Memoplex (Browser)++: A Semantic Document Browser

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Memoplex 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
Memoplex Browser, v.1

- Originally a 533 project from a previous year
  - Built on top of Mike Huggett's Memoplex 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
Memoplex 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
Memoplex 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”
Memoplex Browser, v.2

- Interaction

  - Double-click brings item into focus, re-orients 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