

Graphics Packages

Tecplot

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Lecture Objective

To give an introduction to Tecplot and a brief overview of its features. This overview is intended to show some of the possibilities using Tecplot. It is not intended to teach how to use every function of Tecplot.

Outline

- What is Tecplot?
- Overview of Tecplot Menus and Tool Bars
- Interactive Demonstration of:
 - XY Plots
 - 2D Plots
 - 3D Plots
- Questions

What is Tecplot?

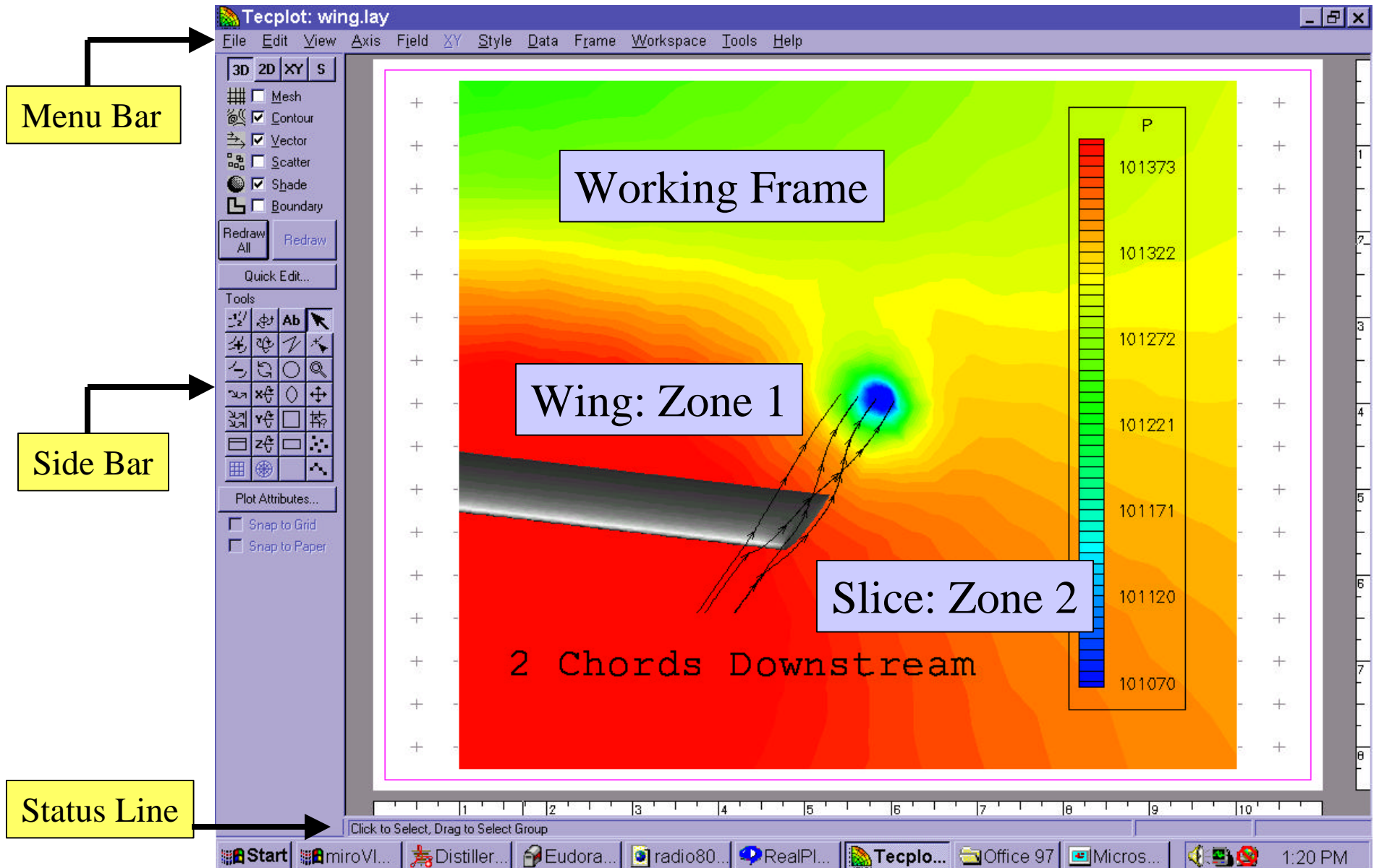
Tecplot



A powerful, simple to use tool for visualizing technical data

