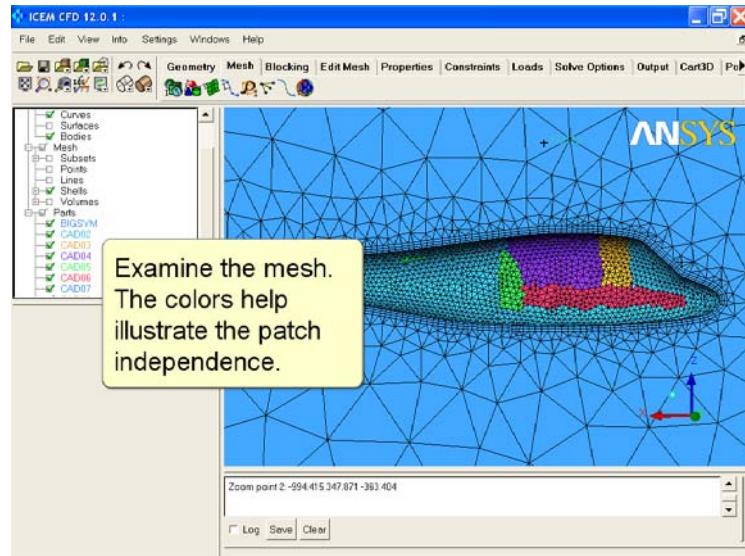
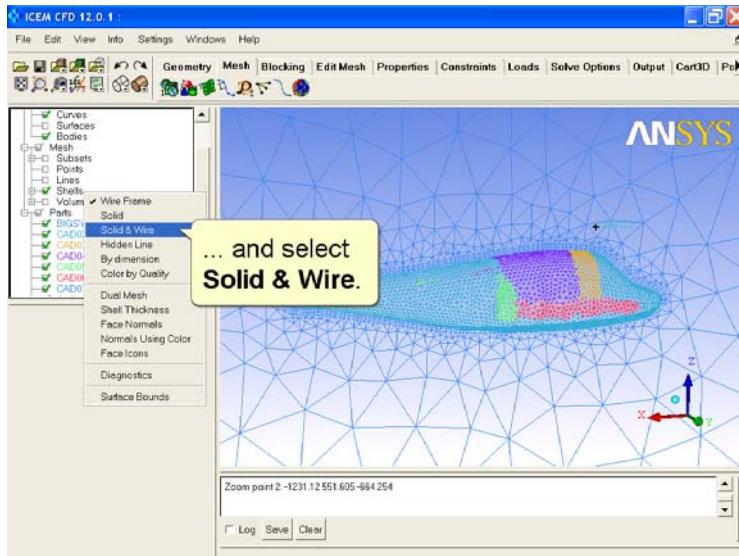
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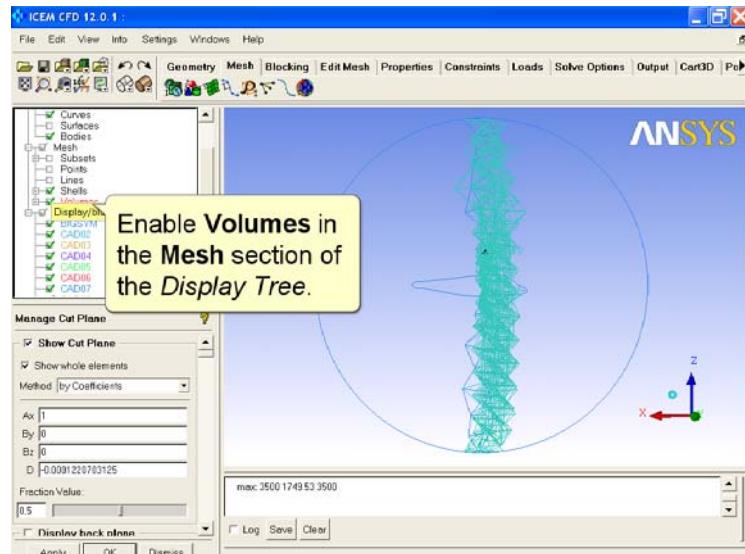
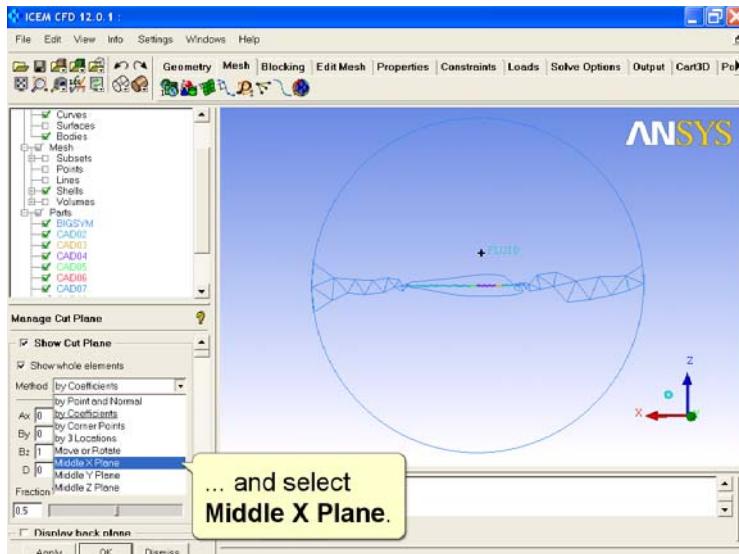
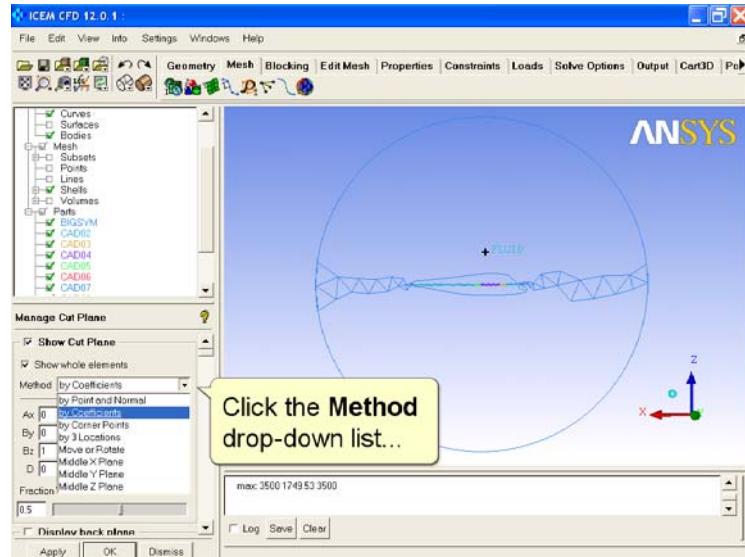
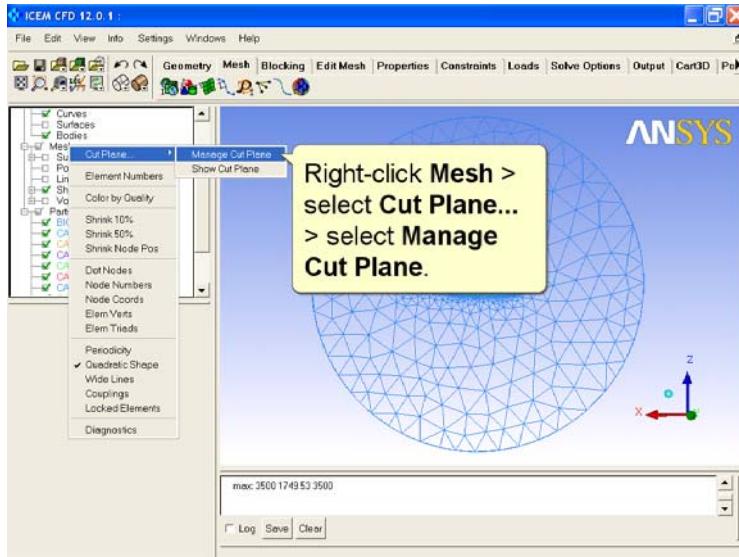
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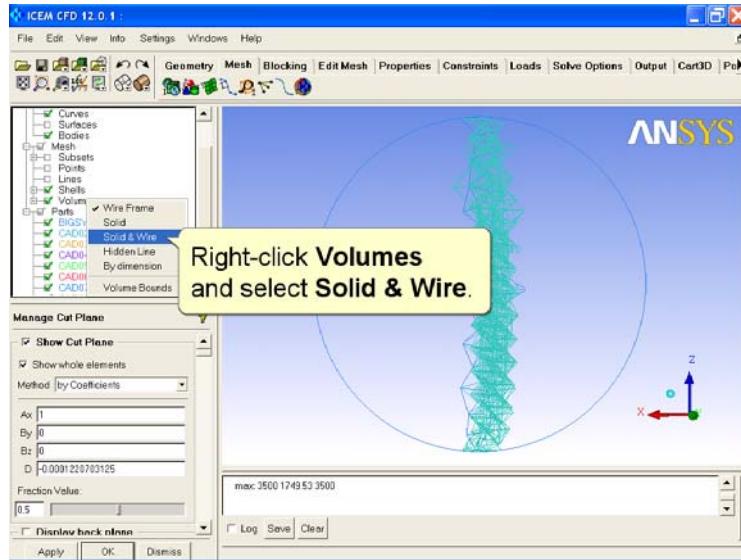
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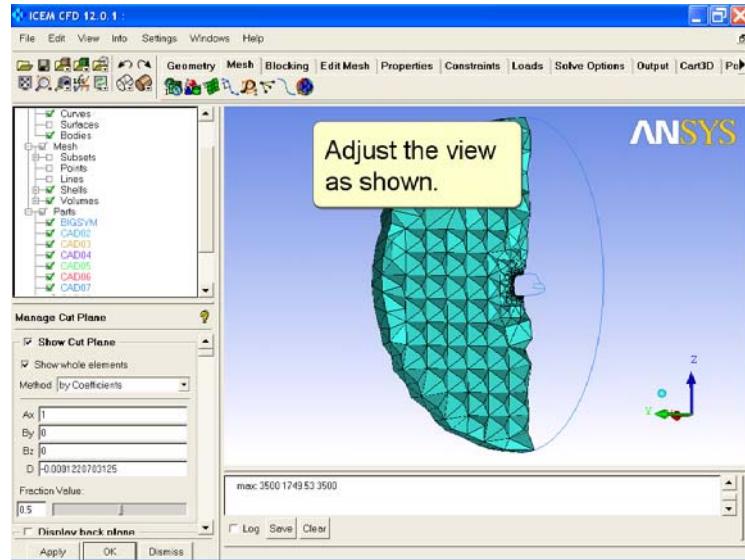
