

What is RainPro ?

- Charting package in APL
 - APL scripts generating charts from data
 - Output : Raster, Vector, Web, GUI
- Philosophy
 - Publication-quality output (PostScript)
 - Maximising data readability
 - Avoiding fashionable spurious decorations
 - Have a good set of defaults

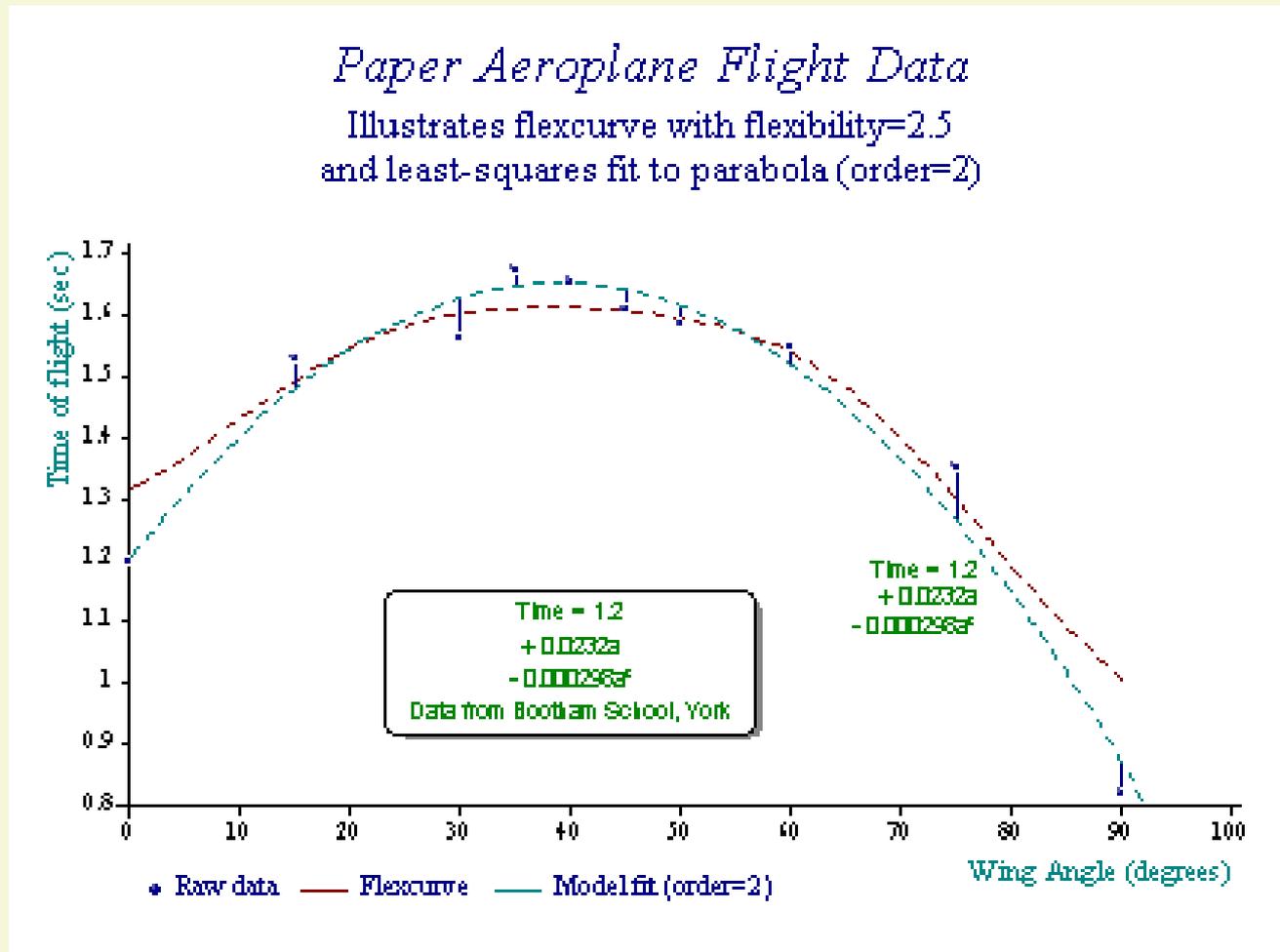


What is SharpPlot ?

