

Information Visualization
CMSC 838B – Spring 2003

Trees

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This presentation adapted from [John Stasko](#)

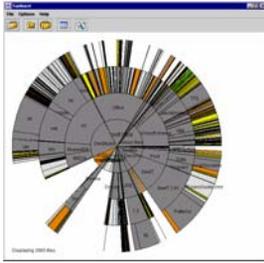
Hierarchies (Trees)

- Definition
 - Data repository in which cases are related to subcases
- Pervasive
 - Family histories, ancestries
 - File/directory systems on computers
 - Organization charts
 - Animal kingdom: Phylum, ..., genus, ...
 - Object-oriented software classes
 - ...

Trees

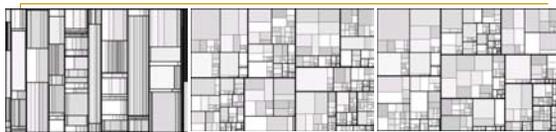
- Two main representation schemes
 - Node-link
 - Space-filling
- Approaches to scale:
 - Complex representation
 - Navigation
 - Elide (don't show) some nodes
 - Show nodes at different sizes

SunBurst – Stasko et. al.



Treemap – Shneiderman et. al.

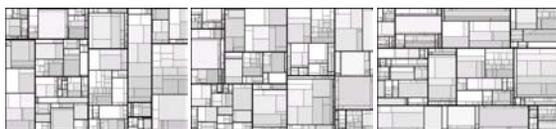




Slice-and-dice

Cluster

Squarified



Pivot-by-middle

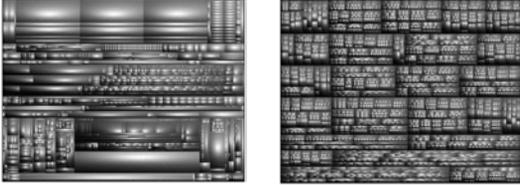
Pivot-by-size

Strip

Variation: Cushion Treemap

Add shading and texture to help convey structure of hierarchy

Van Wijk '99



Questions

- What tasks are best supported by each vis?
- Can multidimensional data per node be portrayed?
- How does the visualization scale?
- Can users quickly understand the representation?