Runs under both Unix and Windows OS

Tecplot Window



Menu Bar

Side Bar

Status Line

Working Frame

Wing: Zone 1

Slice: Zone 2

2 Chords Downstream

P

101373

101322

101272

101221

101171

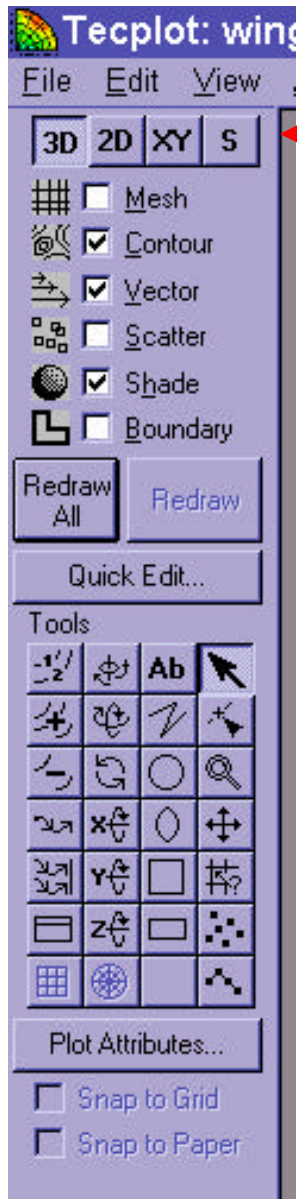
101120

101070

Click to Select, Drag to Select Group

Start miroVI... Distiller... Eudora... radio80... RealPI... Tecplo... Office 97 Micros... 1:20 PM

Tecplot Sidebar



Frame Mode Buttons

3D Surface & Volumes

2D Field Plots

XY Plots

Sketch Plots

Tecplot Sidebar



Plot Layer Buttons

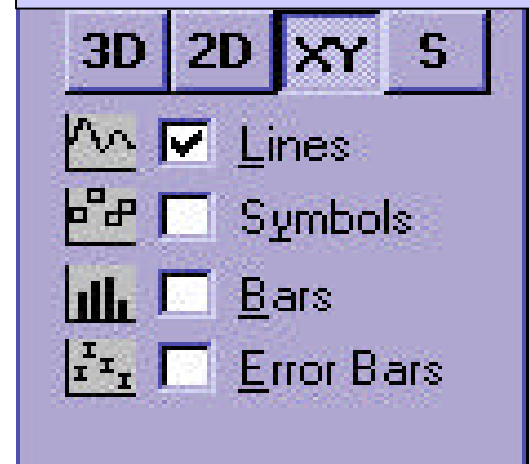
Mesh
Contour
Vector
Scatter
Shade
Boundary

