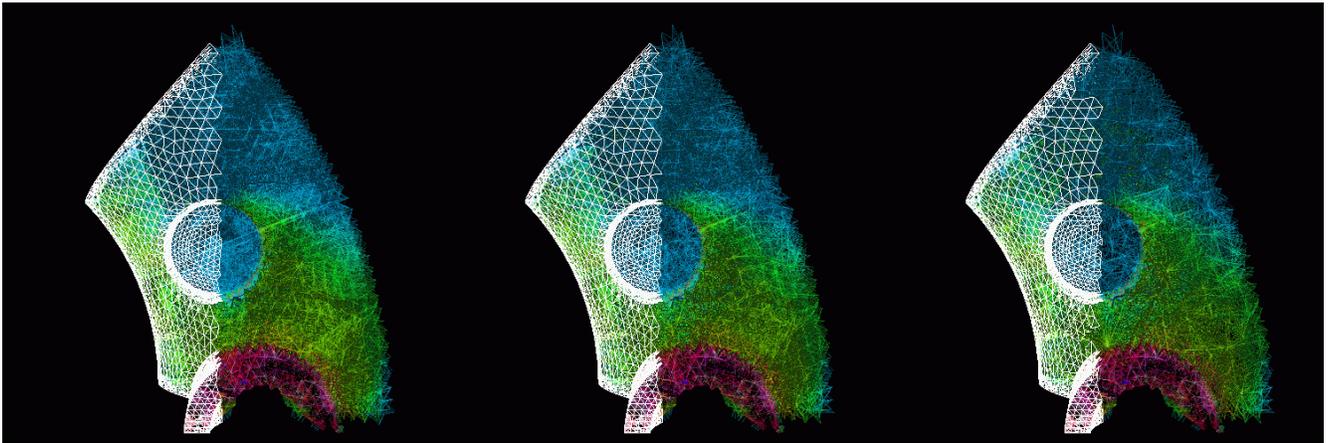# COLOR PLATE

(a) The original mesh   (b) 33.36% reduced   (c) 55.05% reduced

Figure C-I: Portions of three *macroLoD*s of a 103,488 the elements spx mesh, created in less than 16 seconds. All of the 14.79% boundary tetrahedra have been preserved perfectly. The scalar preservation tolerance, SCALAR_TOLERANCE, is 0.025. Some of the boundary tetrahedra have been culled away to show the regions under the boundary.
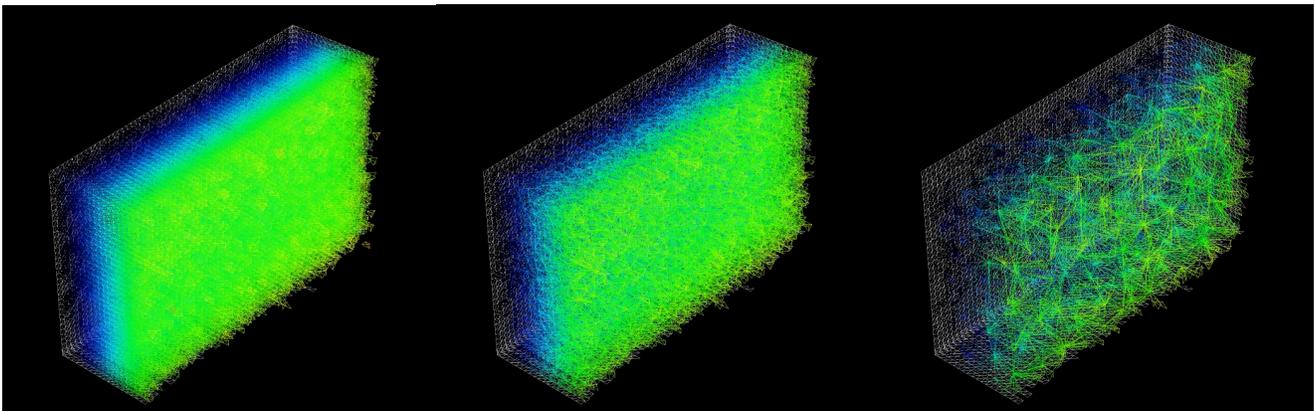
(a) Original corner portion with 200,000 tetrahedra. (b) 56.77% reduced   (c) 91.16% reduced

Figure C-II: Portions of three *macroLoD*s of a 69,448,288 elements tetrahedral mesh section for earthquake simulation, created in 18.84 seconds on an SGI R10000 194MHz with 2048 MB RAM. The 10.54% boundary tetrahedra around the corner (the far three faces of the block) have been preserved perfectly.
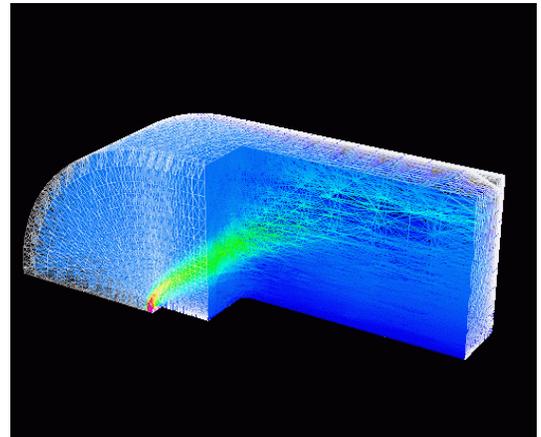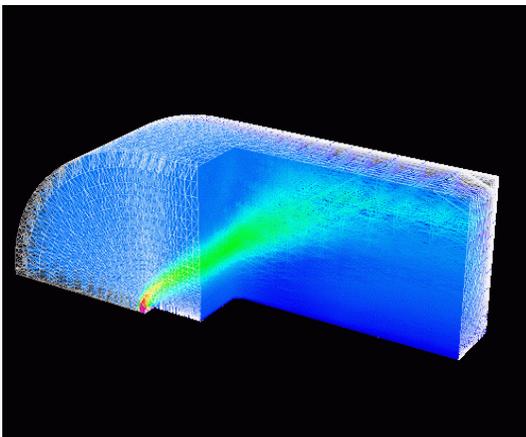
(a) Original Mesh   (b) 63.79% reduced, smooth shaded

Figure C-III: A closer view of portions of two *macroLoD*s of the 1,499,160 elements Blunt Fin dataset, created in 180.2 seconds. The boundary tetrahedra have been rendered as solid white wire-frame elements.