Interaction Techniques

Based on a person’s intent

- Select – *mark something as interesting*
- Explore – *show me something else*
- Reconfigure – *show me a different arrangement*
- Encode – *show me a different representation*
- Abstract/Elaborate – *more or less detail*
- Filter – *show me something conditionally*
- Connect – *show me related items*

Selection

- Mark something as interesting
- Often combined with other techniques

http://faculty.uoit.ca/collins/research/docuburst/index.html

Explore

- Show me something else
- Examine subset of data cases (view-based)
  - E.g. Panning (move viewpoint across representation)
  - E.g. Direct Walk (move viewing focus through clicks)

http://www.visualthesaurus.com/vocabgrabber/
Reconfigure

• Show a different arrangement
  – Move data items to
    • Enable better comparison
    • Avoid occlusion
    • Correspond to some mental model of the data

Encode

• Show a different:
  – Representation Type
  – Visual appearance: Colour, Size, Shape,...
Encode

• Animation can aid encoding changes

Abstract/Elaborate

• Show me more or less detail
  – Adjust level of abstraction
  – Detail-on-demand
  – Zooming (as long as representation isn’t fundamentally altered)

Warning: Not every technique belongs to just one category.
Filter

• Show subset of data based on condition
  – e.g., by selecting a data range
  – or filtering based on distance from focus

AlphaSlider, Ahlberg & Shneiderman, 1993; DocuBurst, Collins, 2007

Connect

• Show related items
  – e.g. brushing

Single view
Heer & boyd, InfoVis 2005

Multiple view
Collins & Carpendale, InfoVis 2007