Tecplot Sidebar

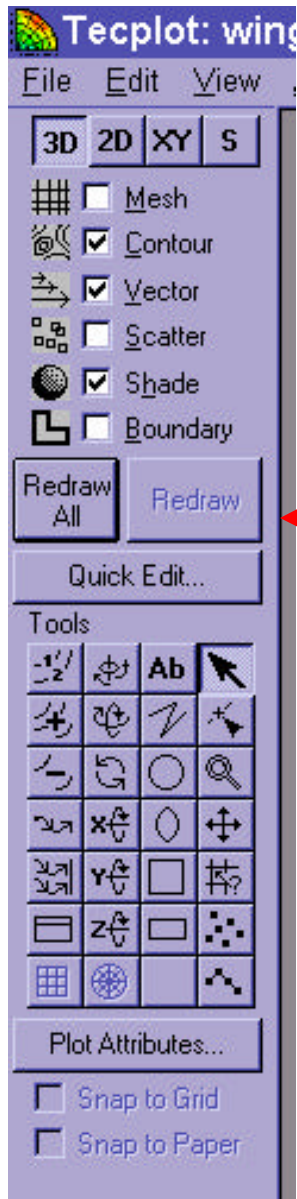


Plot Layer Buttons

Layers for XY Plot



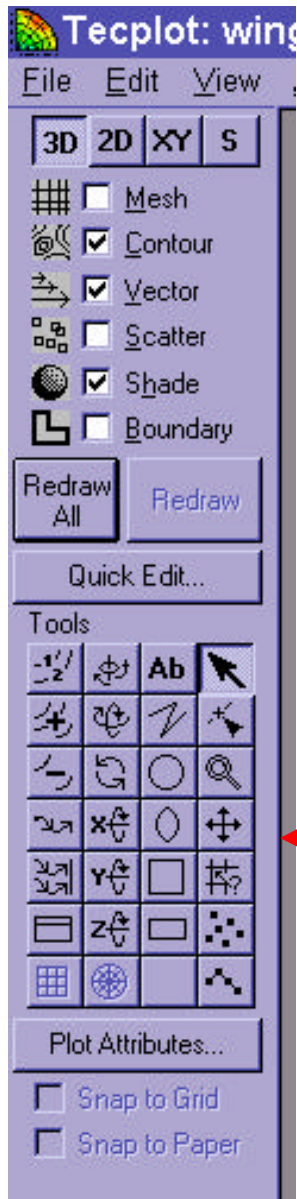
Tecplot Sidebar



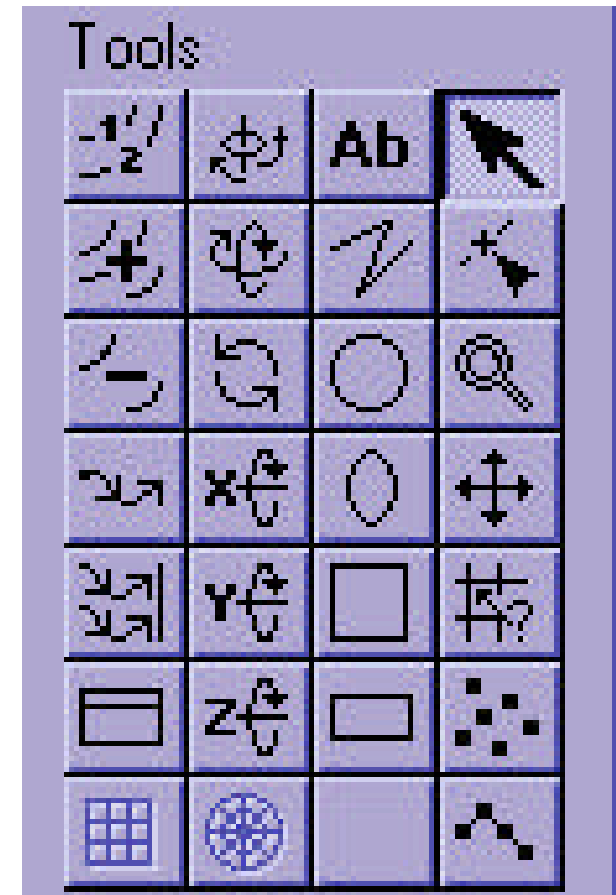
Redraw Buttons

Always Click after making changes!

