Meshing

Issues related to generating a mesh to use as input for PyLith.

Best Practices

- Always check the quality of your mesh BEFORE running a PyLith simulation. The ideal aspect ratio is 1.0.
  - CUBIT: Aspect ratios should be less than about 4.0 in quasi-static simulations and less than about 2.0 in dynamic simulations. Use the "Quality" command to show a summary of the element quality. See the "Mesh Quality Assessment" section of the CUBIT manual for more information about the various quality checks. We find the aspect ratio and condition number checks the most useful. We generally use condition number smoothing to improve the mesh quality.

LaGriT: Aspect ratios should be greater than about 0.2 in quasi-static simulations and greater than about 0.4 in dynamic simulations. Use the command "quality" to show a summary of the element quality.
Always check your nodesets/psets to make sure they match the desired boundaries, etc.
Nodesets/pets for Dirichlet boundary conditions cannot overlap if they set the same components (i.e., x-component, y-component, z-component), but they can overlap if they set difference components.

anar fault geometry

duction and Sessions III and IV of the 2011 Crustal Deformation Modeling tutorial.

etization size with distance from the fault

and examples/meshing/cubit_cellsize.

surface meshes

fault surface is a development feature that is fragile and untested. **Use with extreme caution.**
more thoroughly tested feature.