Assignment 2: Creating Visualizations

Use existing software to formulate & answer questions

First steps
- Step 1: Pick a domain
- Step 2: Pose questions
- Step 3: Find data
- Iterate

Create visualizations
- Interact with data
- Question will evolve
- Tableau

Make wiki notebook
- Keep record of all steps you took to answer the questions

Due before class on Feb 22, 2010

Announcements

2/15: No class due to President's day
2/17: No class
**Zipdecode**  [from Fry 04]

http://acg.media.mit.edu/people/fry/zipdecode/

**Map of the market**

http://www.smartmoney.com/marketmap/

**NameVoyager**

**Generalized Selection**
Visual Queries
Model selections as declarative queries

Applicable to dynamic, time-varying data
Retarget selection across visual encodings
Perform operations on query structure

Generalized Selection
Point to an example and define an abstraction based on one or more properties [Clark, Brennan]

“Blue like this”
“The same shape as that”
Abstraction may occur over multiple levels

“Select items like this one.”
Generalized Selection

Provide generalization mechanisms that enable users to expand a selection query along chosen dimensions of interest.

Expand selections via *query relaxation*.

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Query Builder

Click: Select Items
(id = "China")

Drag: Select Range
(2000 < gni AND gni < 10000) AND (.1 < internet AND internet < .2)

Legend: Select Attributes
(region = "The Americas")
**Query Relaxation**

Generalize an input query to create an expanded selection, according to:

1. A semantic structure describing the data
2. A traversal policy for that structure

**Relaxation using Hierarchies**

Relax using abstraction hierarchies of the data
Traverse in direction of increasing generality

Examples

*A Priori*: Calendar, Categories, Geography

*Data-Driven*: Nearest-Neighbor, Clustering

**Relaxation using Attributes**

If no explicit semantic structure is available, treat data itself as a “flat” hierarchy
Select all items with matching values along the attributes chosen for relaxation
Relaxation of Networks

Haiti Donation Visualizations

Bar Charts
Dot Plots
Pie Charts
Maps