

## Basic Euler3d Operations Manual:

This document describes the basics of using Euler3d. We will describe how to run *surface*, *volume*, *makeg3d* and *euler3d*. Throughout this document, “case” will refer to the specific CFD test case name.

### Surface

The *surface* program creates the mesh along the test case’s surfaces. *surface* creates a .fro file. You can view this .fro file with *gplotnew*.

### Volume

The *volume* program creates the volume mesh throughout the defined CFD solution region. As with *surface*, use the interactive mode with no restarting. *volume* creates a .gri file.

### Makeg3d

The *makeg3d* program initializes the boundary conditions and sorts the .gri file. The *makeg3d* program creates the .g3d file.

### Euler3d

The *euler3d* program performs the CFD analysis. Euler3d creates the following files:

- .un#: Unknowns files (the current solution)
- .rsd: Residuals file
- .lds: Aerodynamic loads
- xn.dat: Mode information

## CFD Analysis Overview:

Euler3d: *surface* → *volume* → *makeg3d* → *euler3d*

File Transfer:

“.g3d” files are binary.

“.unk” or “.un#” files are binary. (Can not be directly transferred to a PC)

Everything else is ASCII