

# Memplex (Browser)++: A Semantic Document Browser

Clarence Chan  
CPSC 533  
Nov. 12, 2006

## Memplex Browser++

- **Text document browser**
  - Uses semantic links, spatial arrangement
  - Color-based clustering for easier identification
- Can view local information more easily, but no advantage over a flat list of results

## The problem

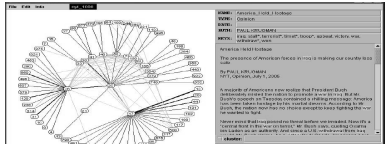
- Directed search: find docs easily if
  - we have the document title
  - we know exactly what keywords are involved
  - **We know what we're looking for**
- **What if we don't exactly know?**
  - look through a list of titles
  - "feel around", browse

## Navigation, browsing

- Analogy:
  - Directed search: Look up exact item in library call number system
  - Browsing: Go to a shelf and look around at various books
- What if we combine these?
  - Go to a bookshelf in a general call number range
  - Browse around various titles and books that are related

## Memplex Browser, v.1

- Originally a 533 project from a previous year
  - Built on top of Mike Huggett's Memplex server
  - Backend: Semantic network of documents
  - Frontend: node-link graph of network
  - Nodes are individual documents



## My contribution

- Make the system useful beyond visualizing structure
- Graph structure (browsing) augmented to support the search functionality
- Built in *prefuse*



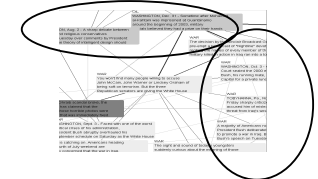
## Memplex Browser, v.2

- Attempts to make browsing of ASN more useful / relevant
  - View actual document snippets, only a few at a time
  - Idea: following local links / highly connected links makes for simpler exploratory search



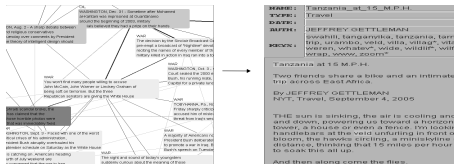
## Memplex Browser, v.2

- Takes up to three keywords in search
  - Finds a set of documents in search pane
  - Doubleclick: opens graph view
  - Elements are spatially organized / coloured into "clusters"



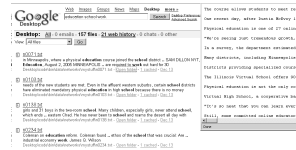
## Memplex Browser, v.2

- Interaction
  - Double-click brings item into focus, re-oriens nodes
  - Also displays it in content pane
  - Simplified panning controls?



## Compared to Google Desktop ...

- Flat list simpler to navigate - familiar
- Spatial layout - very easy to get lost
- Clustering / search results were skewed
- Good for orienting to local (1 hop away)
- Easy to find heavily referenced articles



## Conclusion: Recap

- **A text document browser that uses semantic links and spatial clustering to aid in browsing tasks**
- **Very tricky to do spatial layout of text**

## Conclusion

- Exploiting intricacies of network may not be necessarily useful
- List form is easier to navigate
- However, some kind of indication of "location" and relative referencing is useful
- May have better applications in other domains