Baseline Over-Set Grid

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OUTLINE

- **GRID PROCESSES**

- **GRID STATISTICS**

- **GRID SPACINGS**

- **GRID IMAGES**

GRID PROCESSES

- **SURFACE GRIDS**
  - Gridgen.V13: Nodes On IGES Surfaces
  - Water-Tight Surface Overlaps
    * Collar-Wing Overlap
    * Wing-Wingtip Overlap

- **VOLUME GRIDS**
  - Hypgen For Nearfield Grids
  - No Singular Lines
  - Box Grids In Intermediate & Farfields

- **HOLE CUTTING & COUPLING**
  - GMAN & MIXSUR

GRID STATISTICS

```
Total viscous-surface points:            54445
Total grid points:                     3727462
Total non-blanked grid points:         3231377
Grid points across the TE base               5
Farfield boundary is a box ~150 chord lengths away.
```

| grid	id	jd	kd	surfpts	gridpts	%pts	realpts	%real	description
1	49	273	49	13377	655473	17.6	562499	17.4	fuselage
2	385	65	49	22209	1226225	32.9	1092327	33.8	collar
3	385	62	49	15934	1169630	31.4	1038606	32.1	wing
4	25	141	49	2925	172725	4.6	135219	4.2	wingtip
5	121	22	43	0	114466	3.1	76840	2.4	fuse_box
6	67	74	46	0	228068	6.1	168408	5.2	wing_box
7	75	39	55	0	160875	4.3	157468	4.9	global_box
			Totals:	54445	3727462		3231377		