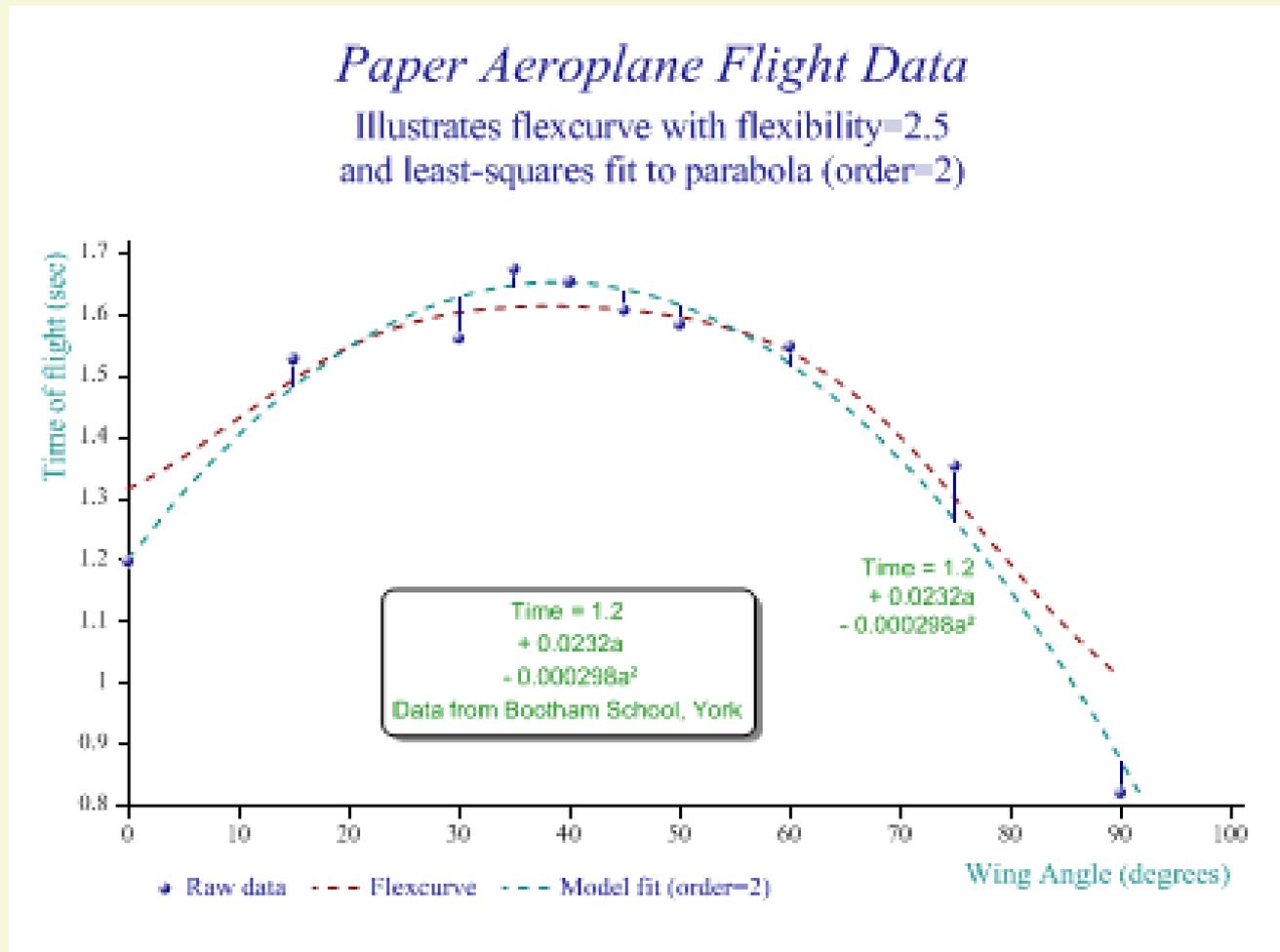
- APL-to-C# machine-translation of RainPro
 - Functionally equivalent
 - Compilation performance
 - .Net portability
 - .Net graphics quality
 - Clarity (code + doc refactoring)
 - Stability (out-of-workspace processing)



Aero sample in RainPro



Aero sample in SharpPlot



How to use it ?