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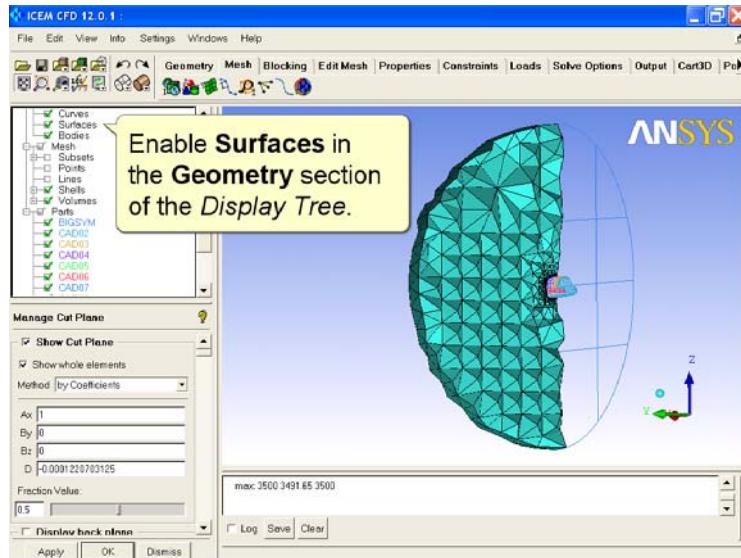
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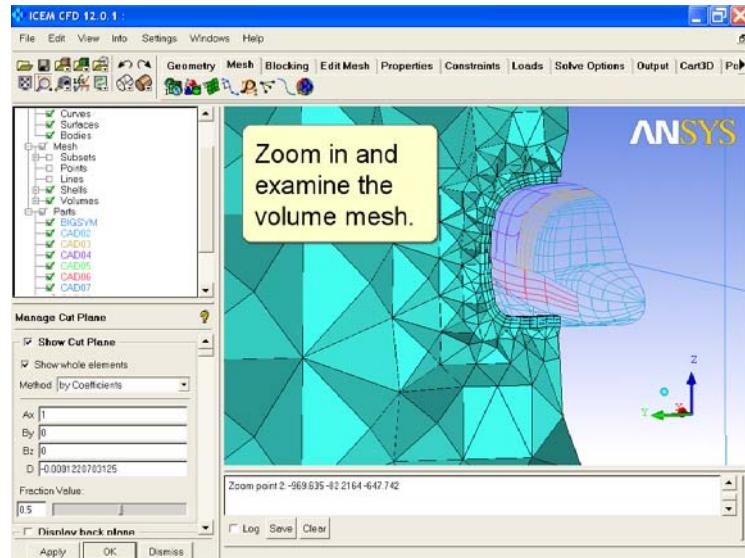
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and select Solid & Wire.



Adjust the view
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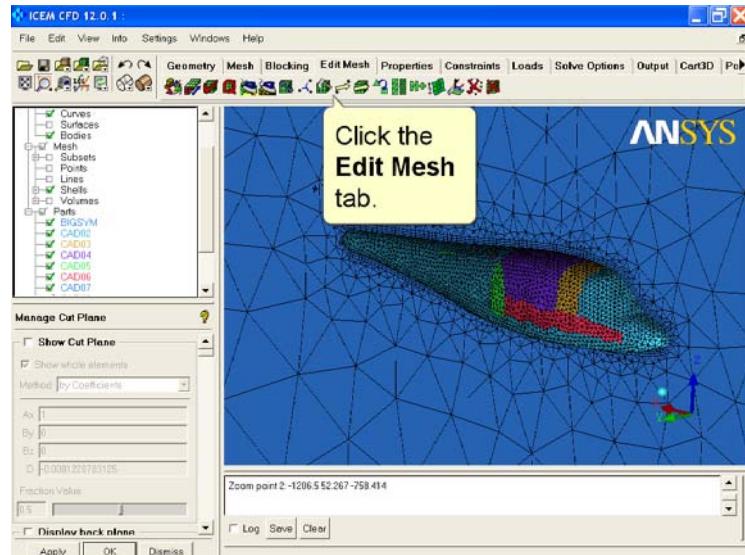
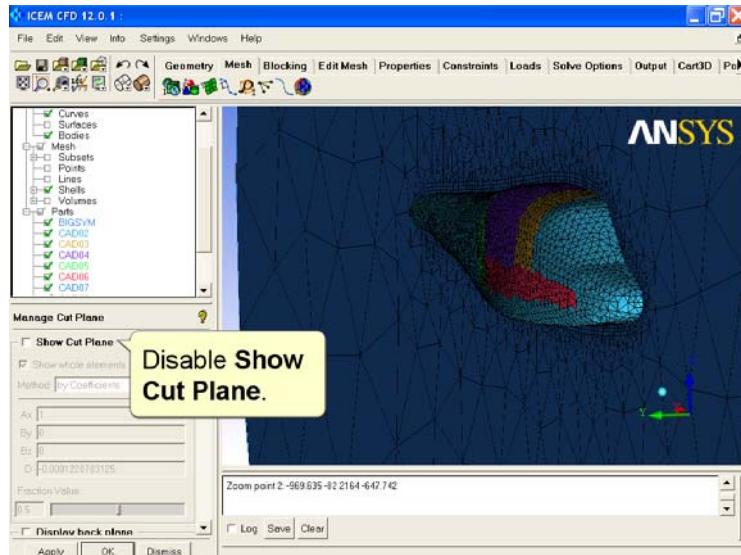
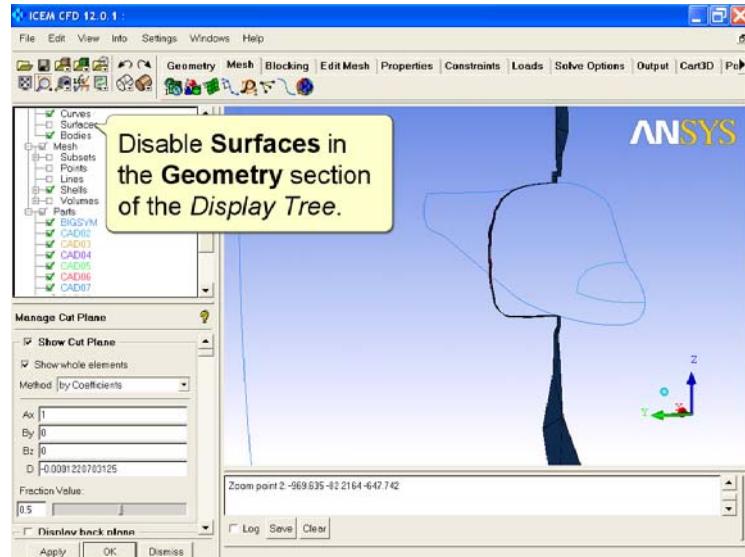