GRID SPACINGS

Chordwise grid spacing at LE	~0.10% Local Chord
Chordwise grid spacing at TE	~0.12% Local Chord
Spanwise spacing at Root	~1.00% Semispan
Spanwise spacing at Tip	~0.10% Semispan
Grid spacing at the fuselage nose	~5.000 mm
First layer spacing off the wall	~0.001 mm (Y+ ~1)
Maximum growth ratio in normal dir	~1.240
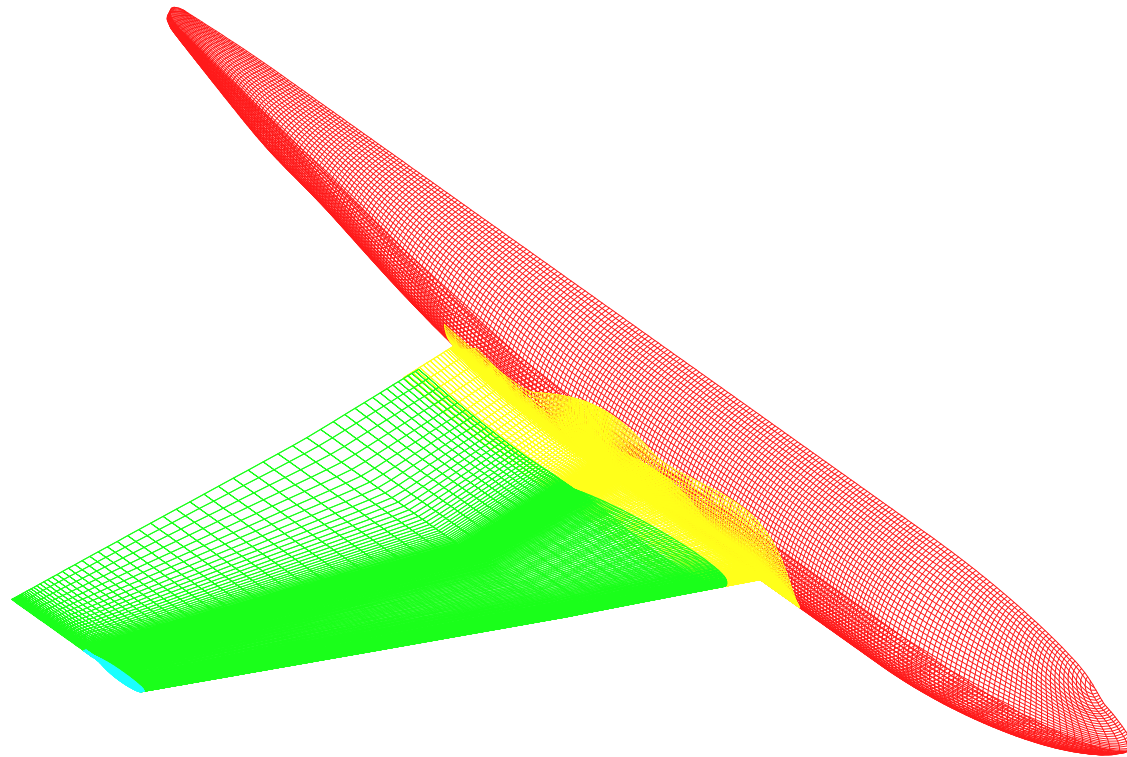