- PostScript-oriented state machine

- Set Frame

```
□USING←',sharpplot.dll' ',system.drawing.dll'  
sp←□NEW Causeway.SharpPlot (800 600)
```

- Set Parameters

```
sp.Heading←'My Chart'  
sp.LineGraphStyle←Causeway.LineGraphStyles.GridLines
```

- Draw

```
sp.DrawLineGraph c(+\^-40+?100p100)
```

- Output

```
sp.SaveImage 'C:\mychart.png'  
System.Drawing.Imaging.ImageFormat.Png
```



How to use it ?

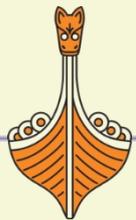
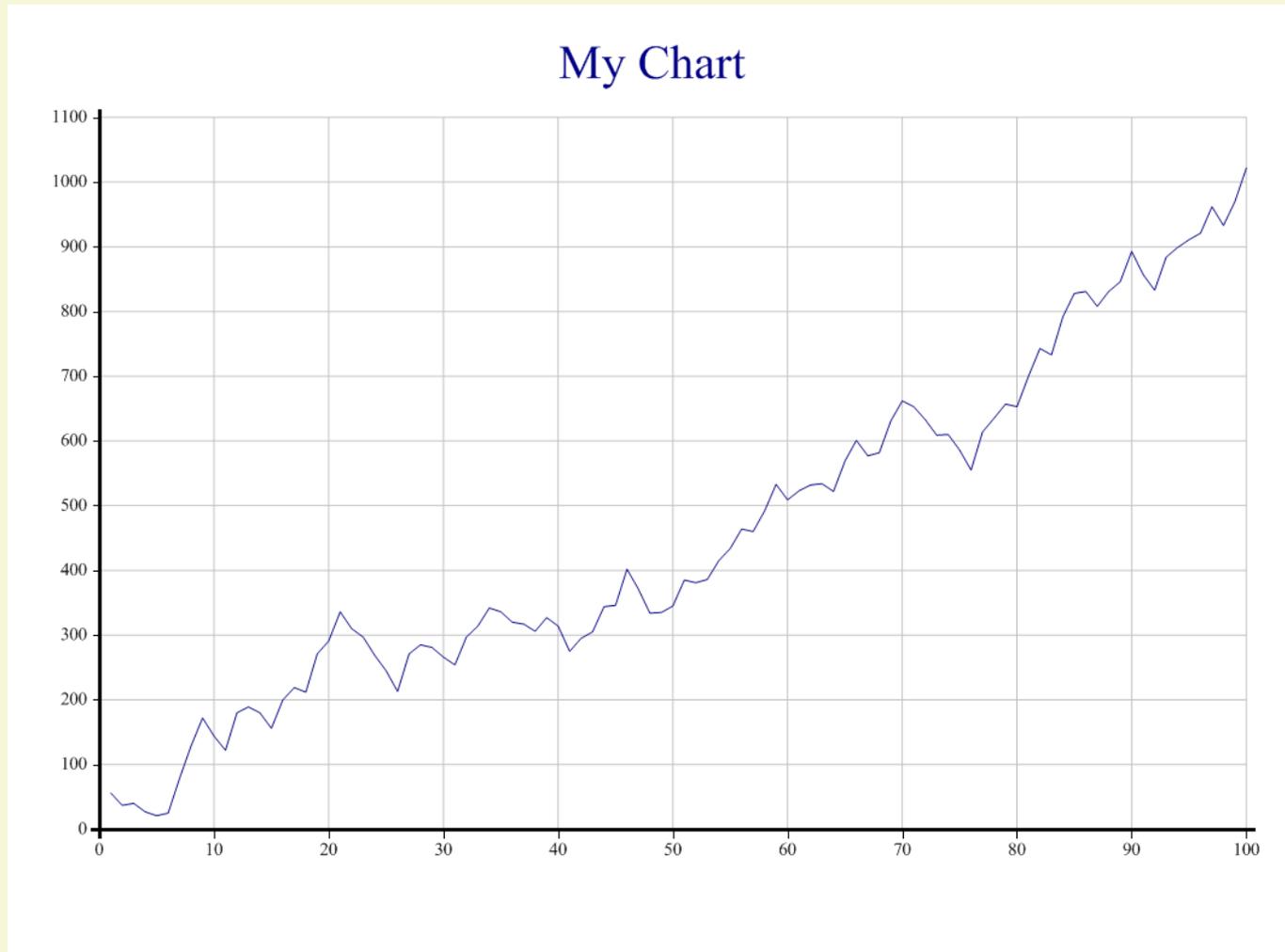
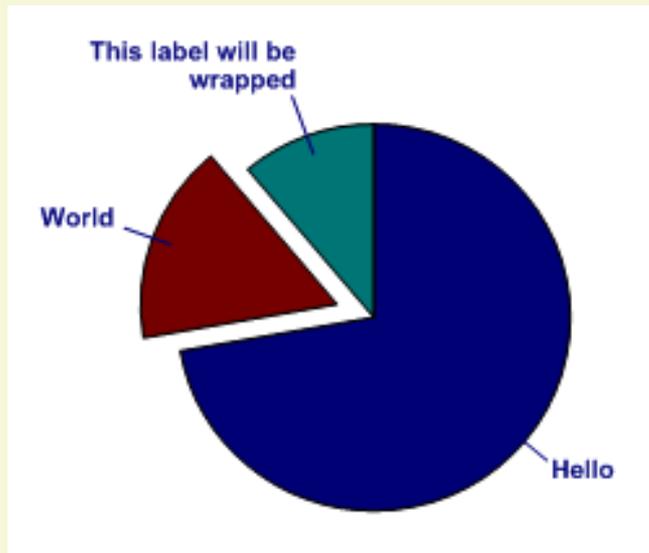