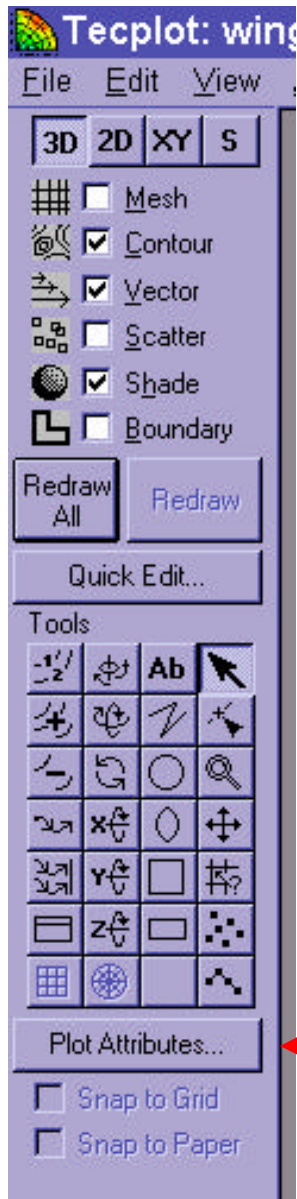
Tecplot Sidebar



Tools Buttons



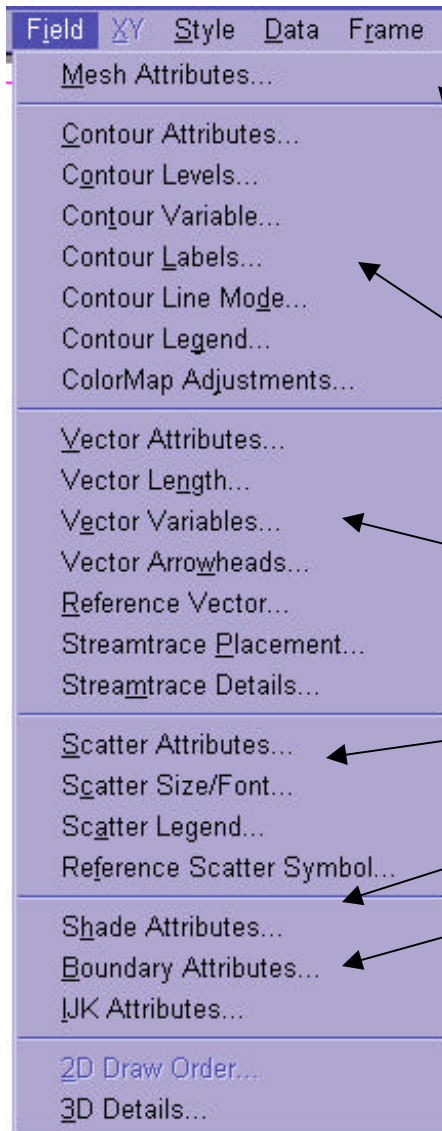
Tecplot Sidebar



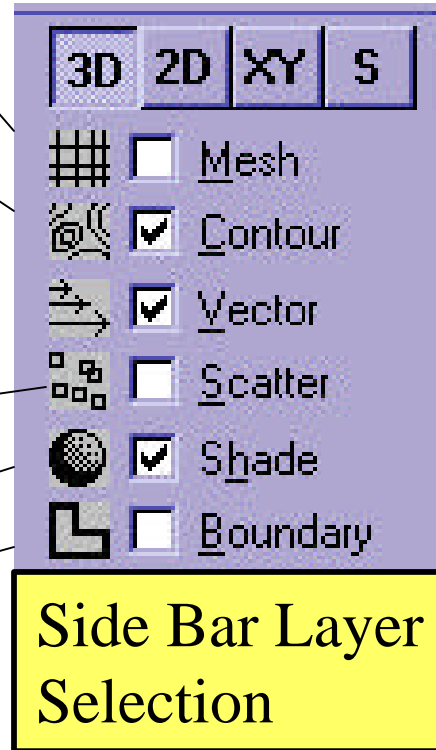
Use this button to call up dialog most directly applicable to your current action.