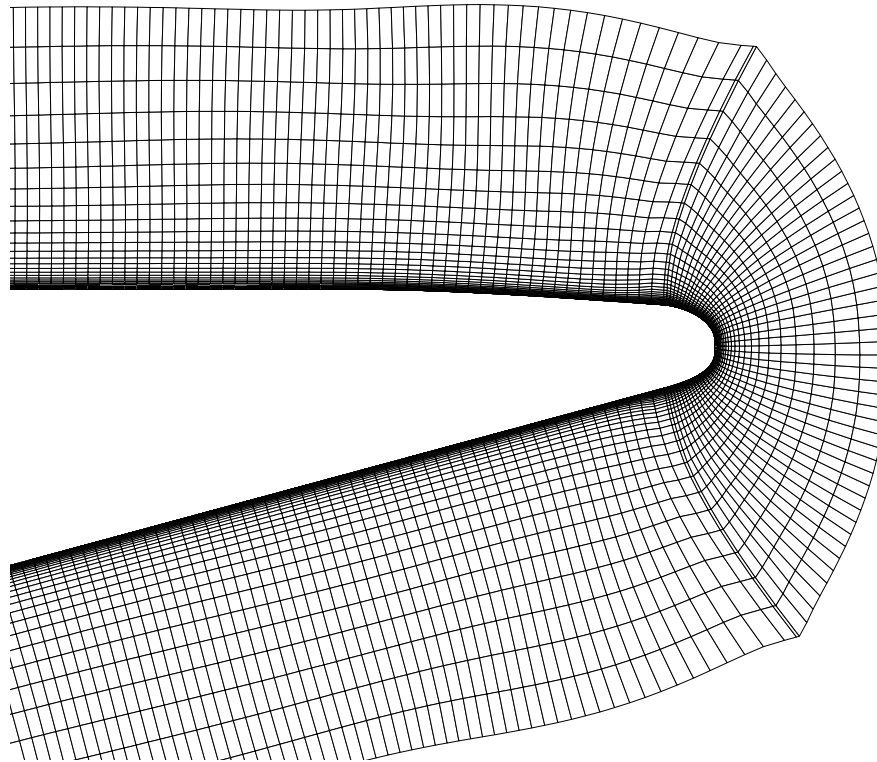## Four Grids Define Wing/Body/Wake Surfaces
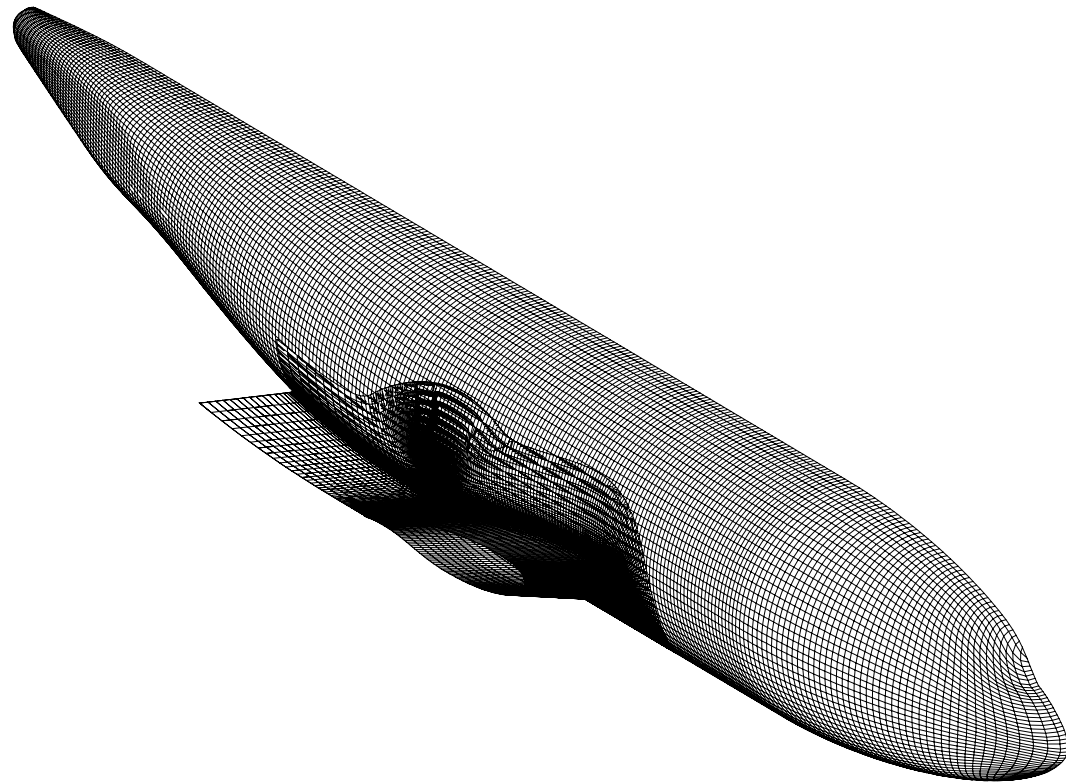
GRID IMAGES
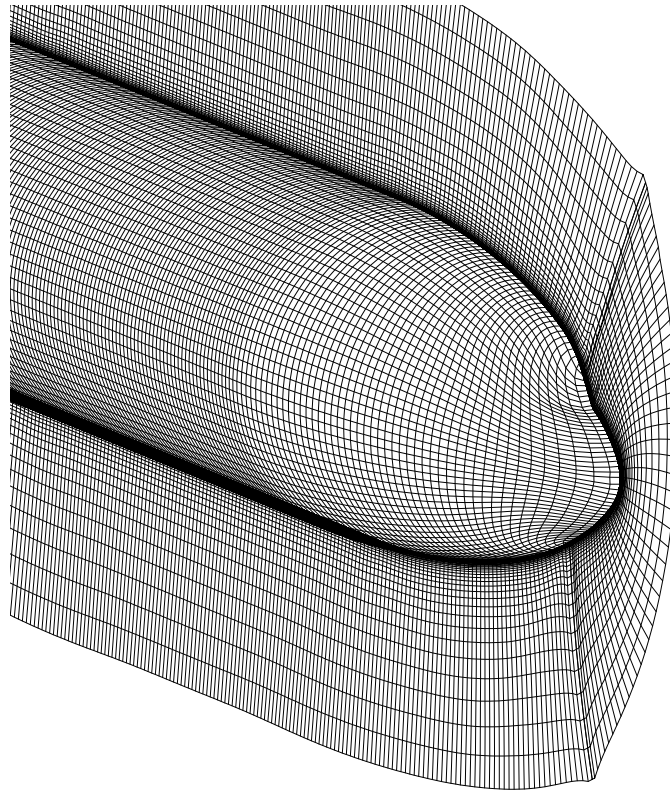
Fuselage Grid Near Nose