Chart Types : 1-d

- Pie



- Dial

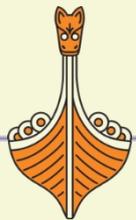
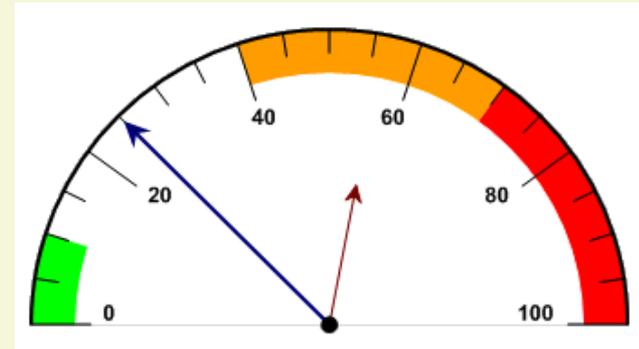
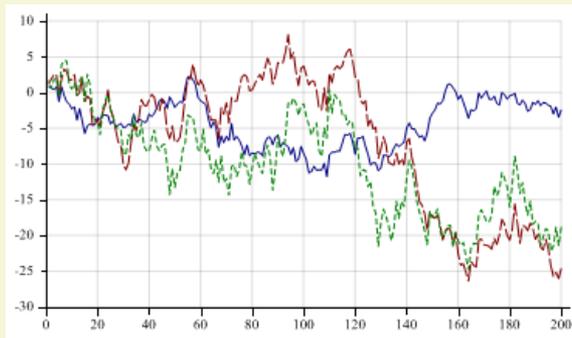
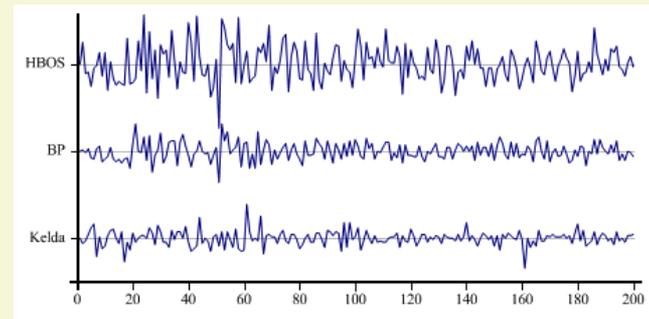