Details Buttons

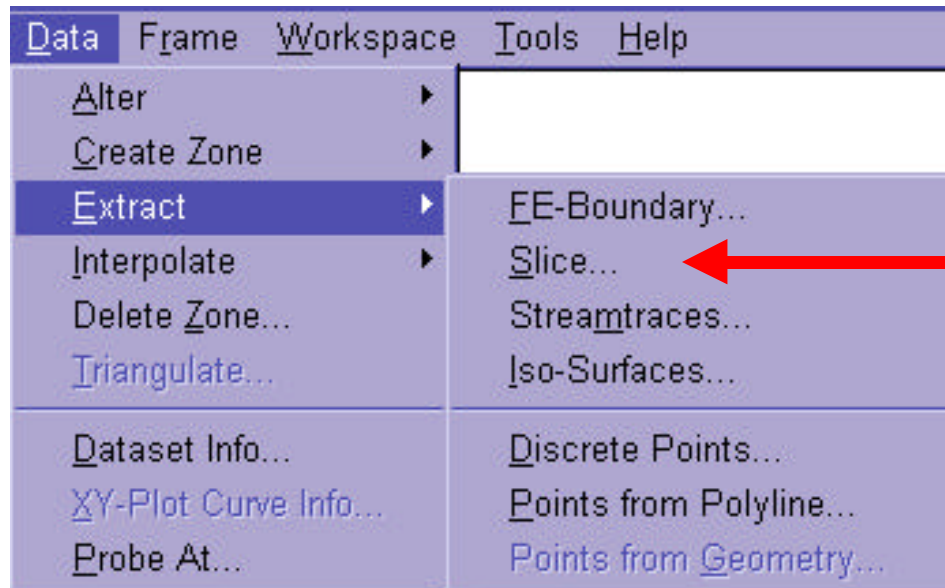
Menu Bar: FIELD



Control layer properties
of 2D & 3D Plots

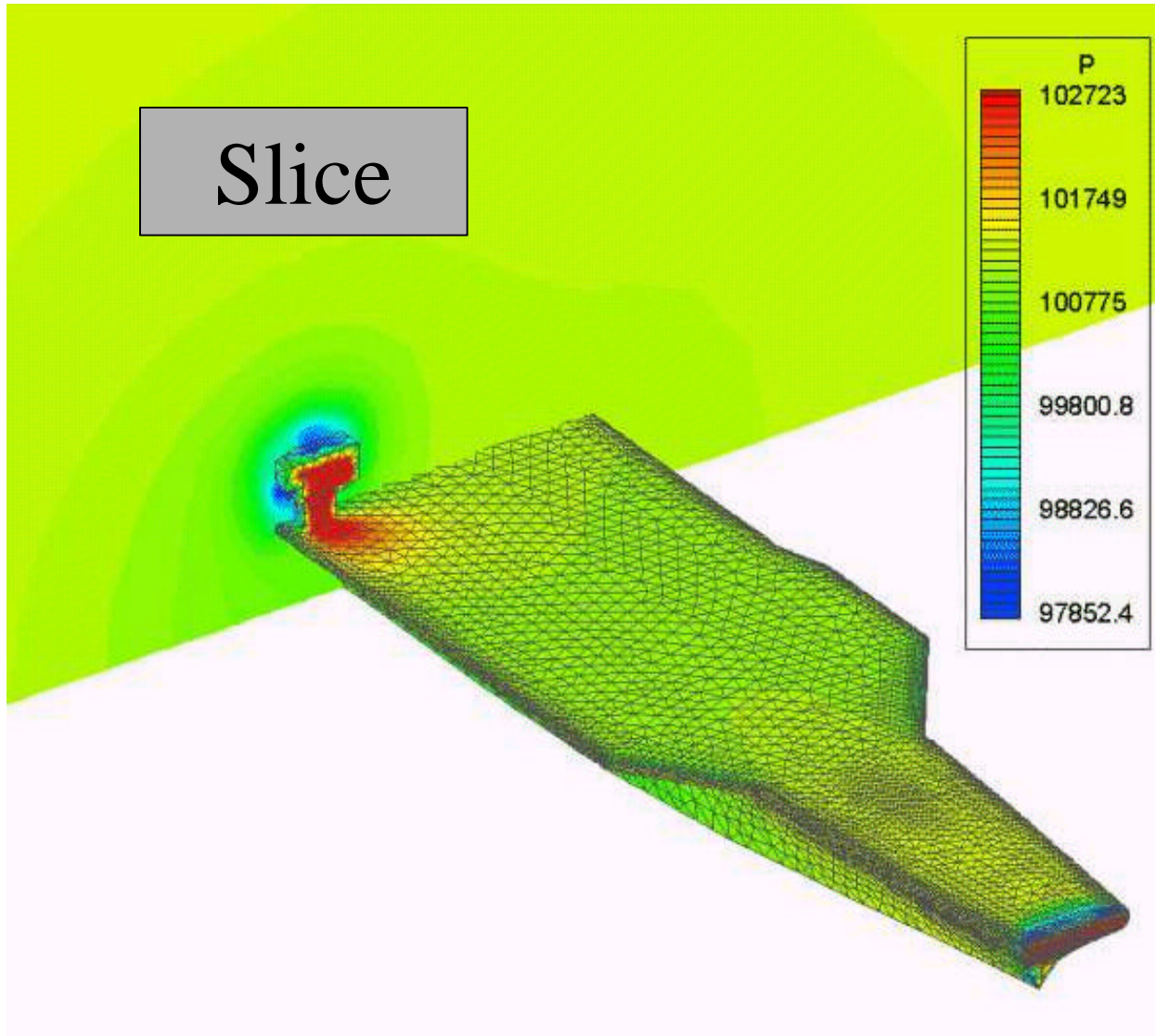


Menu: DATA/EXTRACT



Tecplot allows you to slice 3D Volume Zones with a planer surface

Slice of CVN76



Tecplot Data Files

ASCII or Binary

Title="Simple Data File"

Variables="X", "Y"

Zone (either Ordered Zone or Finite Element Zone)

Ordered Zone

T="zone title"

I=imax

J=jmax

K=kmax

F=point,block

Finite Element Zone

T="zone title"

N=# of nodes

E=# of elements

ET= Element Type

F=fepoint,feblock

CVN76 Data Header

Finite Element Zone Record

VARIABLES = "X"

"Y"

"Z"

"u"

"v"

"w"

"P"

"rho"

"M"

ZONE T="CVN76"

