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
Tecplot Sidebar

Frame Mode Buttons

3D Surface & Volumes
2D Field Plots
XY Plots
Sketch Plots
Tecplot Sidebar

Plot Layer Buttons

Layers for XY Plot
Tecplot Sidebar

Redraw Buttons

Always Click after making changes!
Use this button to call up dialog most directly applicable to your current action.
Menu Bar: FIELD

Control layer properties of 2D & 3D Plots

Side Bar Layer Selection
Tecplot allows you to slice 3D Volume Zones with a planer surface.
Slice of CVN76

Slice
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
Finite Element Zone Record

VARIABLES = "X"
"Y"
"Z"
"u"
"v"
"w"
"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

![Image of Robin Body](image1.png)

### Pressure Tap Locations

<table>
<thead>
<tr>
<th>Location (X/R)</th>
<th>Part of Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0317</td>
<td>a</td>
</tr>
<tr>
<td>0.0541</td>
<td>b</td>
</tr>
<tr>
<td>0.1459</td>
<td>c</td>
</tr>
<tr>
<td>0.2007</td>
<td>d</td>
</tr>
<tr>
<td>0.2553</td>
<td>e</td>
</tr>
<tr>
<td>0.3074</td>
<td>f</td>
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<tr>
<td>0.3497</td>
<td>g</td>
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<tr>
<td>0.4669</td>
<td>h</td>
</tr>
<tr>
<td>0.6000</td>
<td>i</td>
</tr>
<tr>
<td>0.8809</td>
<td>j</td>
</tr>
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<tr>
<td>1.1520</td>
<td>l</td>
</tr>
<tr>
<td>1.3450</td>
<td>m</td>
</tr>
<tr>
<td>1.5298</td>
<td>n</td>
</tr>
</tbody>
</table>

![Image of Robin Body Test](image2.png)
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