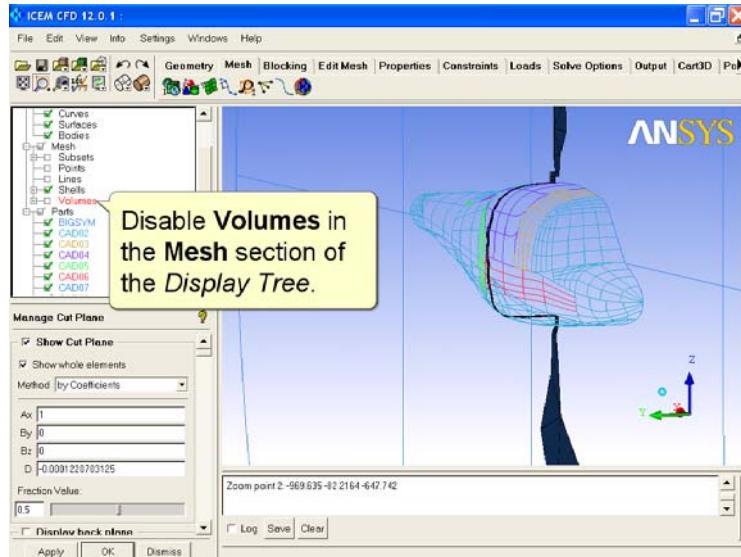


Enable Surfaces in
the Geometry section
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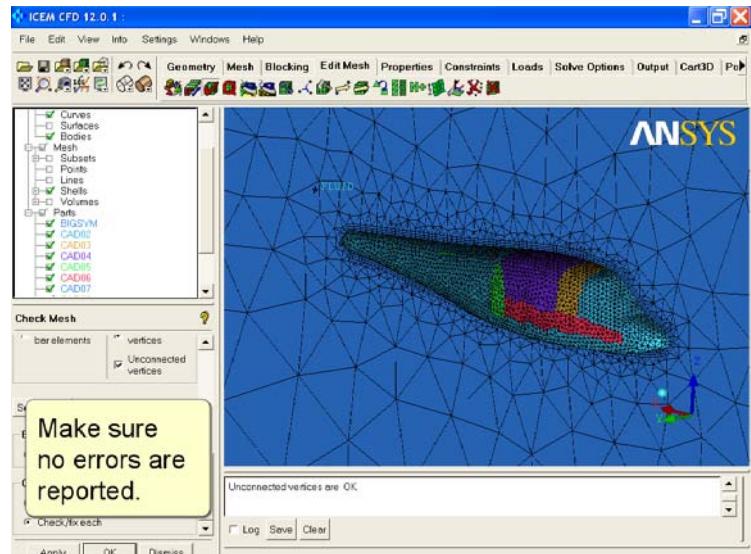
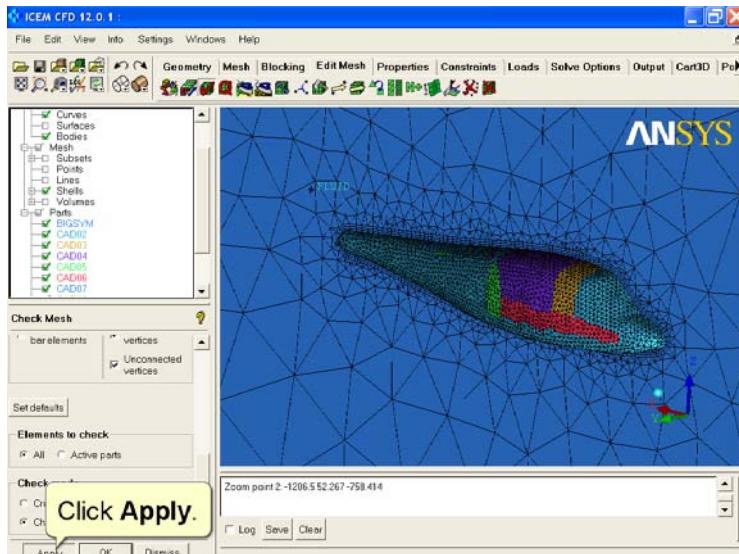
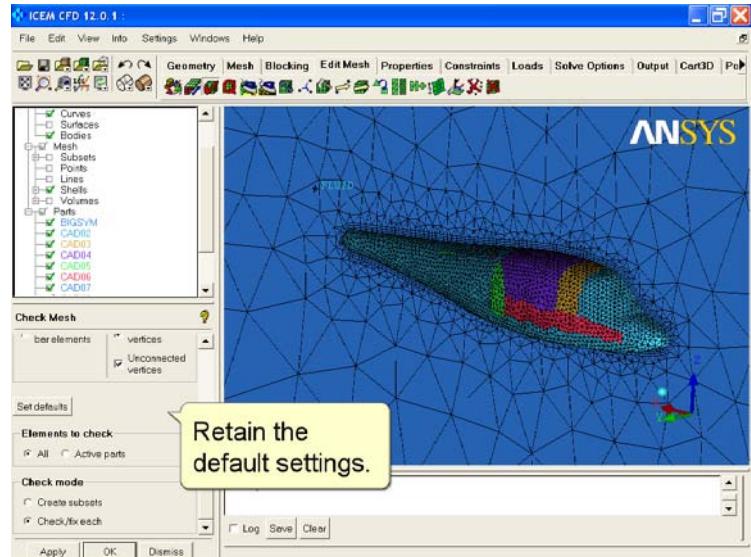
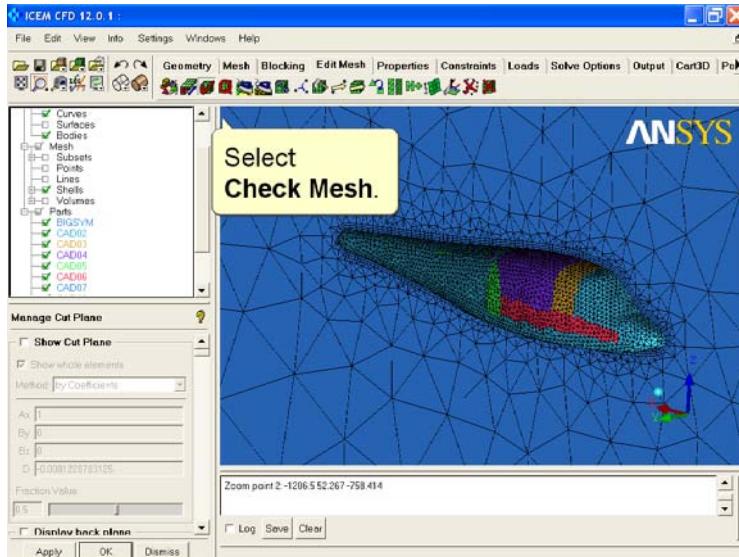


Zoom in and
examine the
volume mesh.

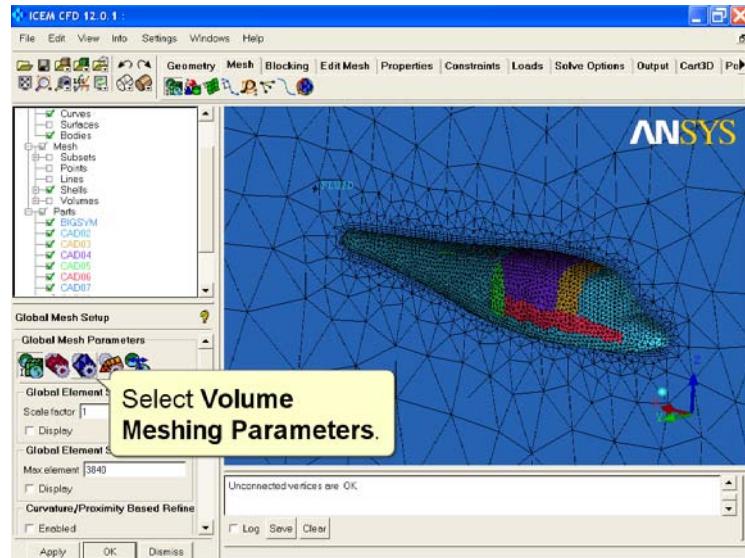
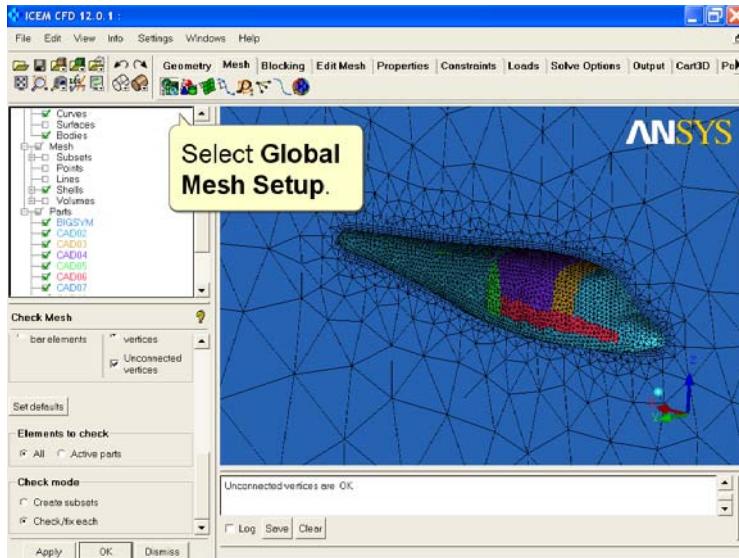
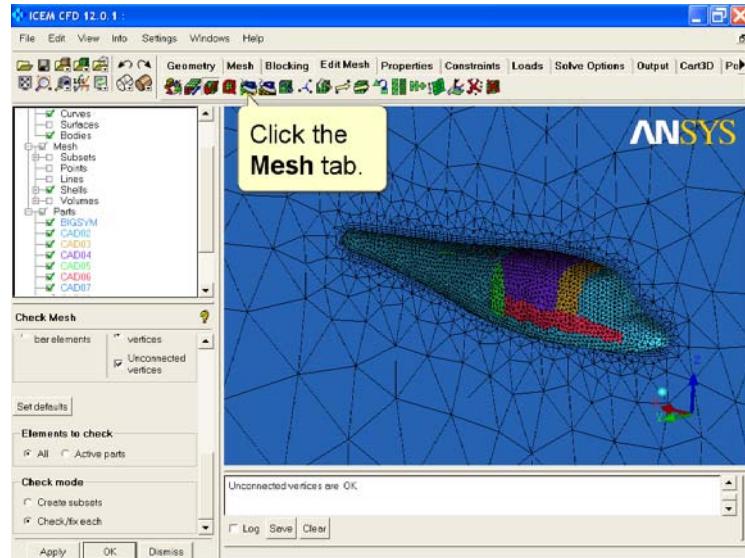