Chart Types : 2-d

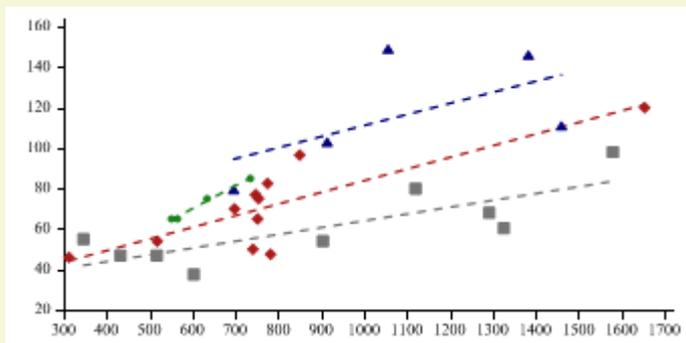
- Line



- Trace



- Scatter



- Bar

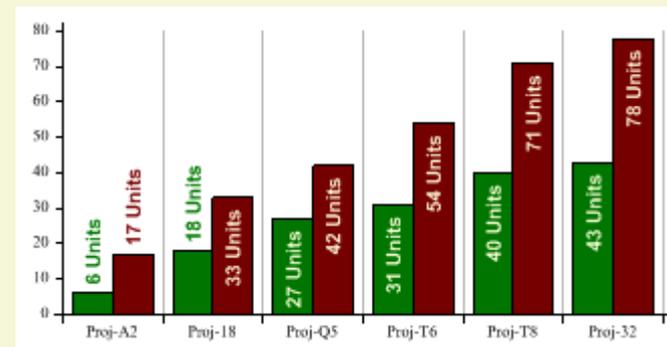
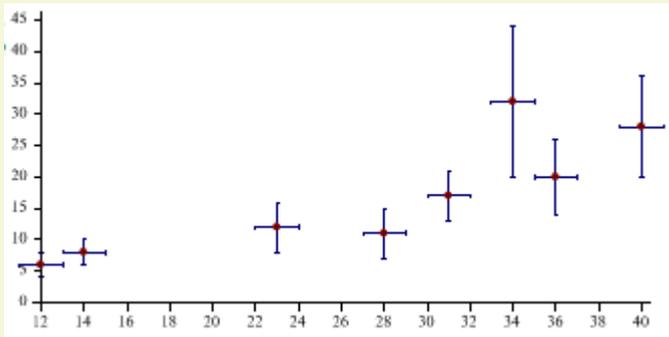
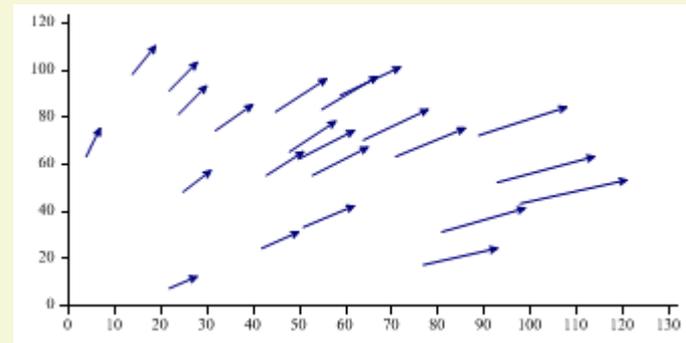


Chart Types : Specific 2-d

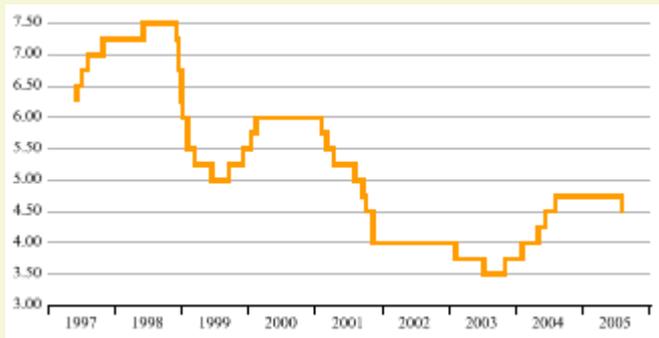
- MinMax



- Vectors



- Step



- Polar

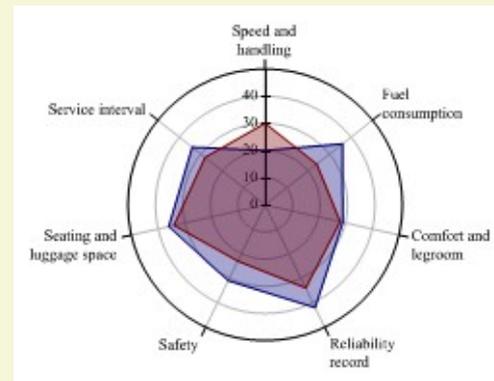
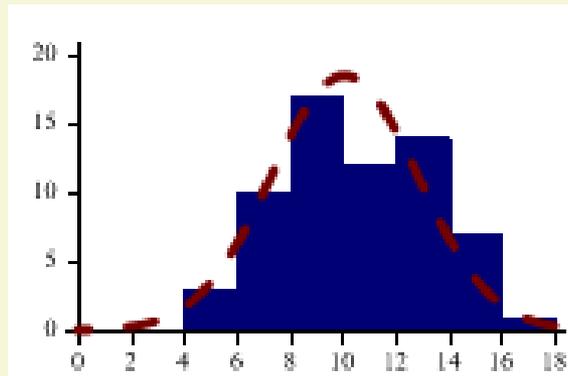


