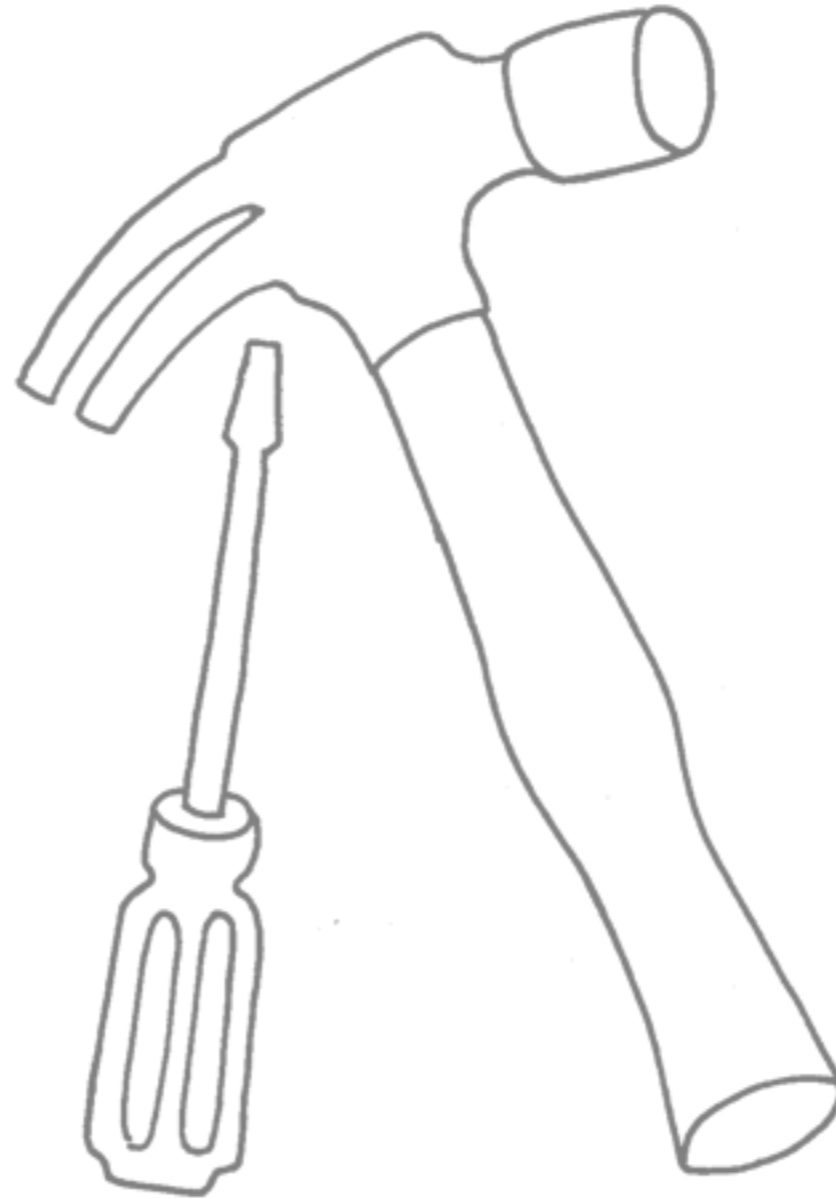


Visualization Tools

February 8, 2009



i247: Information Visualization and Presentation

Ljuba Miljkovic

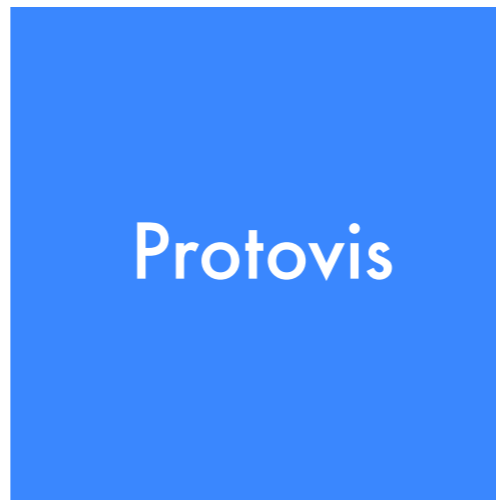
There are all kinds of tools out there...