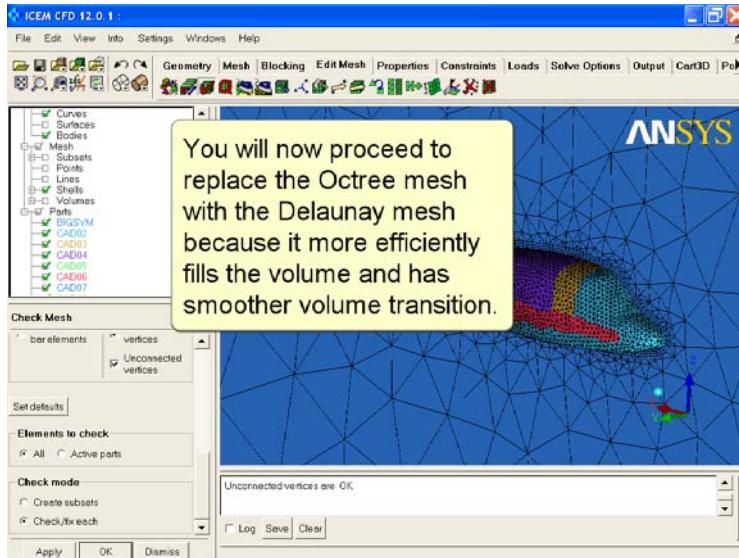
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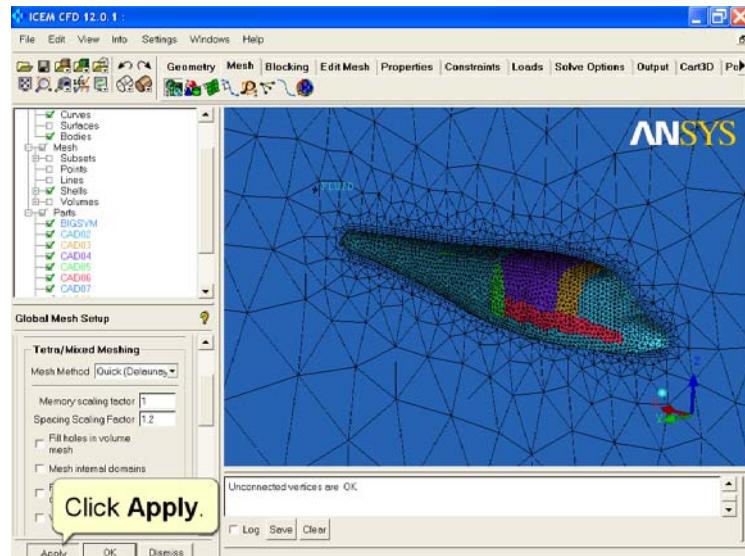
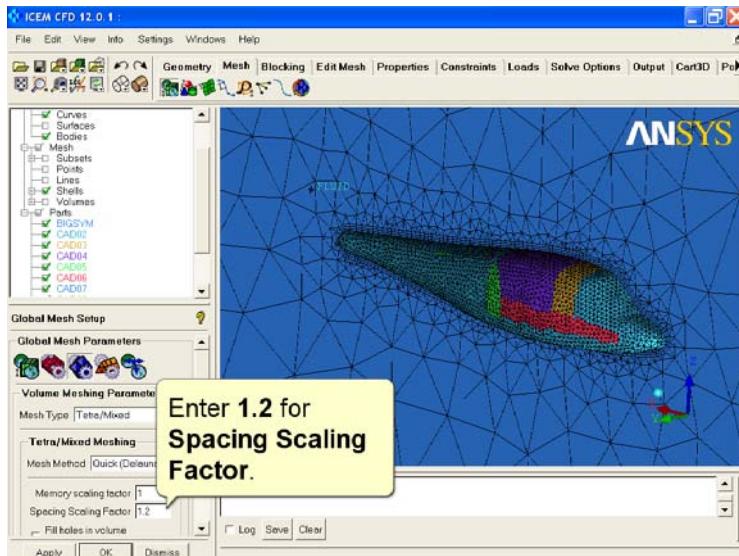
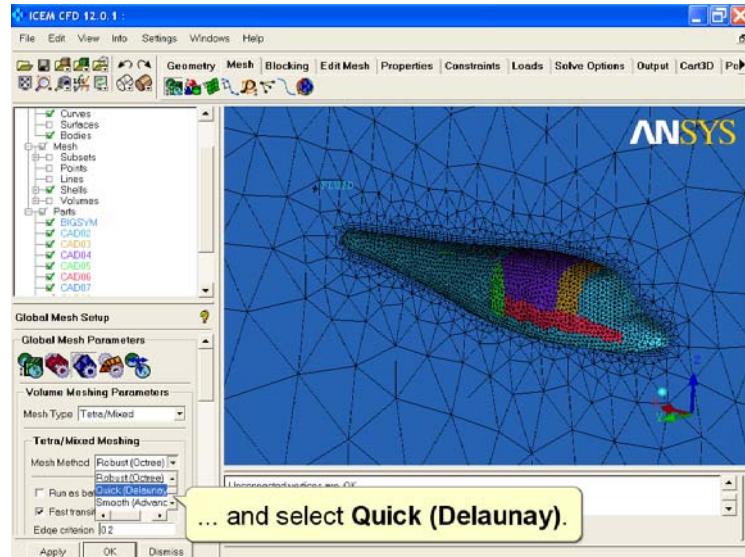
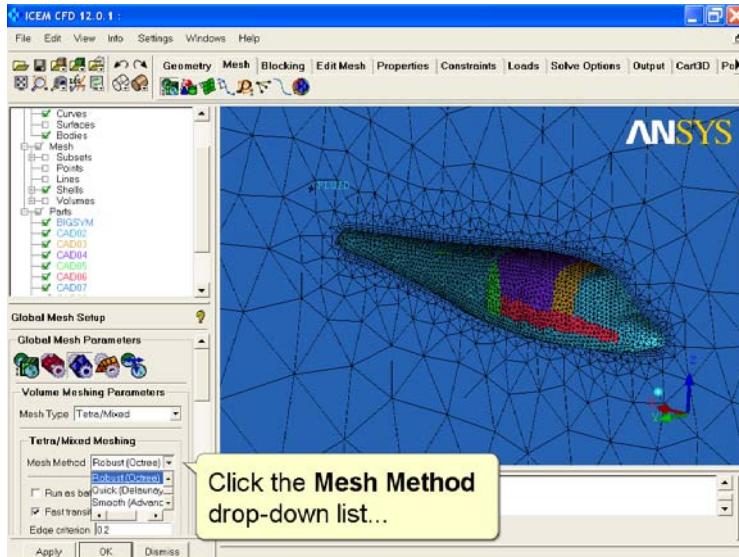
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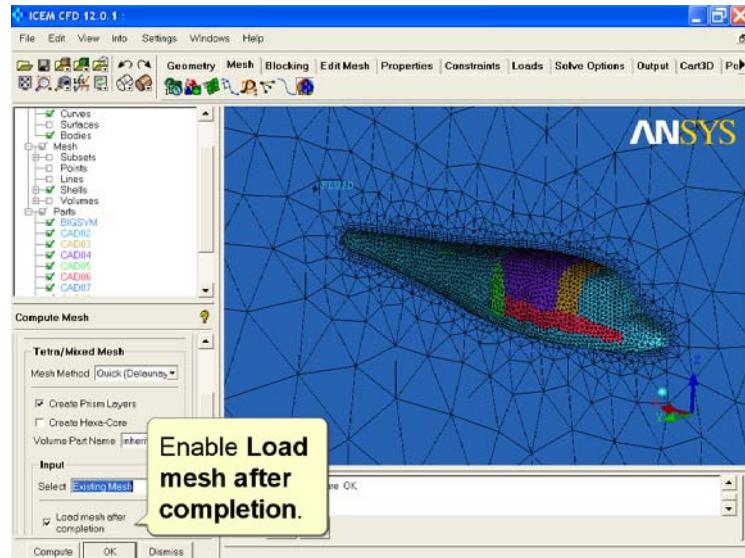
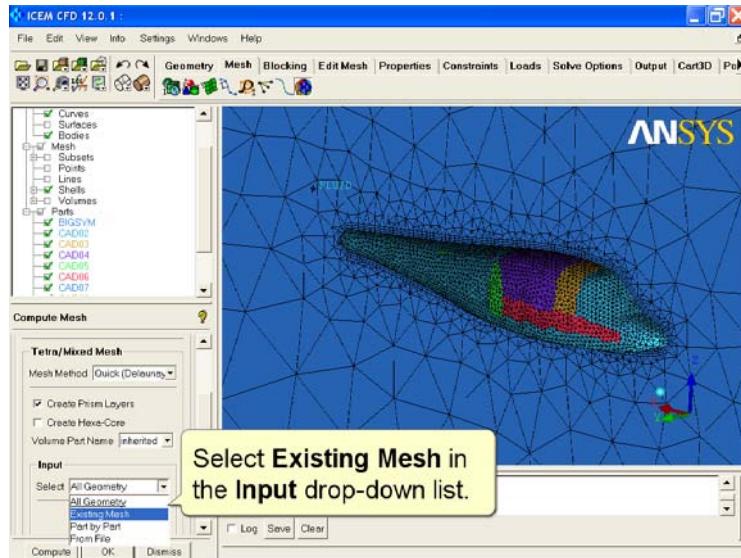
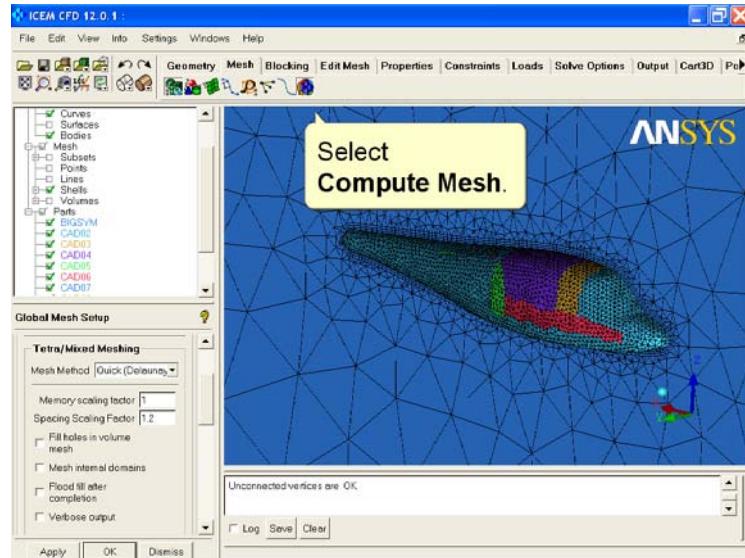