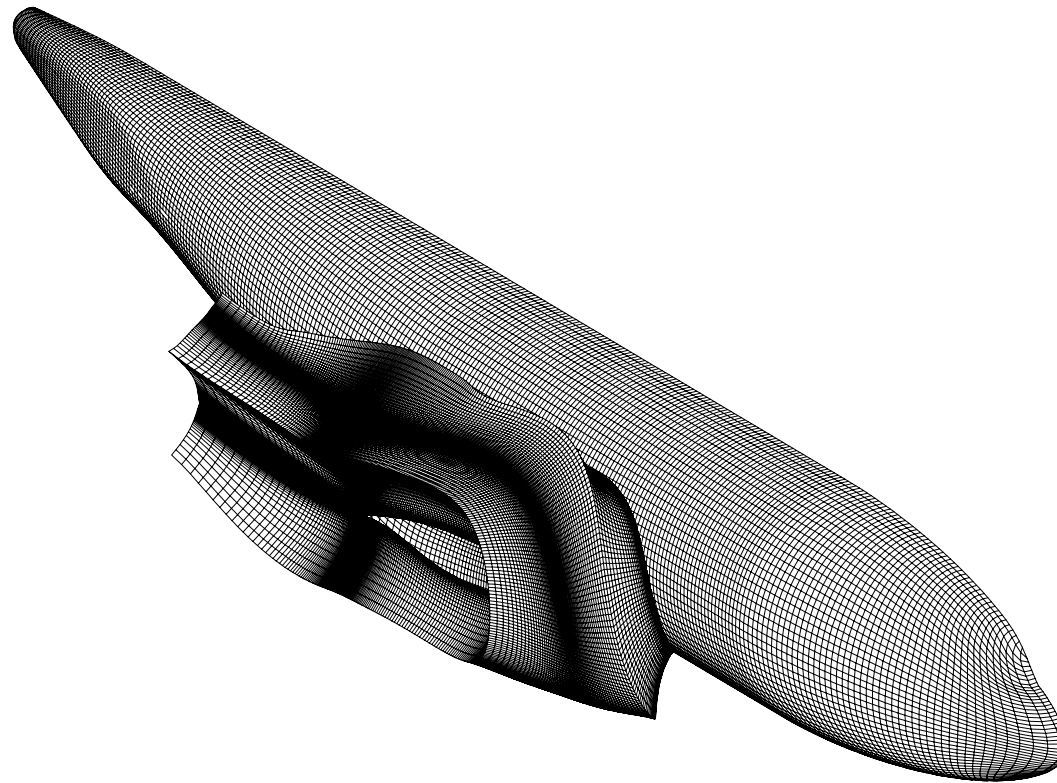
GRID IMAGES

Fuselage Grid Near Tailcone

GRID IMAGES