- Ease of use / Learning curve
- Flexibility and Features
- Analysis vs. Presentation
- Presentation format
 - Image, web, interactive
- Platform
- Cost

Today's Topics



DataGraph



Protovis



Flex



Learning Curve	Low	High	High	Medium
Features	Medium	Low	Medium	High
Analysis vs. Presentation	Combo	Presentation	Presentation	Combo
Format	Image/Vector	Web*	Flash	Image/Web*
Dev. Platform	Mac	All	All	Win
Cost	\$70	Free	Free*	\$1000



DataGraph

DataGraph Pro

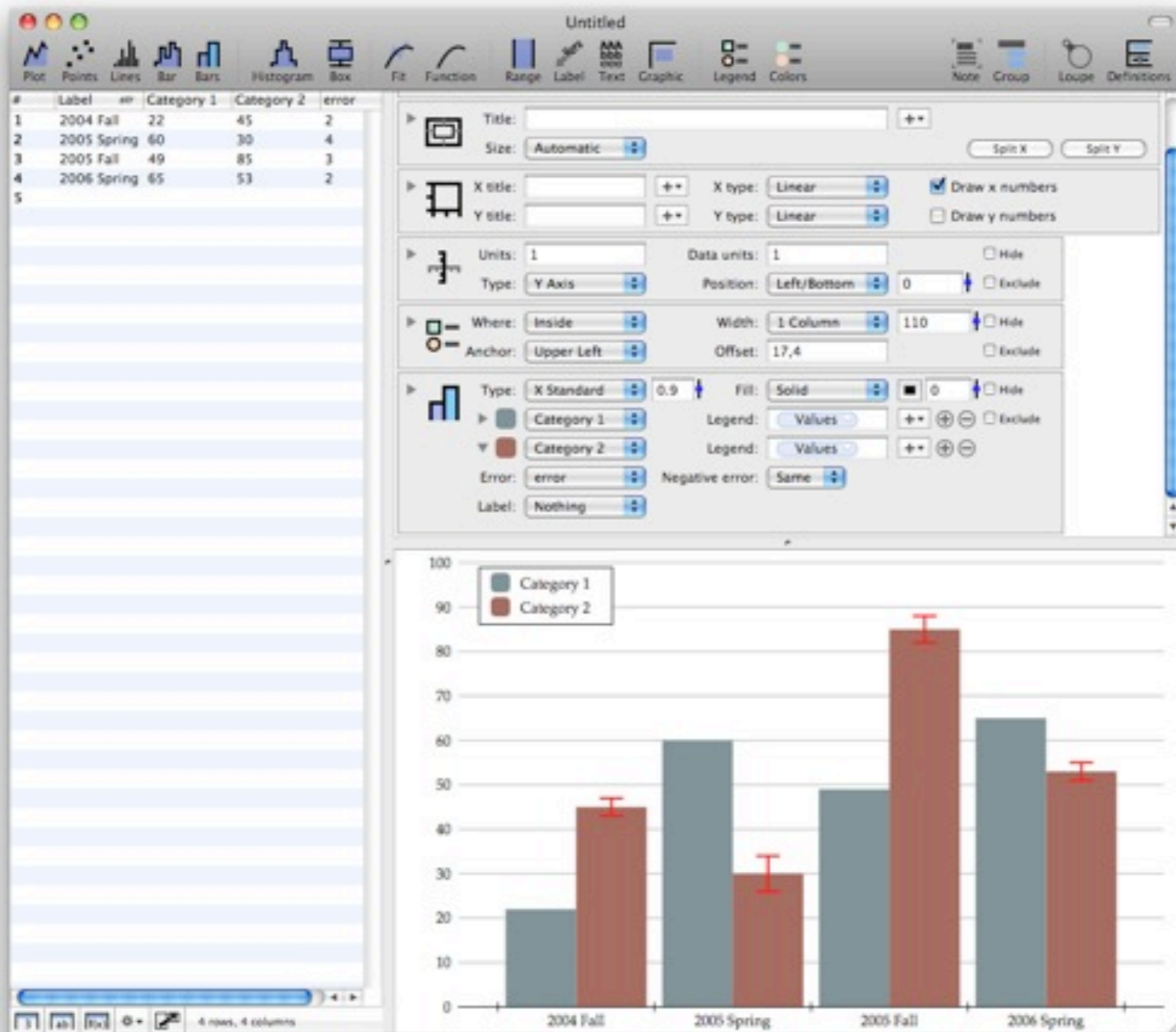
- **Many graph types**
 - bars, scatter, line, histograms, function fits, etc.
- **Imports data from Excel, text files, copy-paste**
- **Robust and fast**
 - can handles millions of data points easily
- **Publishes simple and clean graphs**
 - as opposed to Excel
- **Results fit for publication**