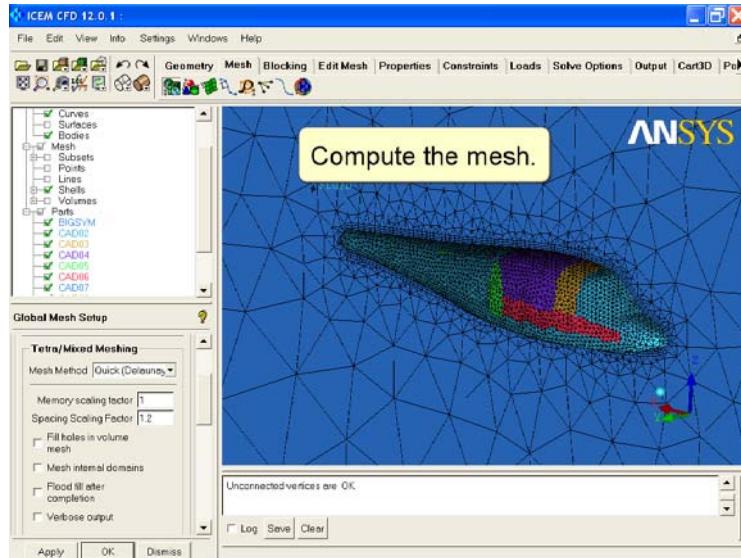
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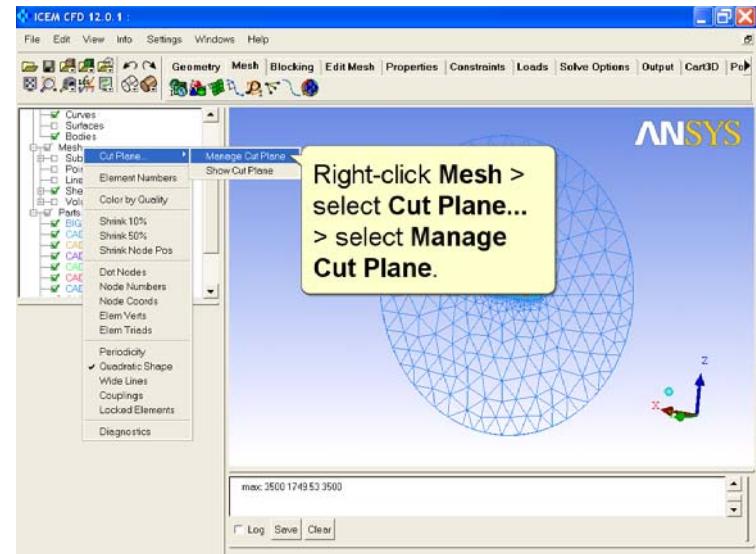
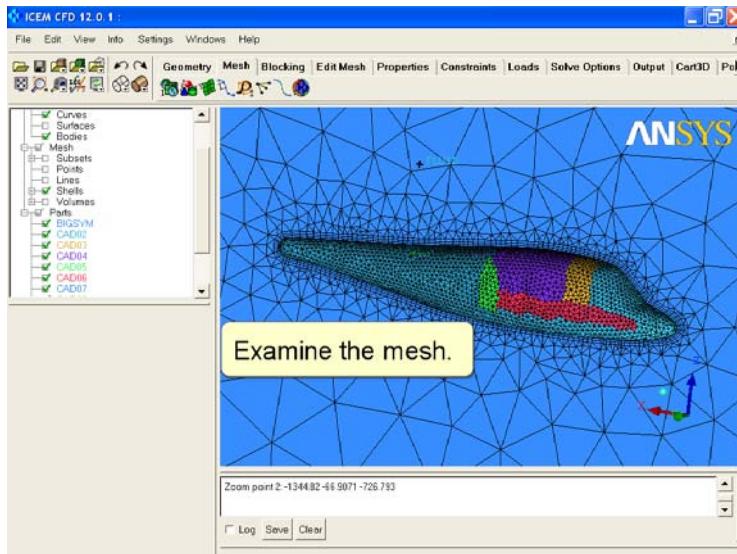
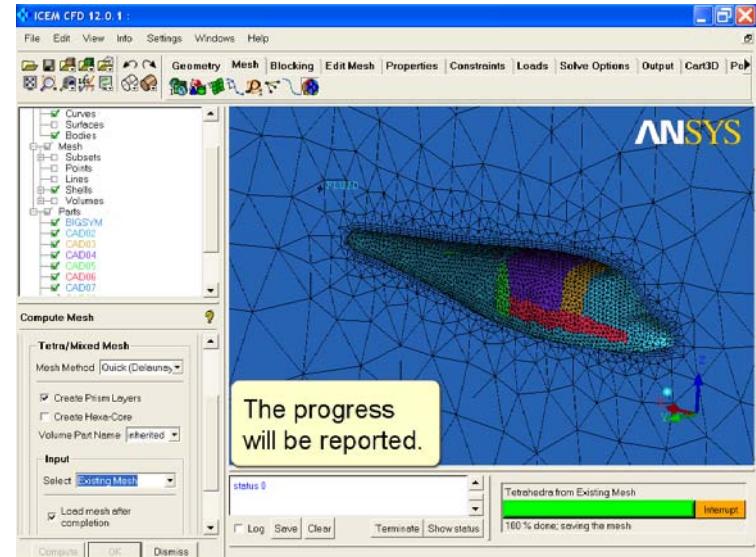
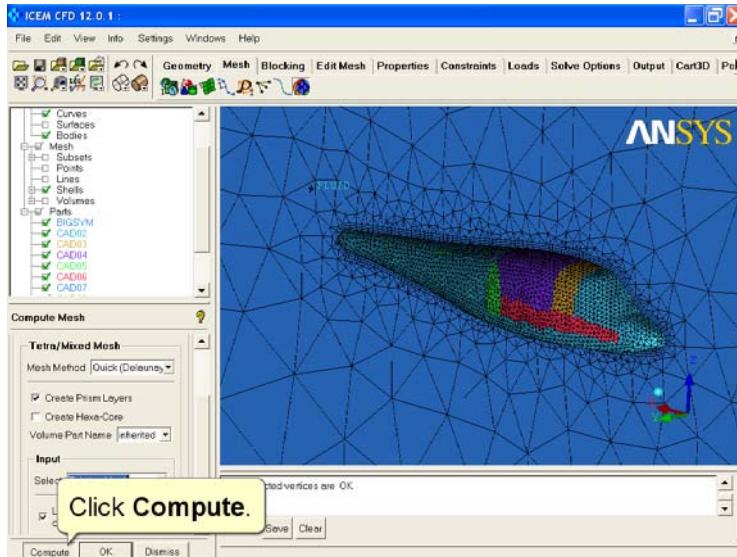
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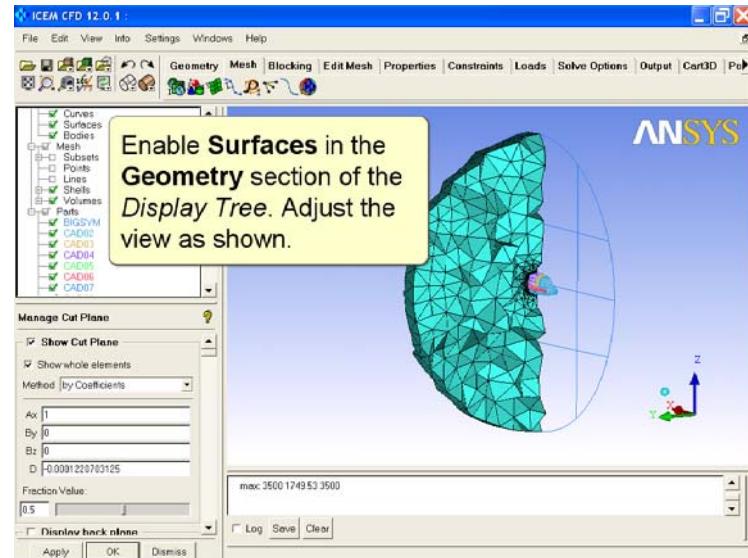
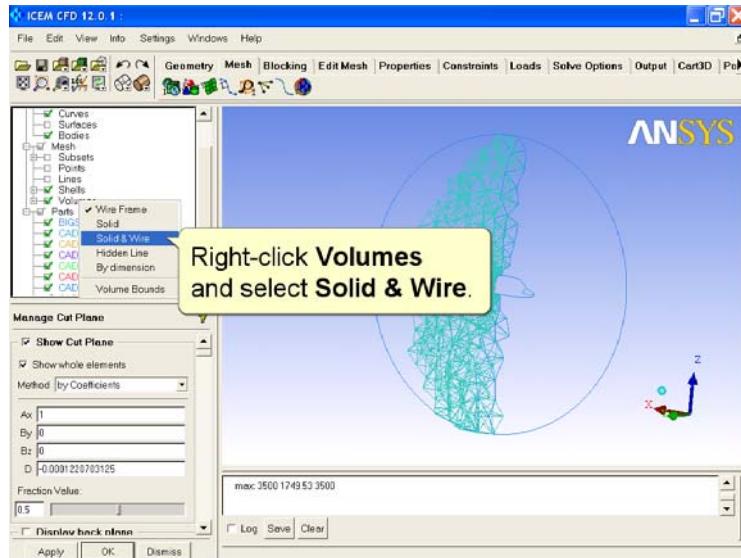
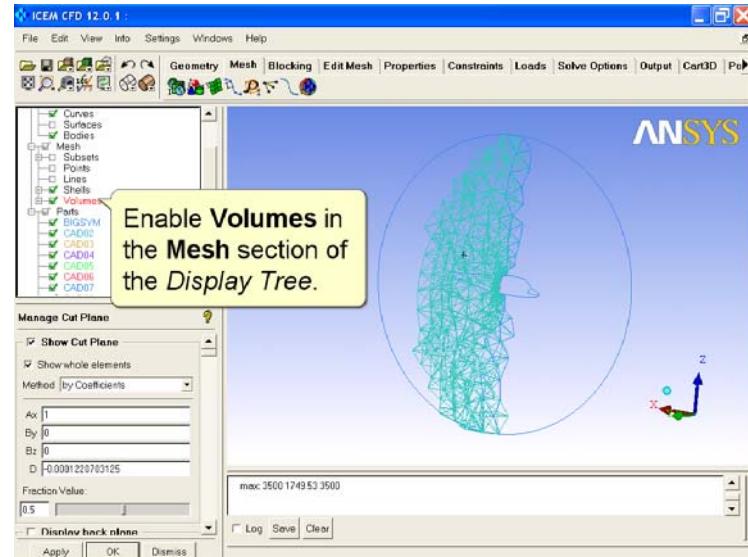
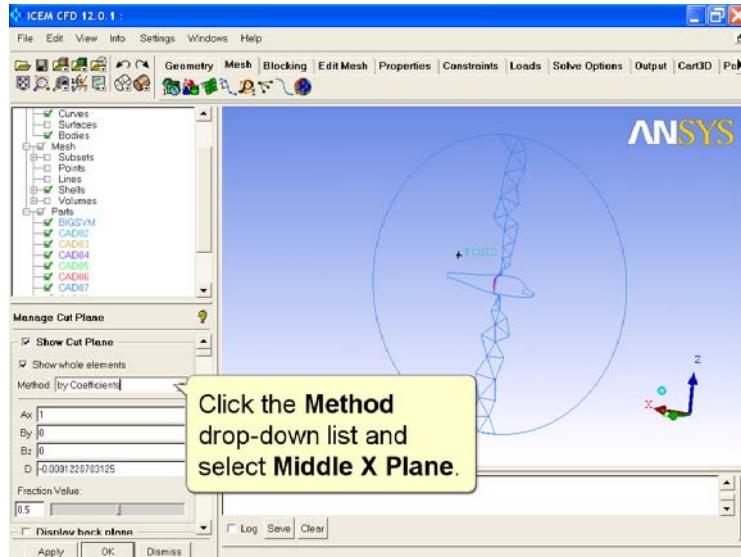