Collar Grid Near Wing/Body Intersection
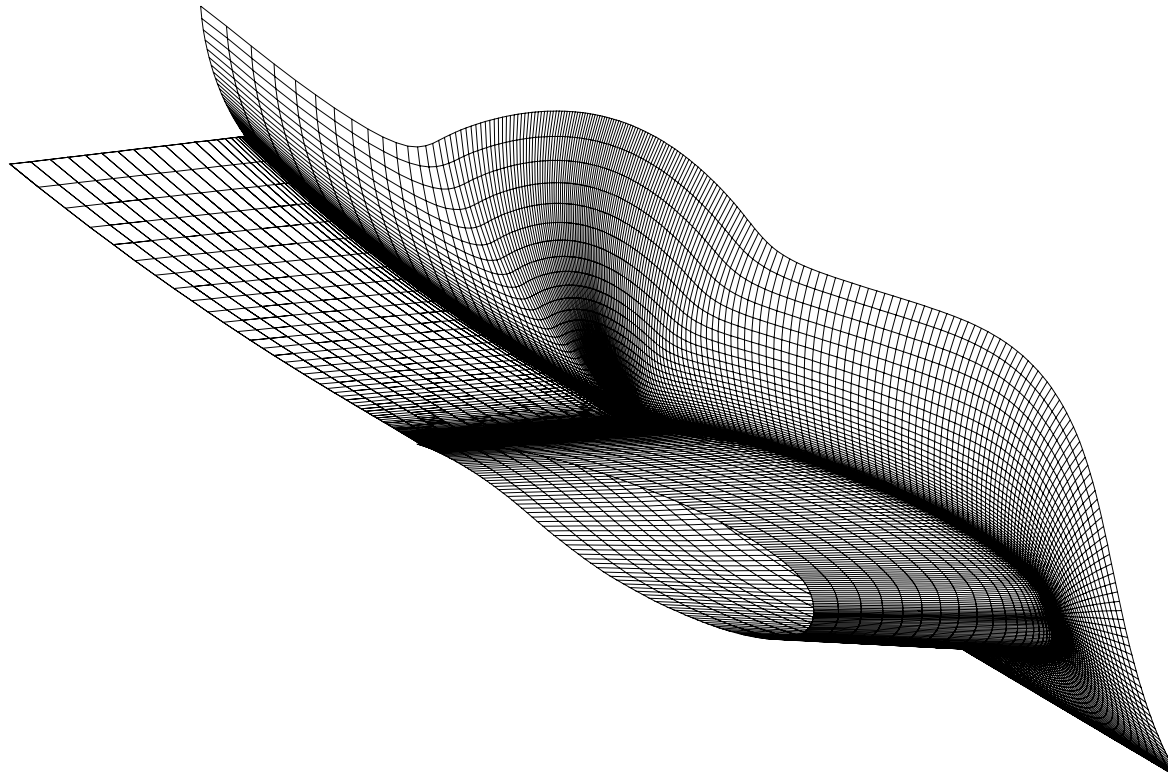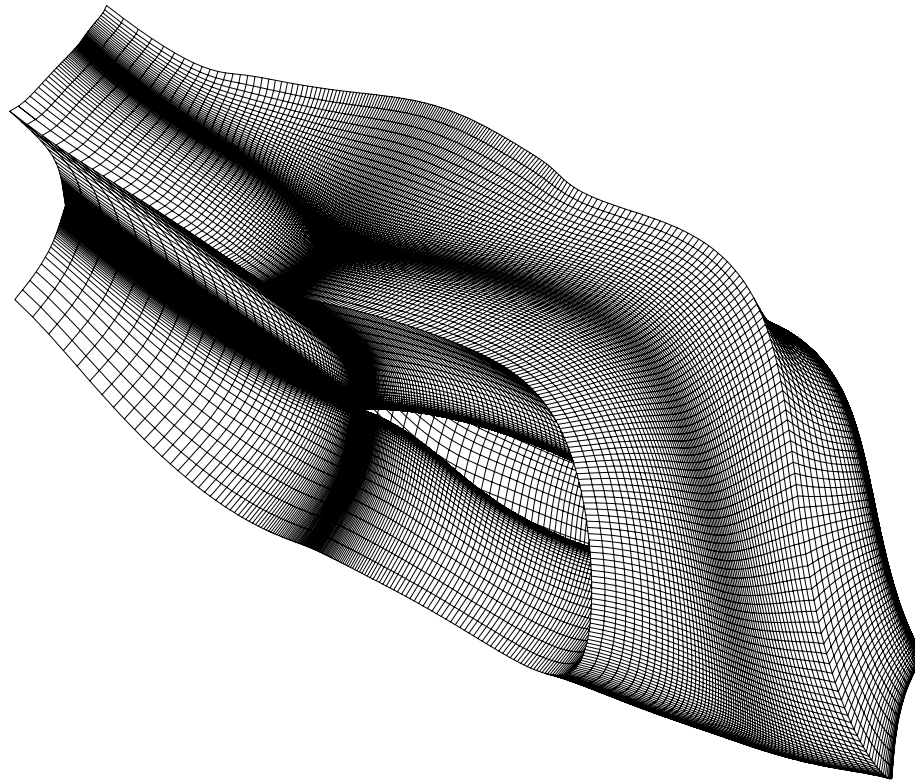