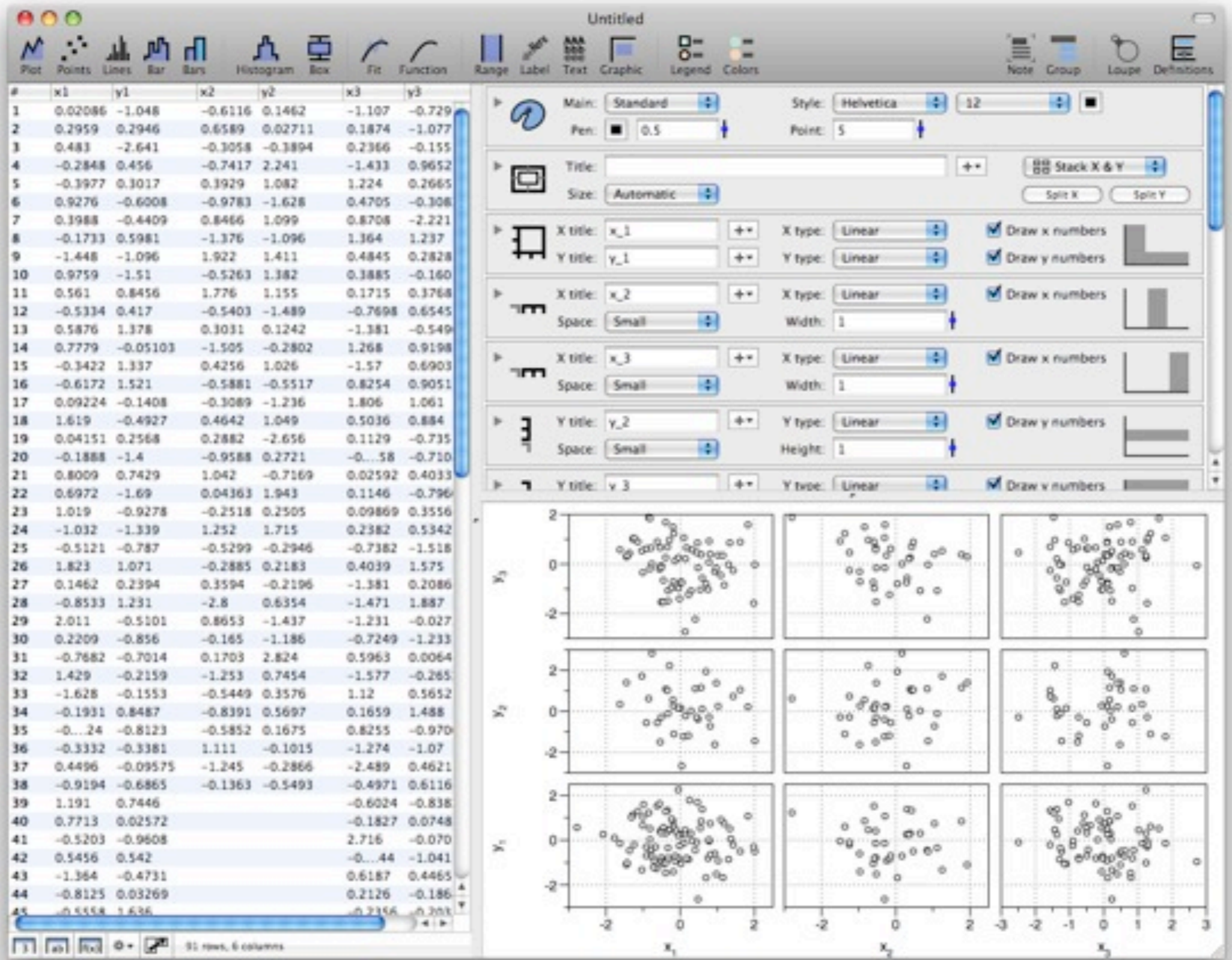


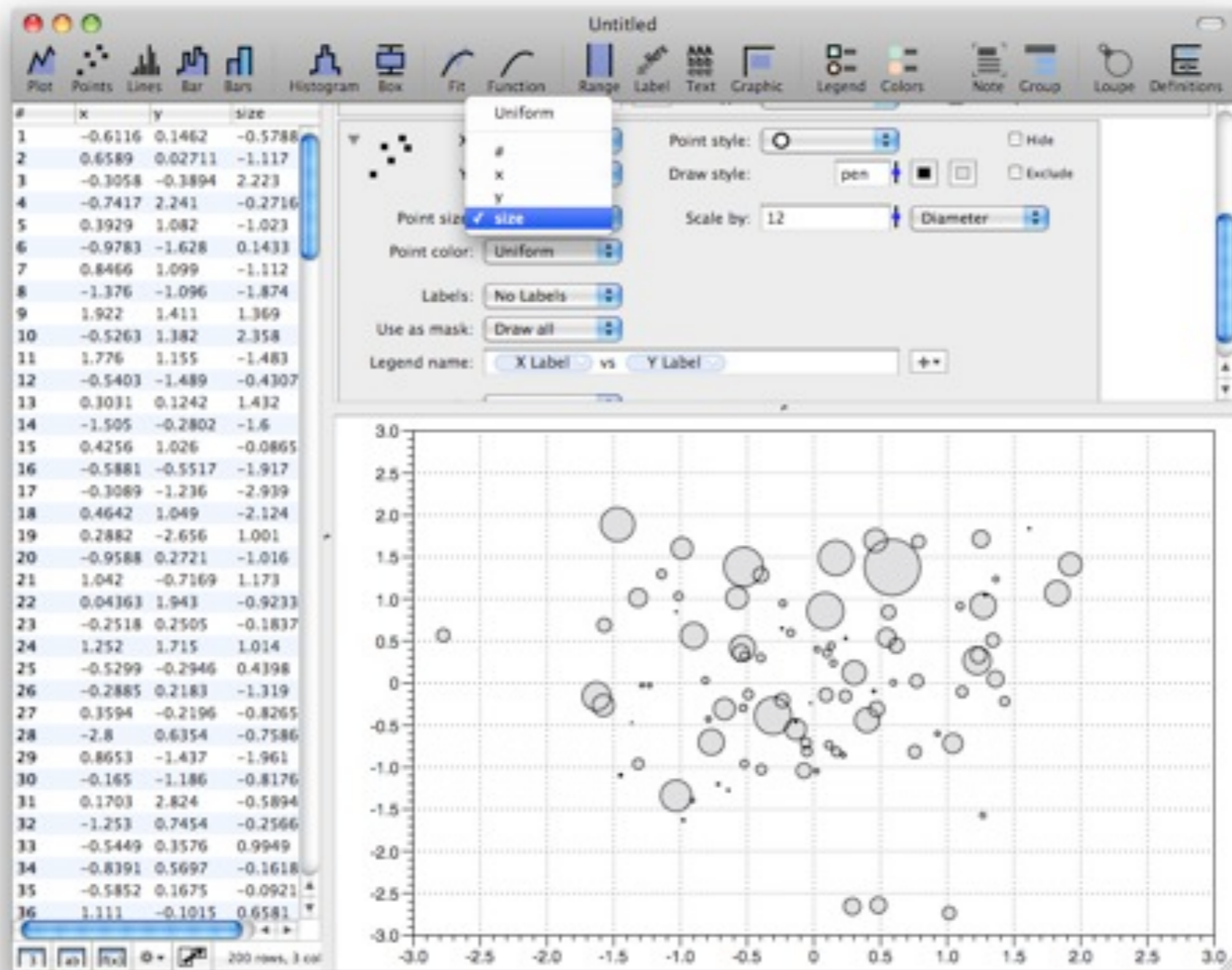
DataGraph Cons

- Mac only
- Non-interactive output
- Costs \$70









DEMO

Protovis

Protovis Pros

- Open-source (BSD license)
- Uses Javascript and SVG for web-native visualization
 - Great for data-driven websites
- In active development
- Simpler than Processing
- Free

Protovis Cons

- Not designed for analysis
- Limited interactivity
- Doesn't work in Internet Explorer (yet?)
- Can be tricky for non-programmers

DEMO

Protovis Examples

- Bar Graph
- Dot Plot
- Oakland Crime Map
- Napoleon's March to Moscow
- Zooming



Adobe Flex

Flex Pros

