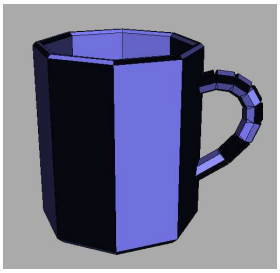
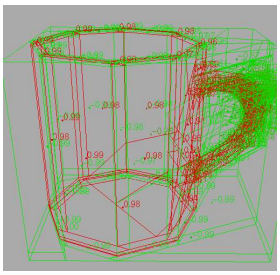
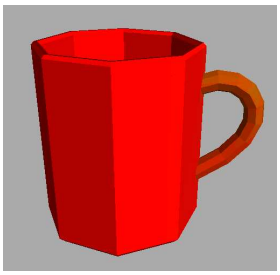


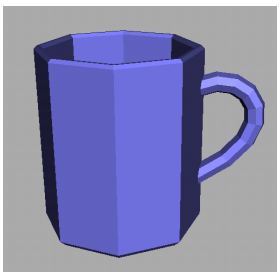
(a) Input model with inconsistencies.



(b) Subdivision cells labeled and outlined with colors based on their solidities.

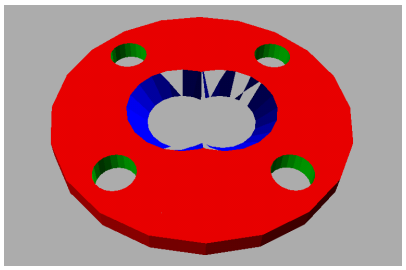


(c) Opaque boundaries between solid and free cells drawn with polygons oriented towards the model's exterior.

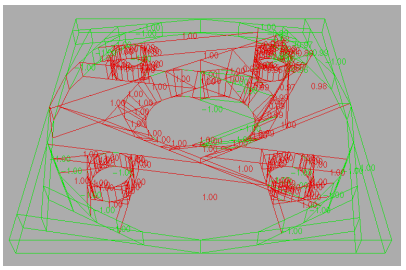


(d) Output model forming a manifold surface.

Plate I. Reconstructing solid model of a cup.

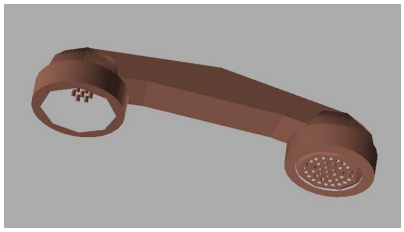


(a) Input model.

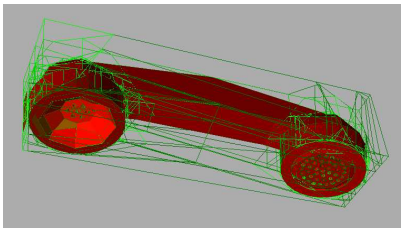


(b) Cell solidities indicated by numerical values.

Plate II. CAD/CAM: Automobile clutch with wrongly-oriented polygons (in the middle) and missing polygons (in the upper-right circular hole).

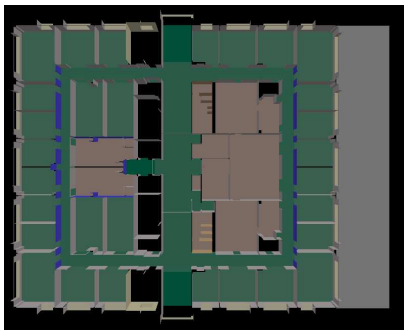


(a) Input model.

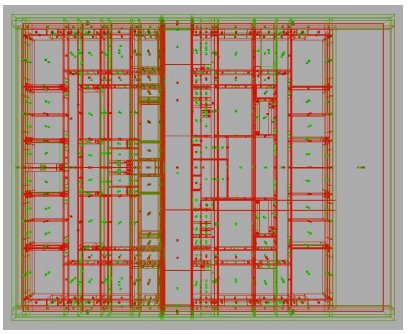


(b) Opaque polygons drawn between solid and free cells.

Plate III. Visualization: Telephone headset containing wrongly-oriented polygons (in the mouth and ear pieces) and intersecting polygons (along the handle).



(a) Input model.



(b) Cell solidities indicated by colored dots.

Plate IV. Architectural CAD: One floor of Soda Hall with numerous topological inconsistencies and other modeling errors.