Chart Types : Statistical

- Histogram



- Box & Whiskers

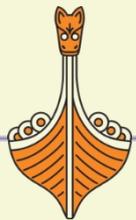
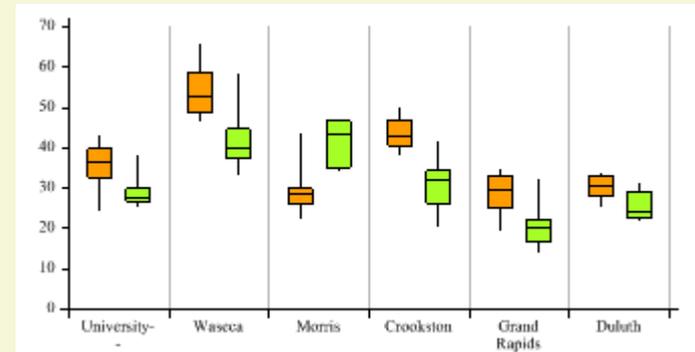
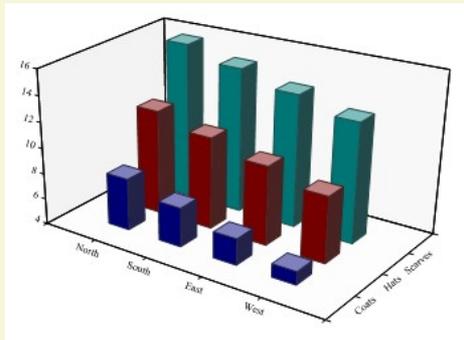
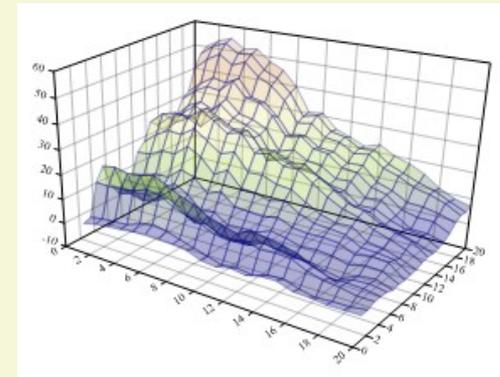