- Rich environment for creating interactive web apps
- Solid charting framework
- Not too hard to learn
- Compiles to Flash – viewable in most browsers*
- Open-source*, Free*
- Available for Mac, Windows, Linux*



Flex Cons

- Compiles to Adobe Flash – not viewable in all browsers
- Content not viewable on Mobile Safari devices
- Eventually not free



DEMO

Flex Examples

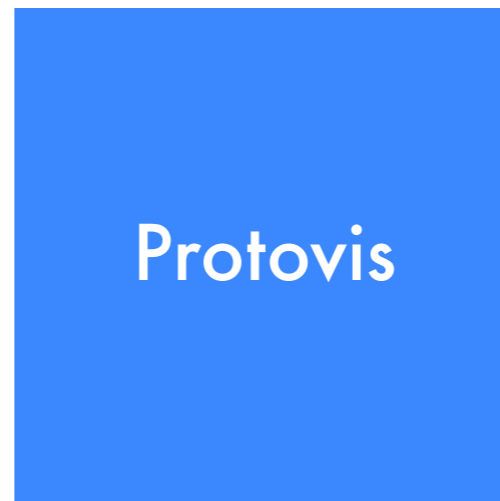
- Chart Sampler
- Drill-down Charts
- How people spend their day
- Gap Minder World



Which is best?



DataGraph



Protovis



Flex

Next Lecture

- **Design Choices in Building Basic Graphs**
- **There is reading.**