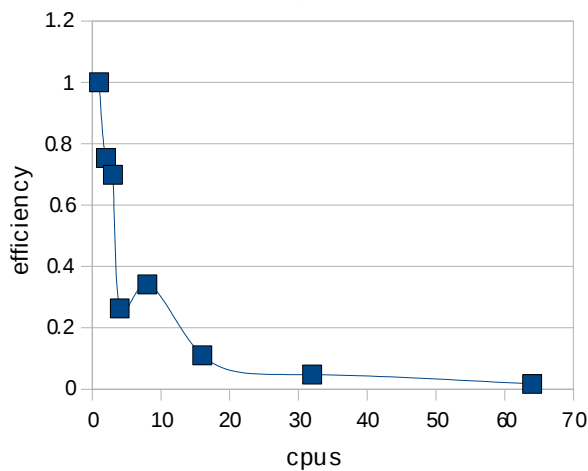


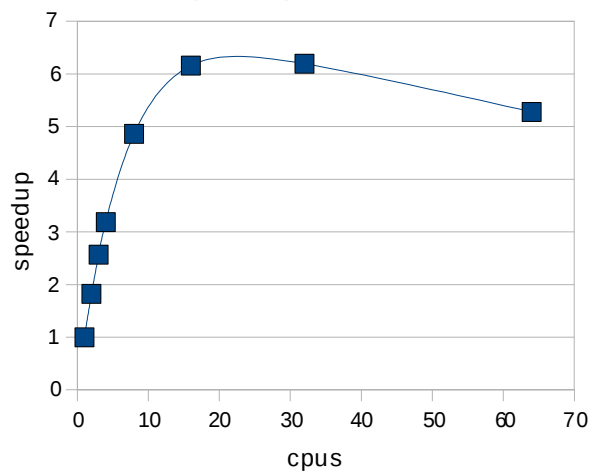
Tasks Completed This Week

This week, analysis of the models provided by Ben was performed to help determine the optimum number of processors to use for running the simulations. His preliminary input file for a 2D system did not scale well and showed some of the same performance issues that were apparent in the earlier running of the yielding.xml example. However, the scaling and performance issues seemed to be remedied in a later model that produces less output per time step to reduce the load on the network. Below are a few graphs showing the speedup and efficiency of the first and second example.

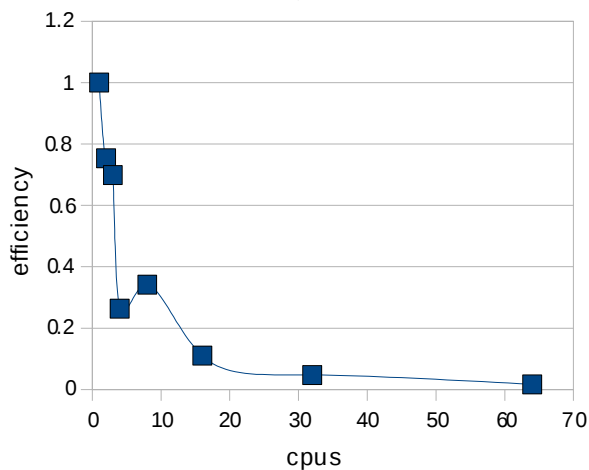
Efficiency, 1st 2d



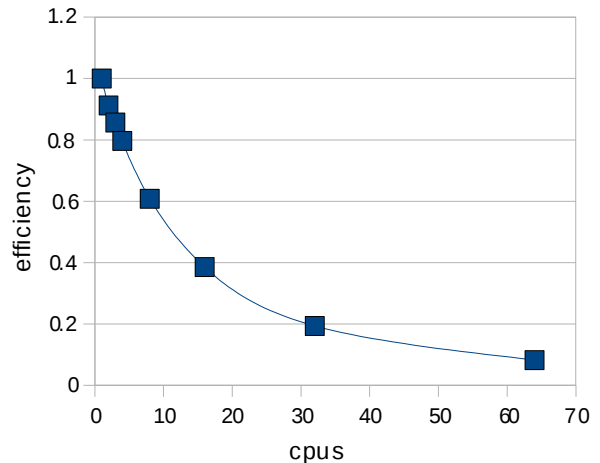
Speedup, 2nd 2d



Efficiency, 1st 2d



Efficiency, 2nd 2d



The 8 processor, 1000 time step simulation is still running on the supercomputer. A larger, 64 processor simulation failed to run. Hopefully the 8 processor job completes soon so that the output can be processed and visualized.

Some preliminary research about FLAC3D shows that there has not been much visualization done using MATLAB, however Ben has not been around for the past week. When he gets back, I will get a briefing on exactly what I need to do for the FLAC3D portion of this project.

Tasks for Next Week

Next week, hopefully work will have started on the FLAC 3D visualization portion of the project. Also, the 3D example is still not working correctly, and the 3D jobs seem to be hanging. Once the 3D example is working, then the Gale portion of this project will be completed. I also need to review the 2D results with Ben when he gets back from wherever he is.