ICEM - Tetra/Prism Mesh Generation for a Helicopter



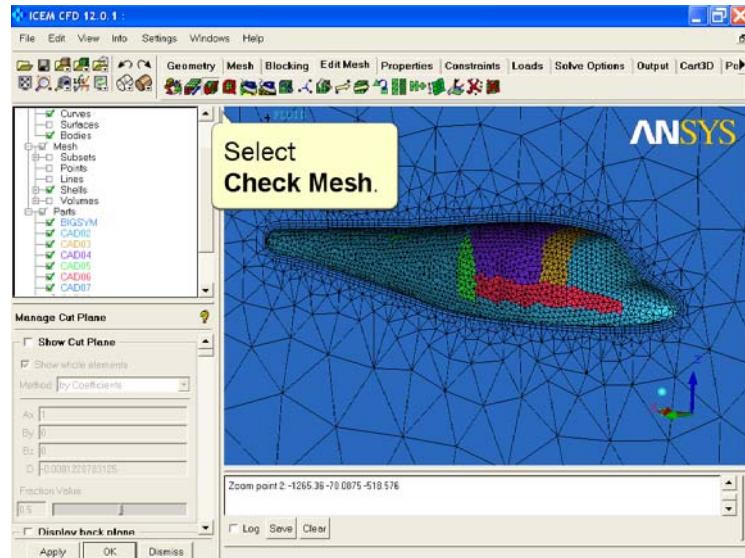
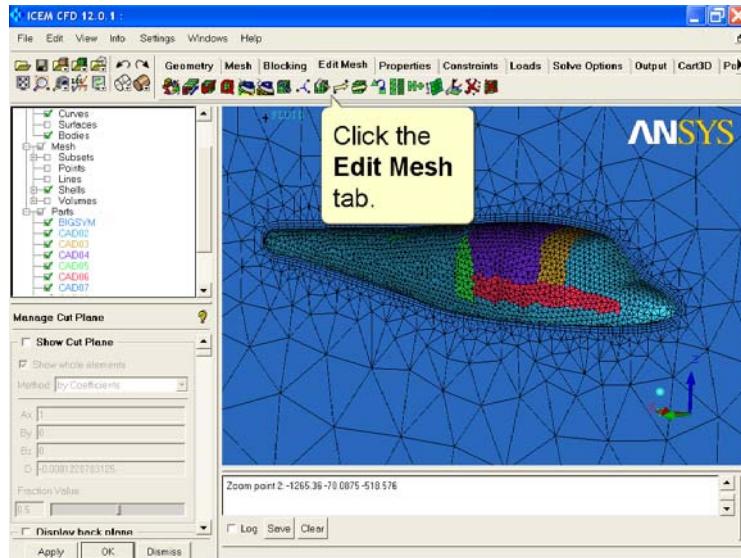
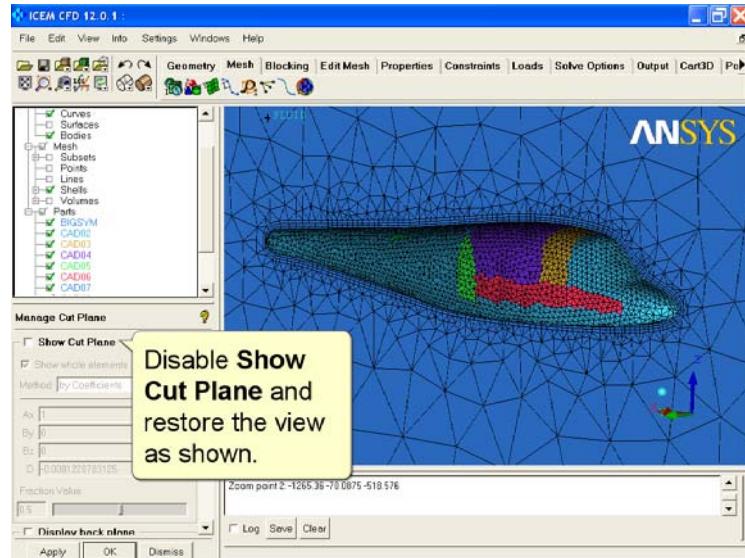
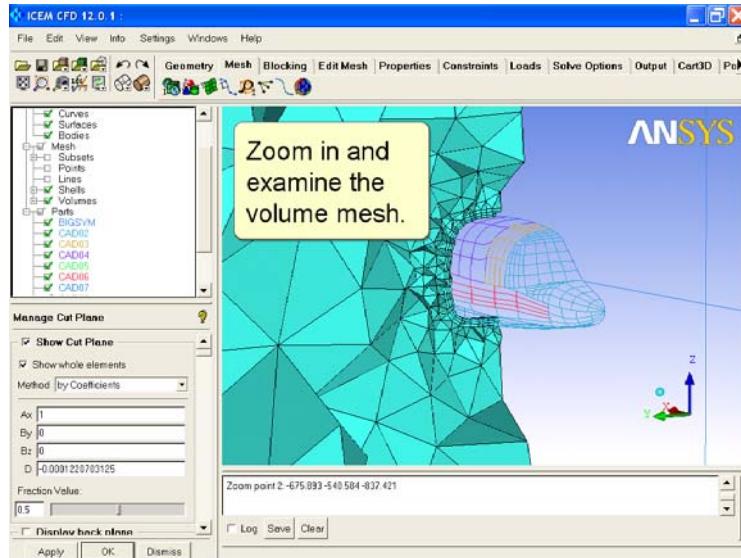
ICEM - Tetra/Prism Mesh Generation for a Helicopter



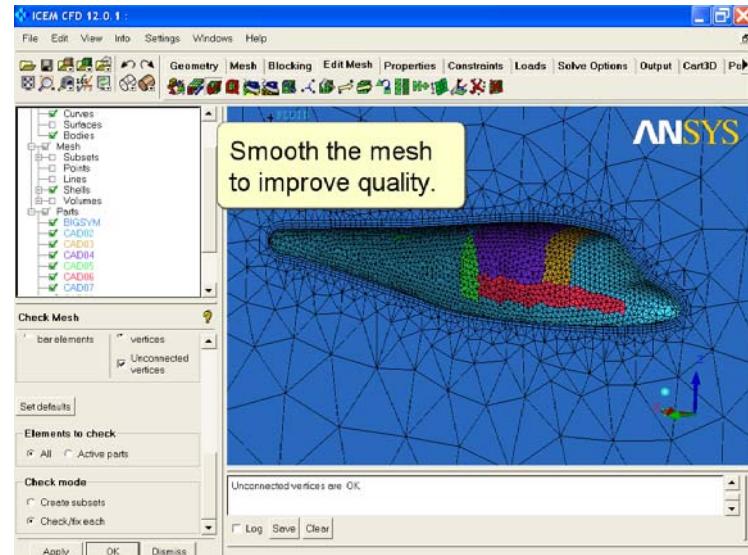
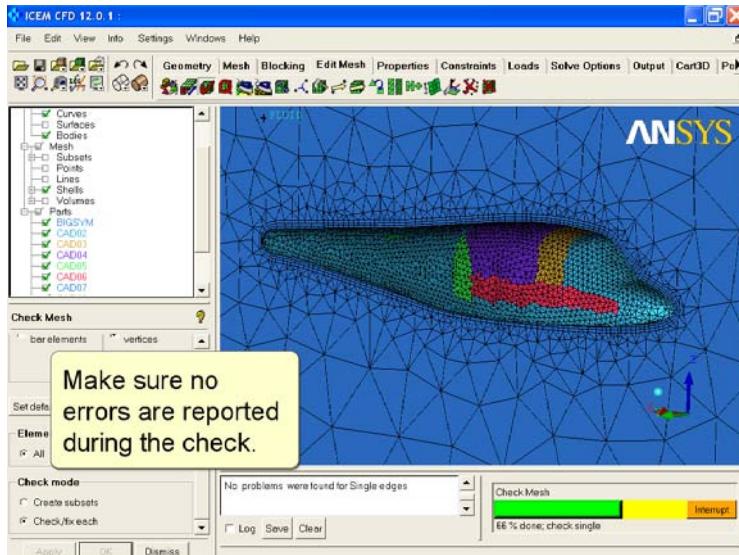
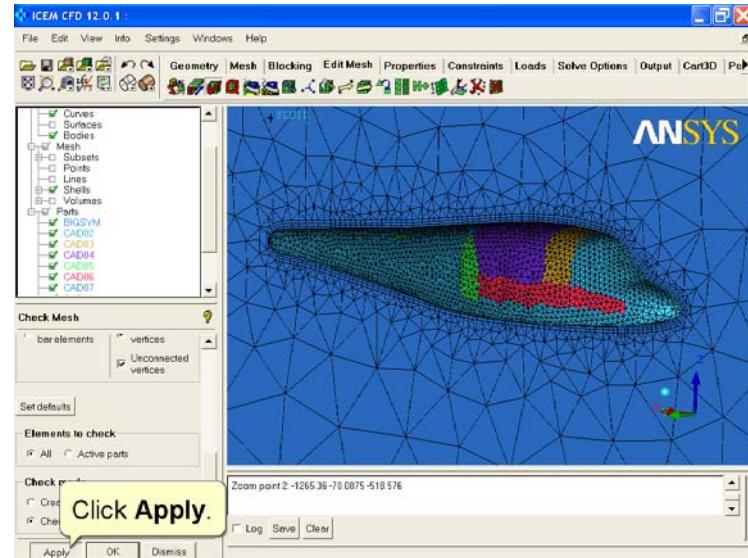
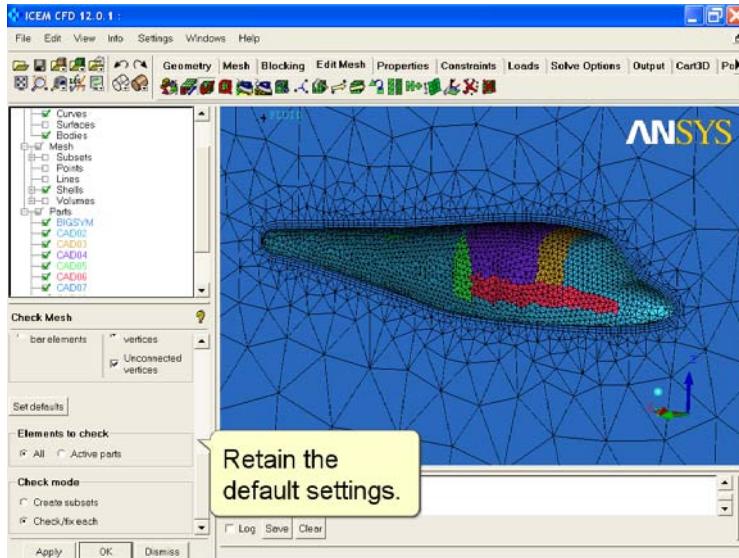
