Visualizing Twitter Data Using Time-Varying Graphs

Work in Progress
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Time-Varying Graphs

- adding or removing vertices and edges
- changing different attributes associated to vertices or edges
Drawing Time-Varying Graphs

- Methods
  - Animation
  - Flipboard
  - Side-by-side
- Issues
  - Cluster stability
  - Layout stability
  - Preserving “mental map”
Twitter Visualizations

- Streamed data source
- Twitter
  - 400 million tweets sent per day
  - 4,000 per second during 2011 Super Bowl
  - Record is 33,000 tweets per second
Why Visualize Twitter?

- Twitter can tell us how information is being spread
  - Travel patterns
  - Flu outbreaks
  - Emergency response to disasters
  - Marketing
  - Current events
  - Public opinion
Twitterscope
http://newsmap.jp
What's happening?

- Find out what is trending on Twitter currently
  - How much is it trending?
  - Why is it trending?
  - People's moods and reactions
- Shifts in sentiment over time
  - location
Our Goal

1. Twitter data -> graphs
2. Analyze the graphs
3. Present findings in an appealing way
Adam Feldman's code
  - Parses tweets and connects words occurring close together
  - builds graph showing co-occurrences within tweets
  - can quickly see most common clusters of words

Twitter -> Graph
Visualization

- Take the most talked-about topics and display them graphically in clusters
- Have the graph vary over time, with topics moving in and dropping out
- The size of the clusters will be representative of the number of people discussing that topic


Thanks to Adam Feldman