Chart Types : 3d

- Tower



- Response Surface



- Cloud

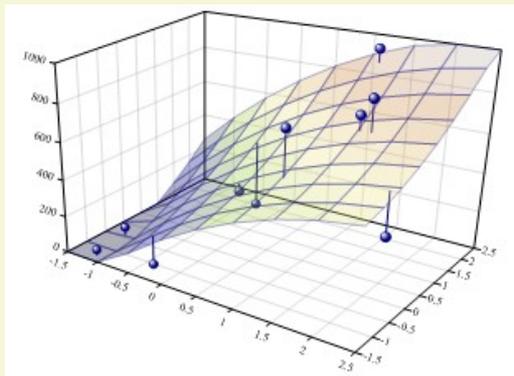


Chart Types : Readable 3d

- Bubble
- Contour

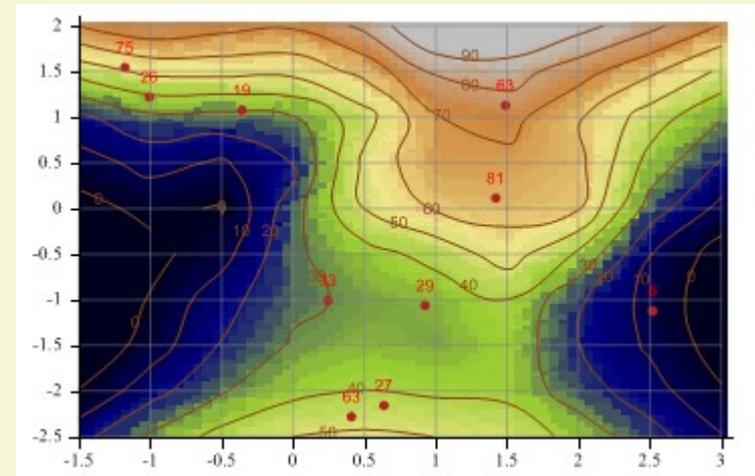
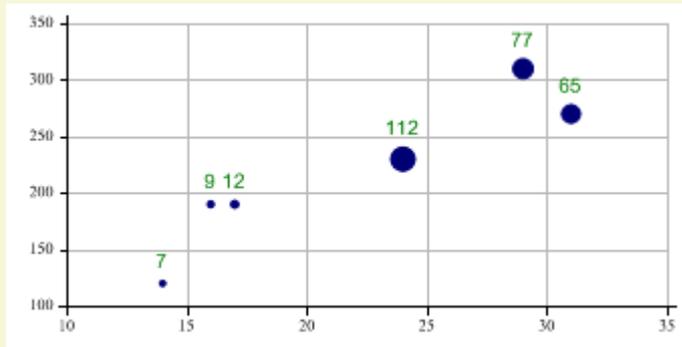
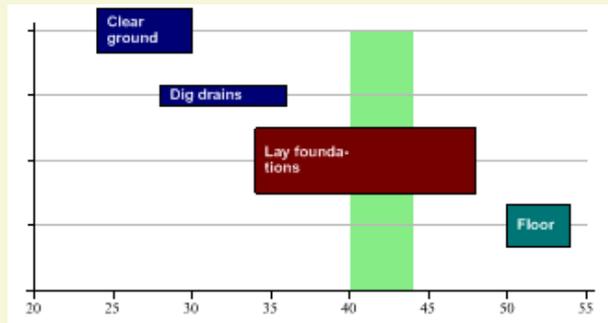
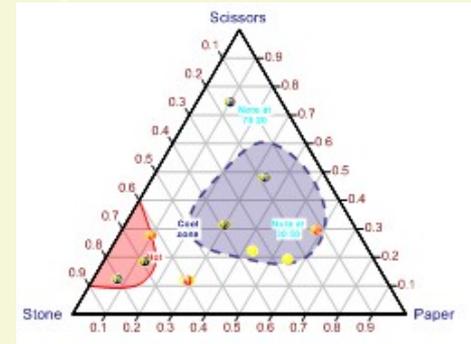


Chart Types : Misc

- Gantt



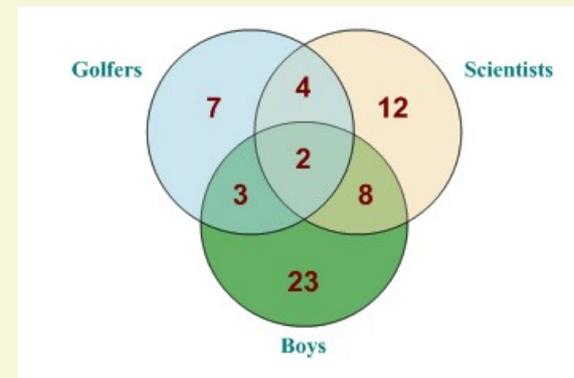
- Triangle



- Table

Average Yield	University-Farm	Waseca	Morris	Crookston	Grand Rapids	Duluth
Manchuria	26.66	41.17	30.60	36.45	27.55	25.77
Gilabron	39.94	46.47	31.95	32.15	21.78	27.77
Svansota	31.28	42.92	30.40	30.55	23.15	23.87
Velvet	33.36	43.82	32.48	36.70	27.63	24.38
Trebi	32.82	56.53	45.20	44.38	25.20	32.27
No. 457	34.85	50.15	36.12	40.00	25.82	28.15
No. 462	31.09	65.24	38.68	39.55	22.42	25.30
Pearland	30.42	42.30	36.54	33.42	30.74	31.69
No. 475	27.34	64.02	33.42	38.12	17.47	30.22
Wisconsin No. 38	38.66	68.49	38.32	42.89	27.57	30.47

