untar Omicron.tar
cd Omicron/machines
pick a make file or create a new one
setenv BOX to the extension of the makefile
        for example:
        BOX=mac_OSX if I am using the make.mac_OSX makefile

cd ../Src
make model (you'll get a lot of warnings from the tetgen and triangle code)
make mesh
cd ../Run_Dir

the Run_Dir contains 5 files:
smooth_surface.pts – This is the LIDAR file that is used to create the shell.
cyl_frame.2dm – This is the hockey puck shell file.
Stone3.2dm – This is the stoned shell file.
Smooth_surface_model.dat – This is the input file to run the model part of the mesh
generator. This creates the 2D triangulated closed shell
Smooth_surface_mesh.dat – This is the input file to run the mesh part of the mesh
generator. This creates the tetrahedralized mesh from the triangulated closed shell.

Commands
Run the model code first to create the triangulated shell
../bin/model smooth_surface_model.dat – may take a few minutes (it slows down when
                looking for intersections. So the more objects you have in the scene the
                slower the code executes)

When the model code completes, there are 4 new files. The first two files are error
checkers in case something is wrong with the final shell. The last two files are the files
used on a regular basis:
Surf3D_smooth_surface.vtk – This is just the top triangulated surface with z values
assigned.
Box_Shell.vtk – This is the triangulated shell with objects in place, but the objects have
not been connected to the mesh (there are intersecting triangles between surface objects
and the surface triangles).
BC.vtk – This is the boundary condition file. The triangulated shell is written out with the
boundary condition tags. The boundary ids are listed in the LOOKUP table.
smooth_surface.vtk – This is the final triangulated shell. The material ids are listed in the
LOOKUP table.

Both the model and the mesh code write Statistics to the screen. These statistics are used
to determine if the mesh is usable. The statistics for this example mesh are not great
because we have intersected the surface with stones. The statistics would be better with
just the hockey pucks or without any objects. However, the statistics are still good
enough for the mesh to be used.

Run the mesh code to create the tetrahedral mesh
The mesh input file has 25 objects as compared to the model input file which has 24 objects. The extra object in the mesh input file is the soil itself which is listed as the first object in the input file.

../bin/mesh smooth_surface_mesh.dat - (may take a few minutes, most of the time spent in the smoother)

Output file:
Only 1 file is created:
mesh_smooth_surface.vtk – This is the fully tetrahedralized mesh with the material ids set in the input file.