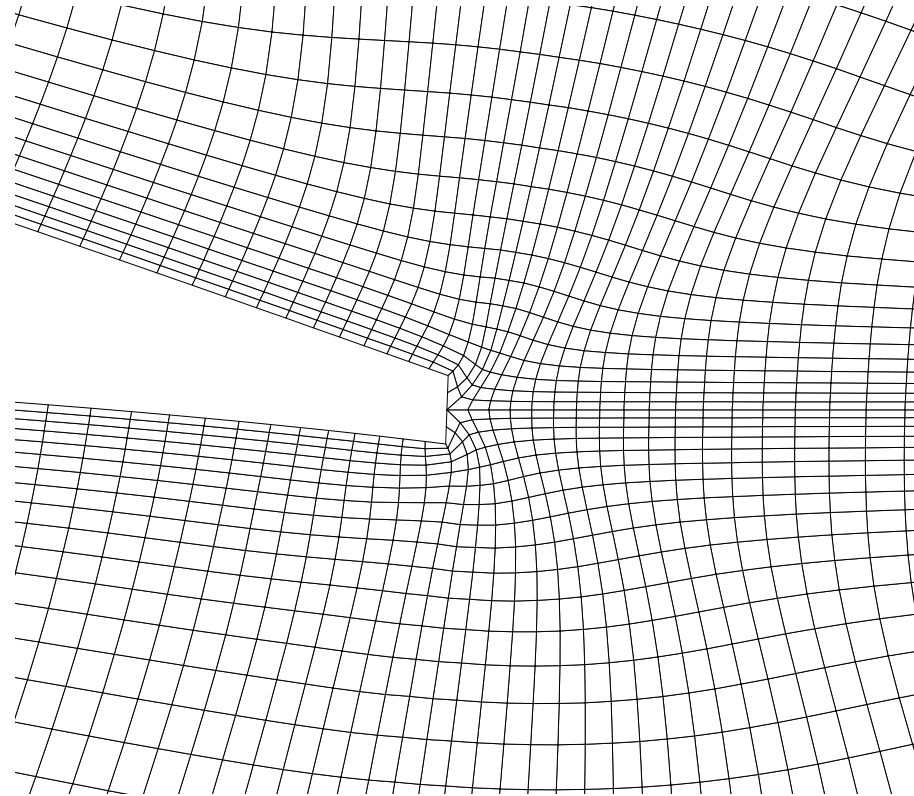
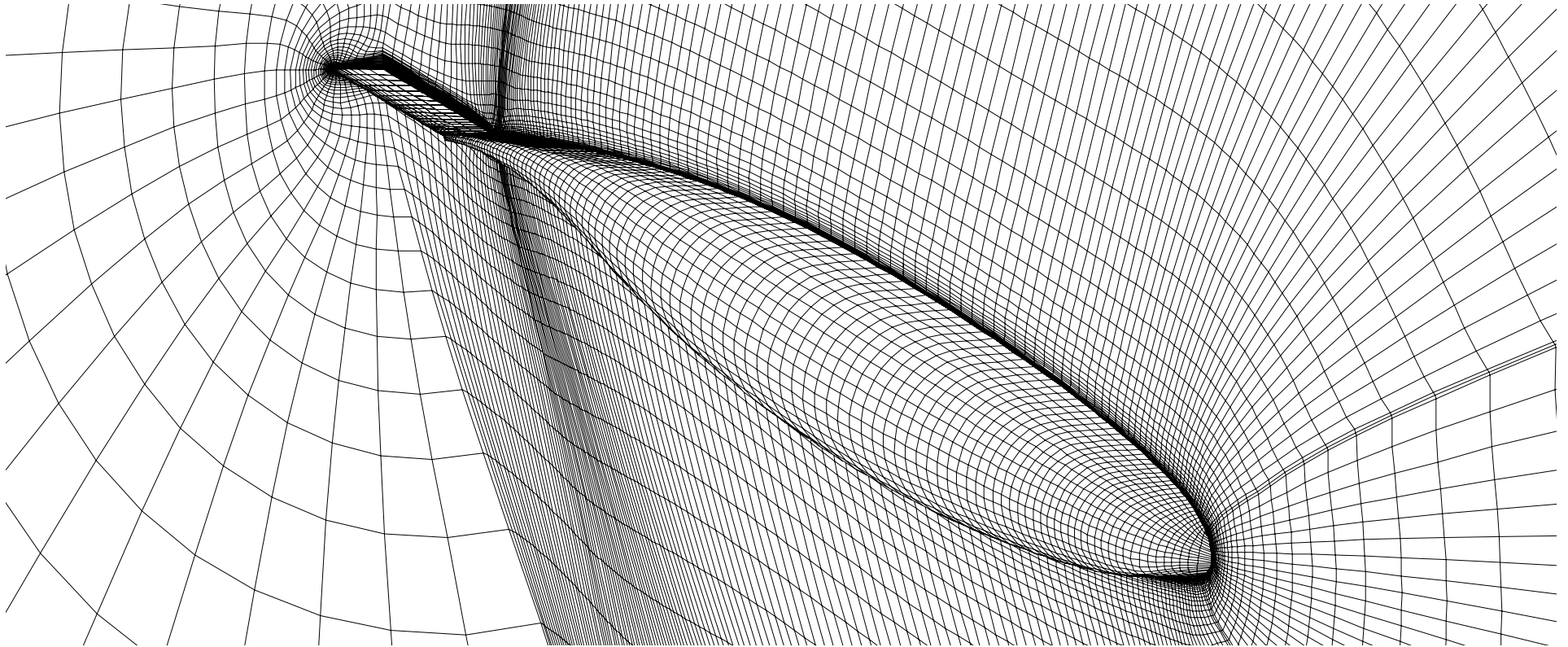Collar Grid Near Wing/Body Intersection