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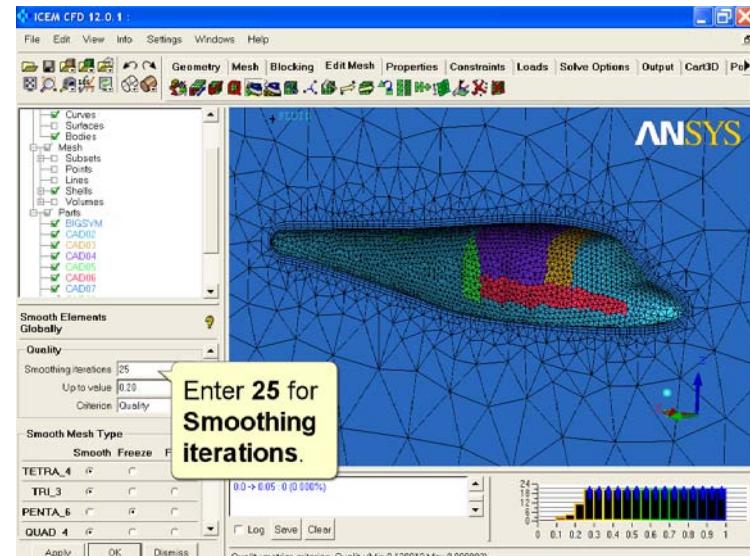
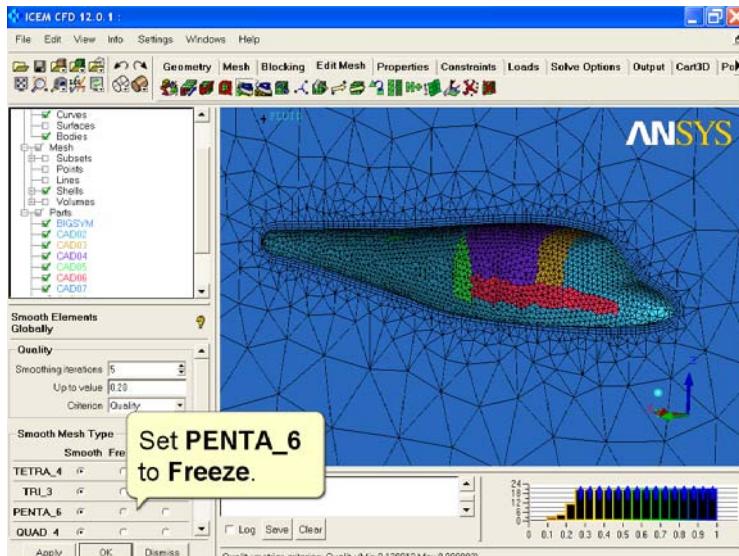
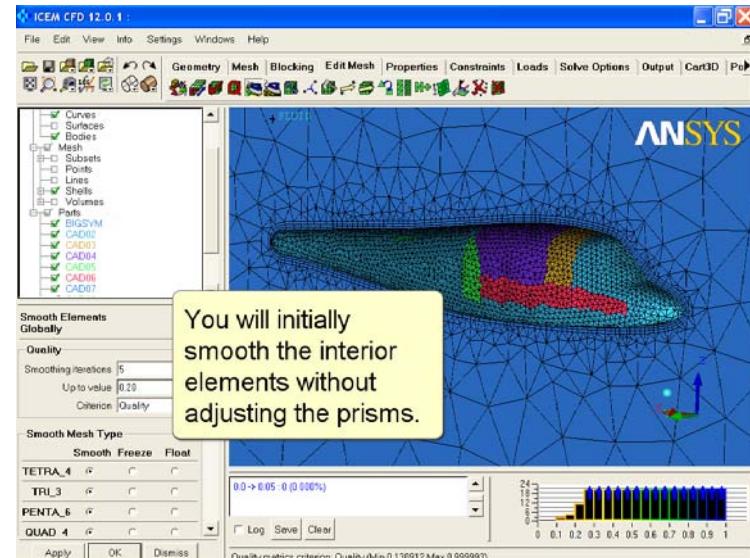
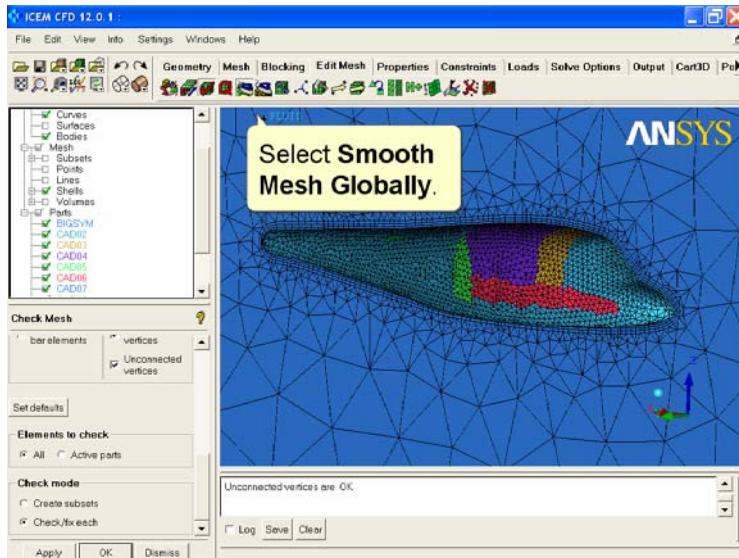
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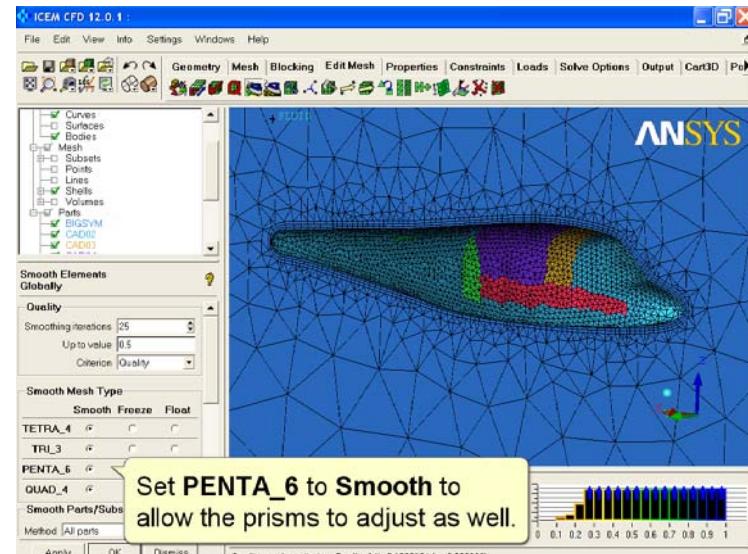
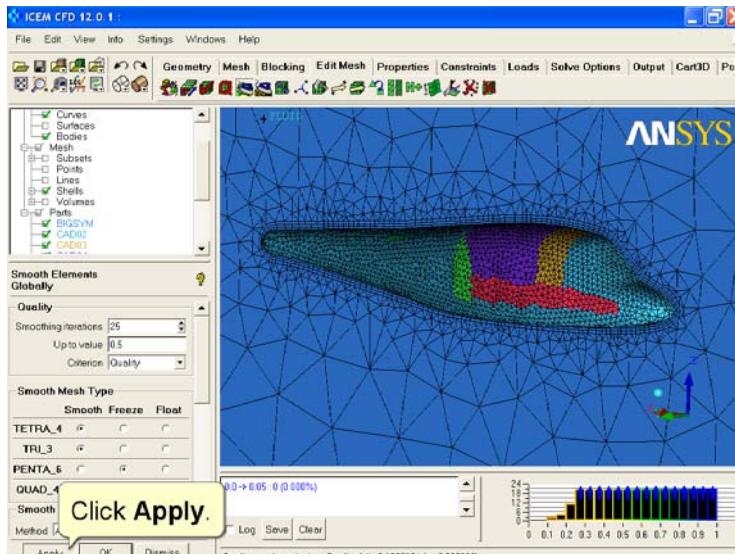
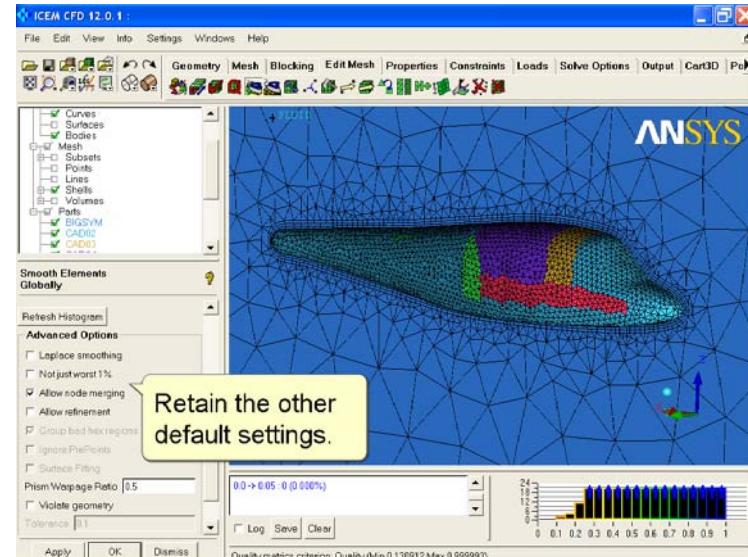
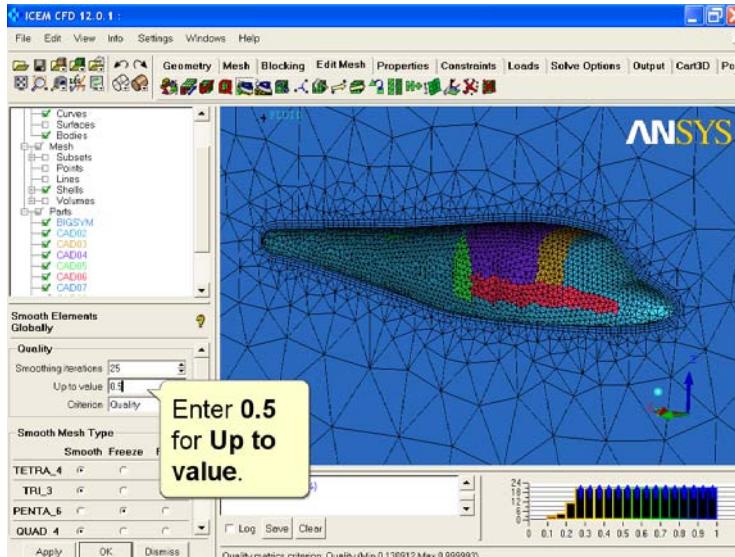
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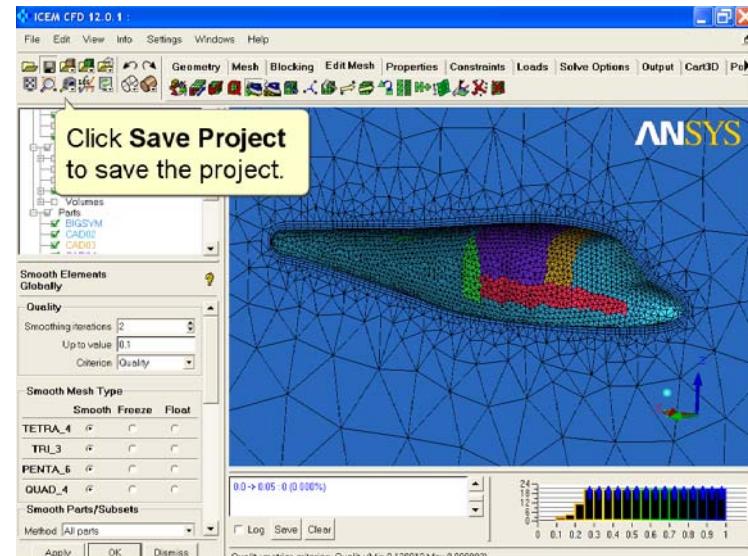