- Venn diagram



Multiple Charts

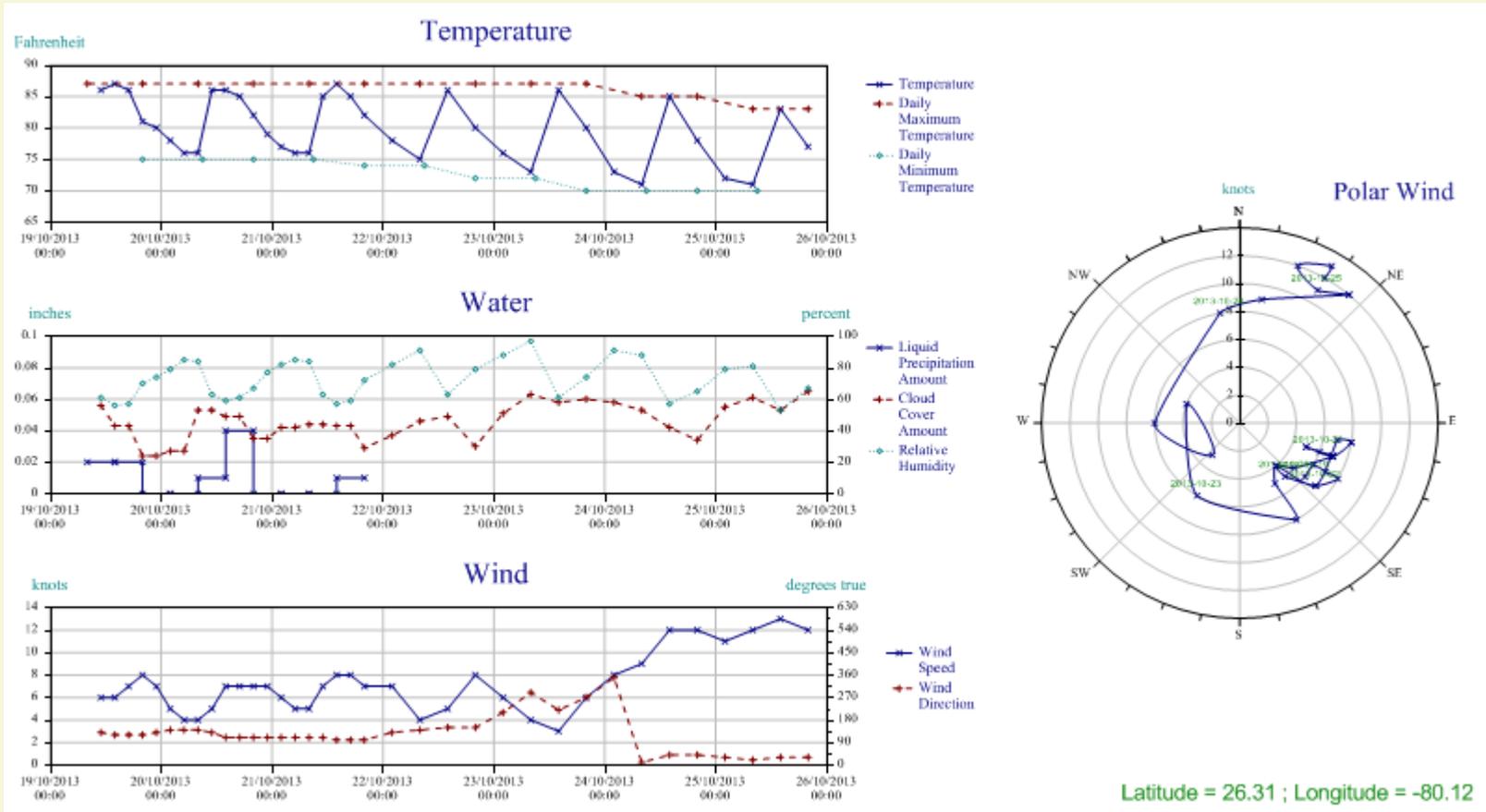


Chart Wizard (v14.0)

- Graphical data explorer
- SharpPlot script generator
- NOT a full wrapper of SharpPlot

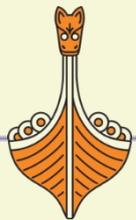
- Example :

```
key←'Angle' 'Sine' 'Cosine'  
data←key,{ω;1 2°.0ω}o2×(0,ι100)÷100
```



Come to the workshop !

- More Chart Wizard examples
- SharpPlot in depth
- SharpRain (migration from RainPro)
- Exercises with internet data
- Whatever you want



Interesting links

- <http://conference.dyalog.com> → TP03
- www.sharpplot.com
- www.findicator.fi