Collar Grid Volume

GRID IMAGES

Collar Grid Volume

GRID IMAGES

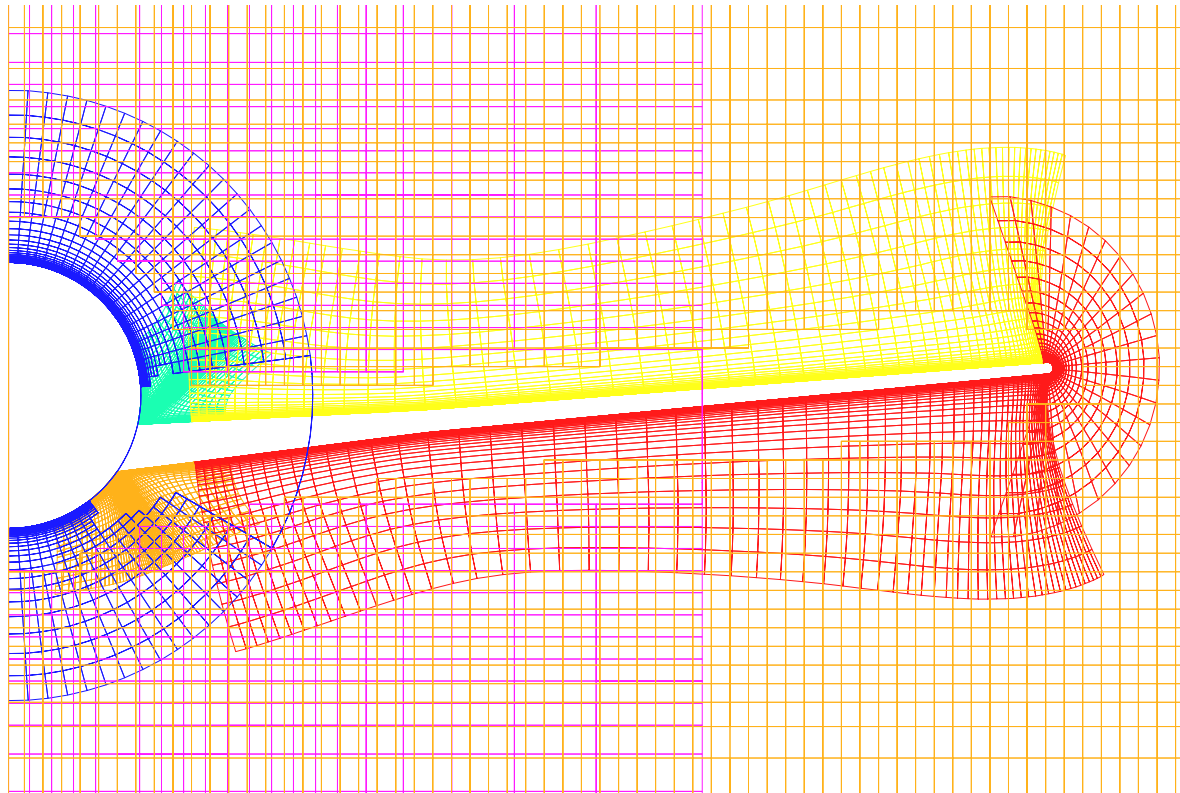

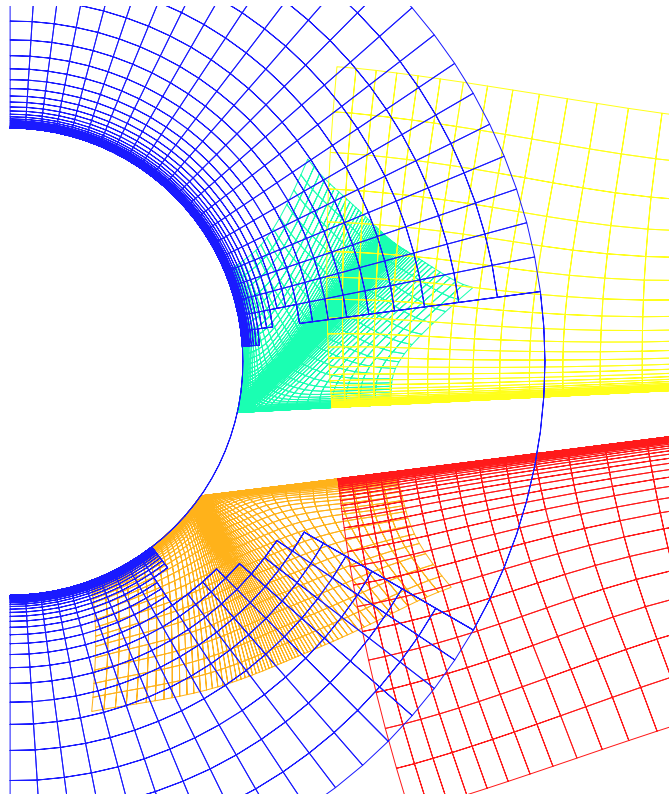Collar Grid on Fuselage Near Wing Trailing Edge

GRID IMAGES

Wing-Tip Grid

Field Grids Near Wing Mid-Chord Location

GRID IMAGES

Field Grids Near Wing Mid-Chord Location