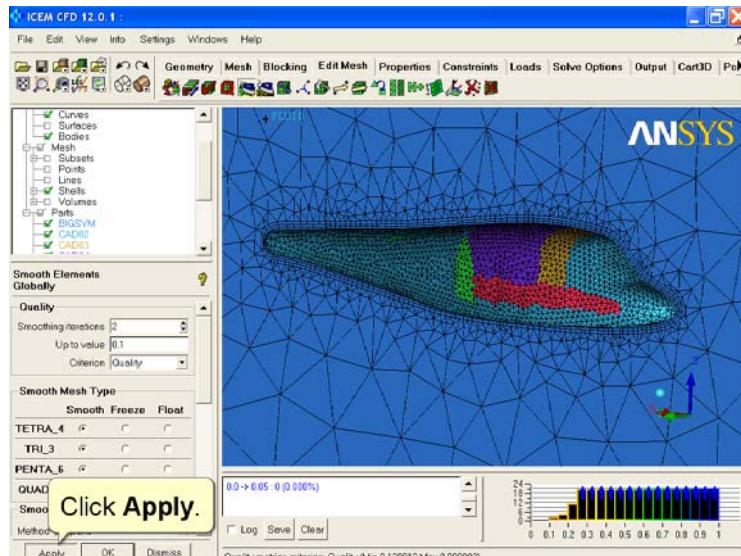
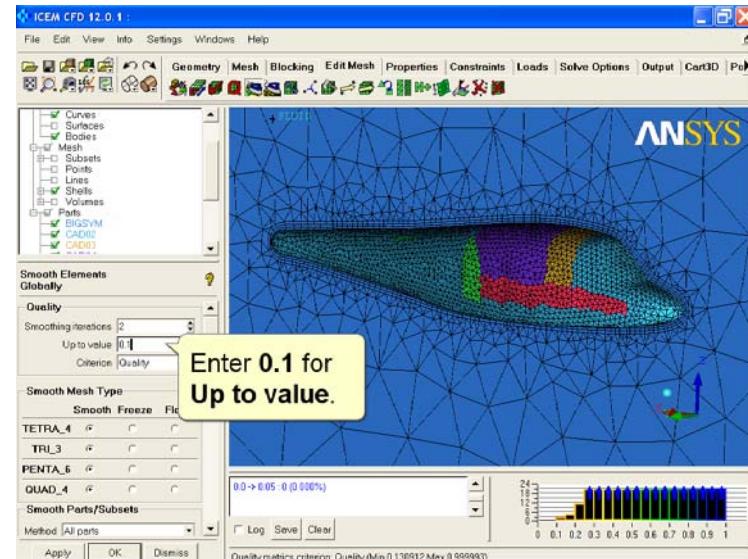
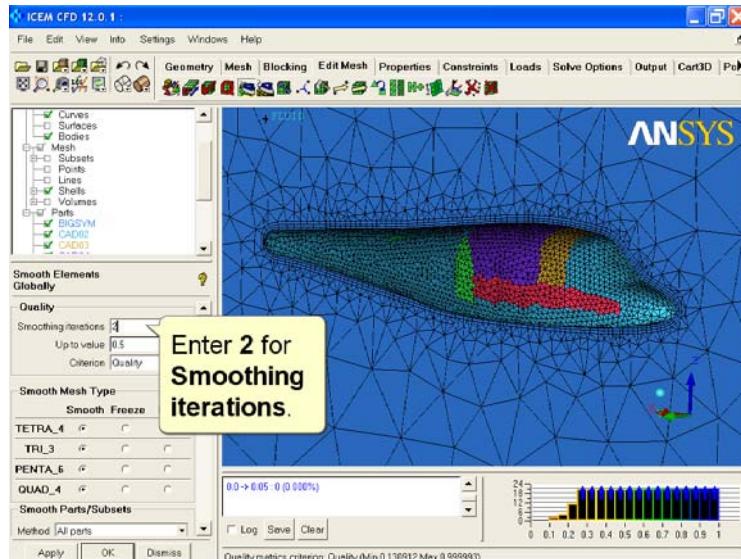
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What Have We Learned?

ANSYS

- Setting up global and part parameters for meshing
- Generating a tetra/prism mesh using the Octree and Delaunay approaches
- Examining the mesh using cut-planes
- Checking the mesh
- Smoothing the mesh to improve quality