N=10674, E=21308, F=FEBLOCK ET=Triangle

Preplot

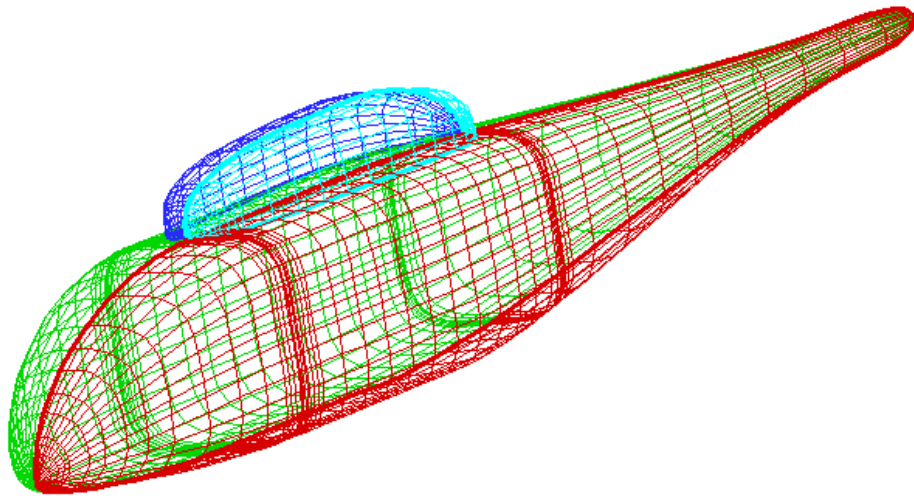
Converts ASCII to Tecplot Binary

You can use preplot to debug ASCII files that Tecplot cannot read

Special settings to convert Plot3D files

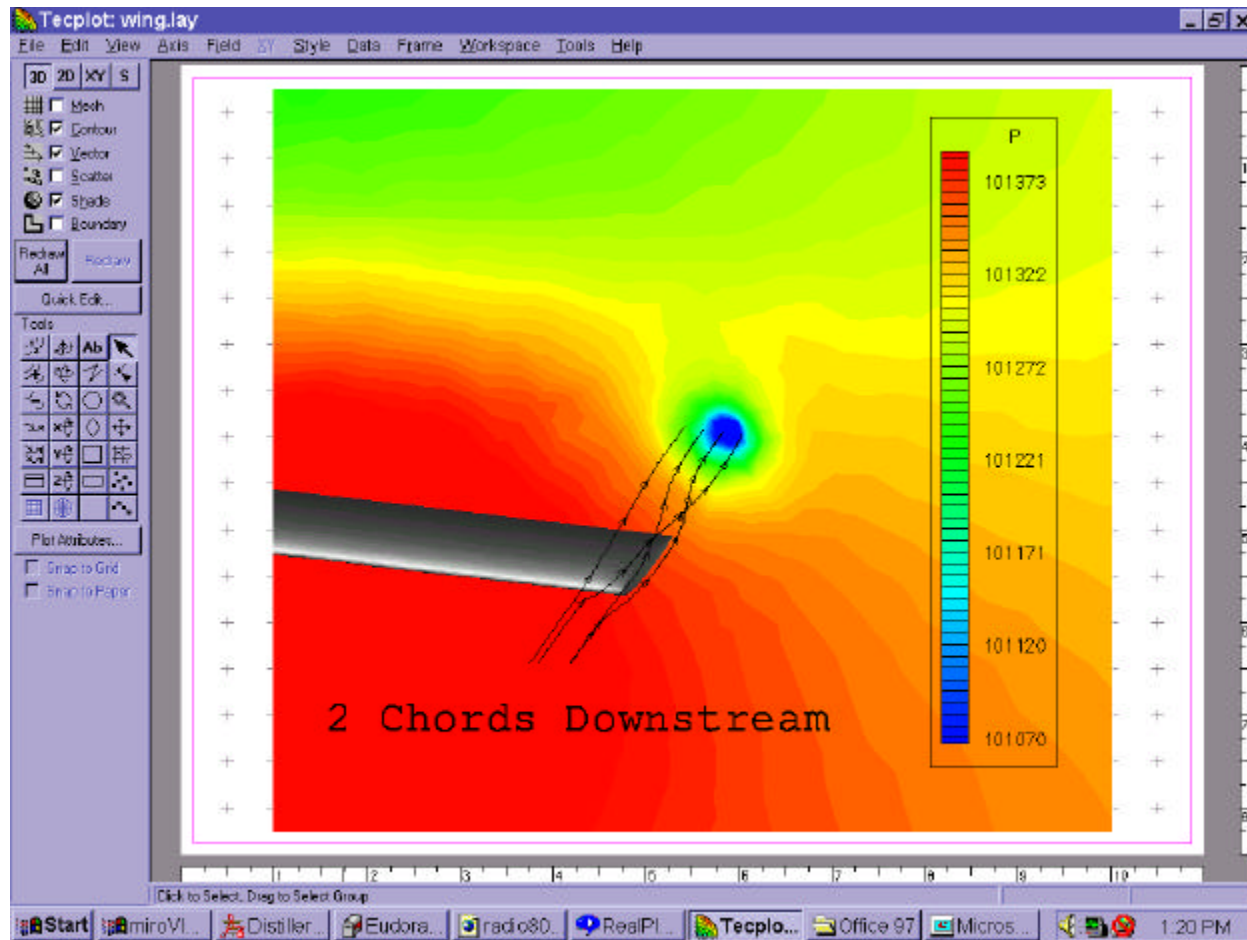
Runs from DOS window on Windows 95/98

Interactive Demo: Robin Body

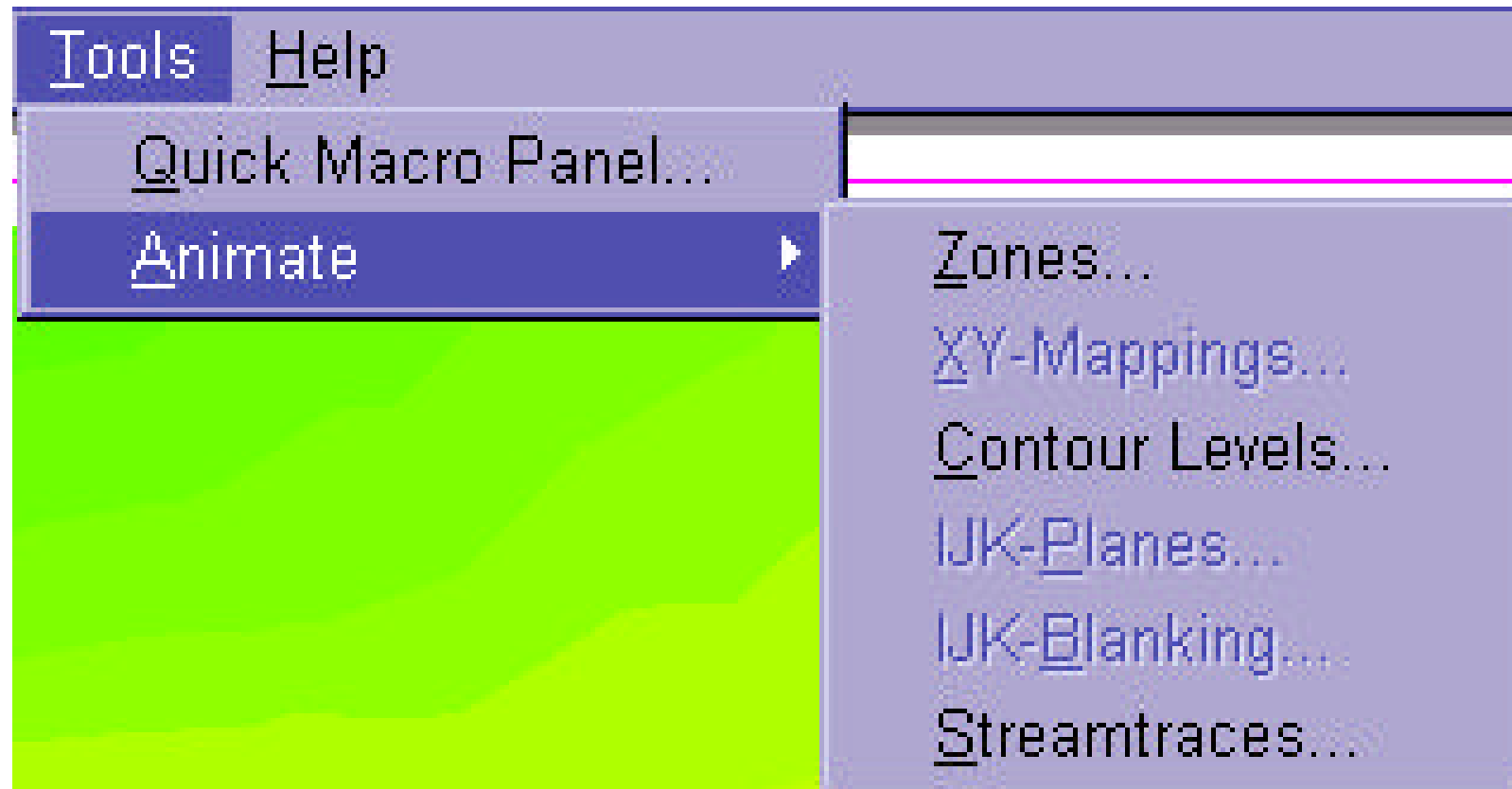


Pressure tap locations	X/R	Part of figure
	0.0517	a
	0.0941	b
	0.1450	c
	0.2007	d
	0.2563	e
	0.3074	f
	0.3497	g
	0.4669	h
	0.6003	i
	0.8809	j
	1.0008	k
	1.1620	l
	1.3450	m
	1.5298	n

NACA 0012 Animation



Framer (Auto Animate)



Resources



CAC Tecplot Training
<http://cac.psu.edu/training/>



Amtec (Makers of Tecplot)
<http://www.amtec.com/>



Schweitzer Homepage
<http://family.schweitzer.net>
family@schweitzer.net