Visualization Design Principles

- Scientific Visualization vs. Information Visualization
- Simple clean design vs. “Chart Junk”
- Managing & leveraging huge amounts of data
- Understanding your Audience
  - E.g., Visualization for Science, Communication, Education, Debugging, etc.
- Importance of companion text
  (title, axis labels, legend, caption)
- Targeting visualization design to human perception & low-level vision processing

Readings for This Week

- “Eenie, Meenie, Minie, Moe: Selecting the Right Graph for Your Message”, Stephen Few, Intelligent Enterprise, 2004
- “Helping Engineers and Scientists Avoid PowerPoint Phluff”, John Mignot, IEEE Aerospace Conference, 2005
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Windows Directory Statistics
http://windirstat.info/

National Telecommunications and Information Administration, October 2003.

http://futurist.se/gldt/wp-content/uploads/12.01/gldt1201.png

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OK GO OF THE BLUE COLOUR OF THE SKY
http://blog.aupio.com/post/361650069/cover-art-of-the-week-9-of-the-blue-colour-of-the
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Stages of the Visualization Process

• Motivation & Problem Definition
• Visualization Design
• Data Collection
• Visualization Execution
• Analysis & Validation
• Visualization Revision
• Presentation

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Today’s In Class Exercise

• Teams of 2
• Given: Country & Topic
  – Spend a few minutes on that country’s Wikipedia page (no additional searching or clicking)
  – Prepare a visualization of data relevant to that country & topic
  – Use art supplies... no computers!
  – Experiment, Post, Discuss, Revise, Repeat
• Focus: Visualization Design & Visualization Revision
**Homework Assignment 2:** due Tuesday @ 11:59pm

Using a (new to you) Visualization Tool

- Select a tool (some ideas on webpage)
- Learn the tool
- Find a (very!) simple dataset
- Create 2 or more visualizations of the same/similar data with the tool
- Write a review of the tool

* Focus: Visualization Execution

**Readings for Next Week**

- “A Short Note on the History of Graph Drawing”
  Kruja, Marks, Blair, and Waters, Graph Drawing 2001
- “Graph Drawing”, Tamassia, 1997, Lecture Notes in Computer Science
- “Lombardi drawings of graphs”, Duncan, Eppstein, Goodrich, Kobourov, Nollenberg, Graph Drawing 2010

• Everyone must post a non-trivial comment or question on their chosen reading to the LMS discussion by Monday @ 11:59pm