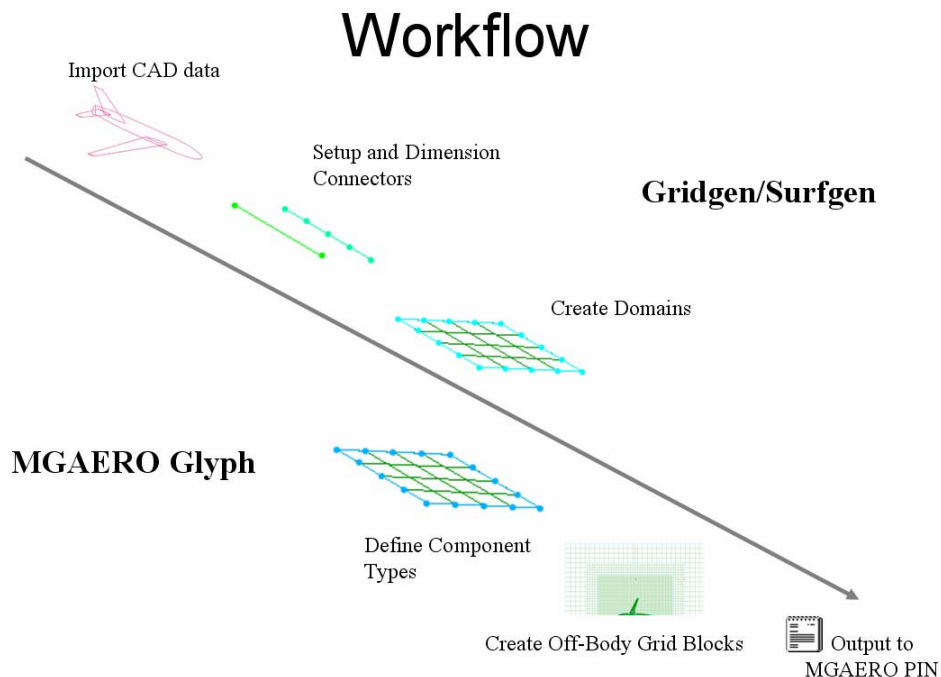


MGAERO Model Creation with Surfgen and the MGAERO Glyph September 4, 2007

The general workflow for making MGAERO models in Surfgen with the aid of the MGAERO Glyph is presented in the figure below. Typically, CAD geometry is imported into Surfgen first. On this geometry, connectors are created and dimensioned as required to create surface domains to cover the entire outer surface of the CAD geometry. Once the surface domains are completed the MGAERO Glyph is used to finish making the CFD model.

The add-on, MGAERO Glyph, is used for converting surface meshes made in Surfgen into MGAERO component types. After the surfaces are defined as MGAERO components, off-body grid blocks are created. The lower level grid blocks, 1 to 3, are automatically generated based on a few user inputs. Finer level grid blocks are manually created with the aid of the glyph GUI which supports the creation of all 3 types of MGAERO off-body grid blocks.



Feature List

Surface Editing

- Rename surface patches
- Define component type as WING, BODY, PYLON, and DOMAIN types
- Create ENCLOSUREs
- Define surface normals
- Mirror
- Create BODY propulsor components

Off-Body Grid Blocks

- Autogenerate levels 1 to 3
- Translate
- Redimension
- Split
- Rotate
- Shear
- Create Point-to-Point
- Snap Point-to-Point
- Mirror

Import/Export

- Import MGAERO PIN file
- Export MGAERO PIN file
- Set *Basic Data* options
- Set *Geometry Data* options
- Set *Grid Data* options