# More Trees (Space-filling)



CS 4460 - Information Visualization

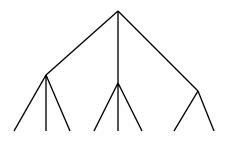
Many PPts courtesy John Stasko

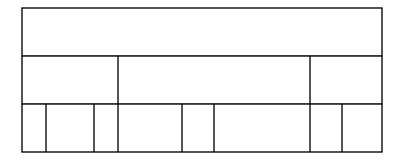
## A Space-Filling Representation



Each item occupies an area

Children are "contained" under parent

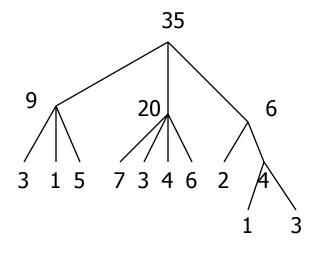


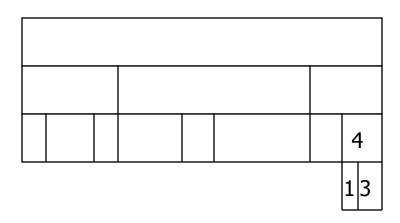


One example

### Called "Icicle Chart"







#### A Real Icicle Chart

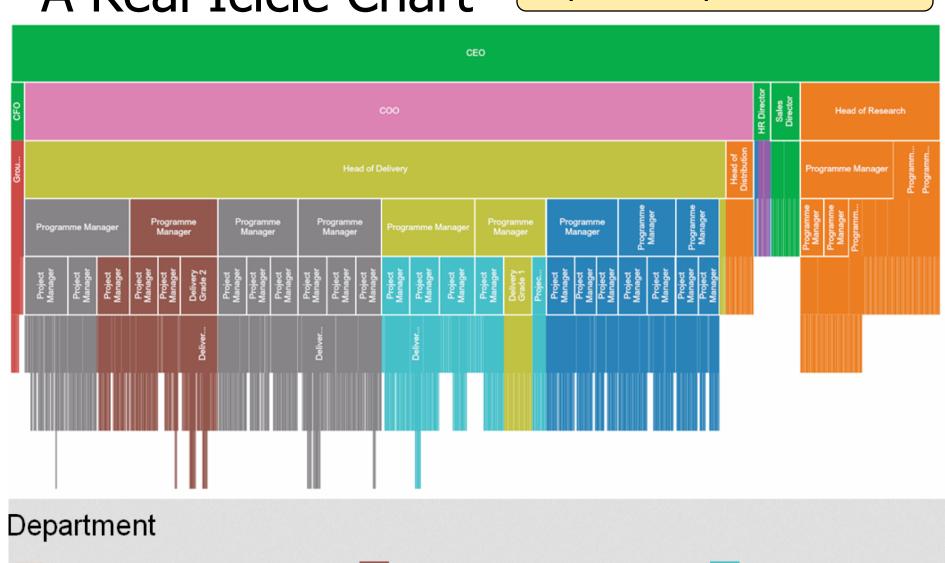
Distribution

Executive

Any similarity to SunBurst?

Project Delivery

**Projects** 



IT Programme Delivery

Operations

# Treemap Issues



- Aspect ratio of individual areas
- Showing hierarchy

## Treemap Area Aspect Ratios



These kinds of rectangles are visually unappealing

And hard to compare areas — which has bigger area?

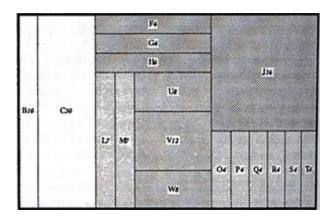
# Showing Hierarchy



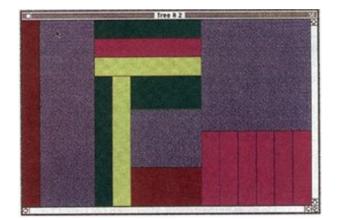
- Regular borderless treemap makes it challenging to discern structure of hierarchy, particularly large ones
  - Supplement Treemap view
  - Change rectangles to other forms

# **How Show Hierarchy?**





Nesting not explicitly shown



Get Get Get Get Red Get Red Get Red Set Te

Nesting explicitly shown



Good for how many levels?

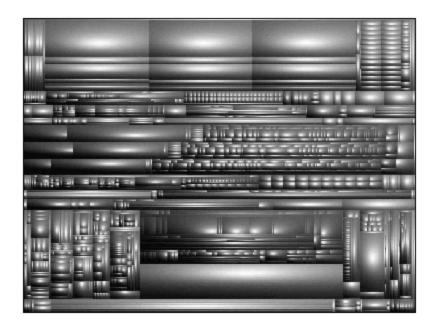
CS 4460

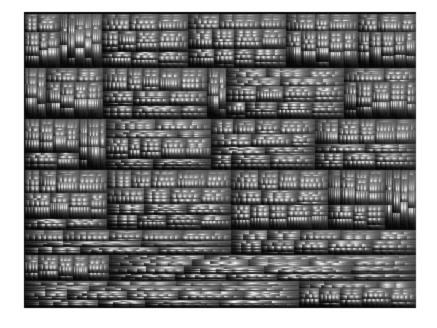
## Variation: Cushion Treemap



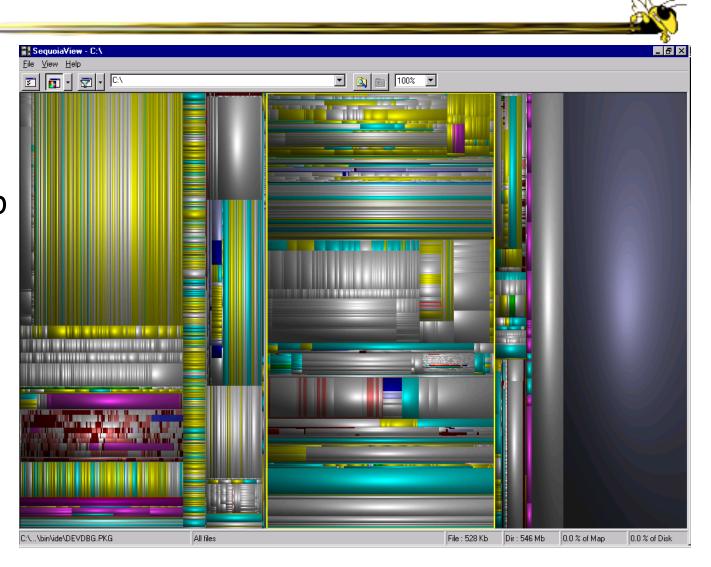
Add shading and texture to help convey structure of hierarchy

Van Wijk & van de Wetering InfoVis '99





File visualizer built using cushion treemap notion



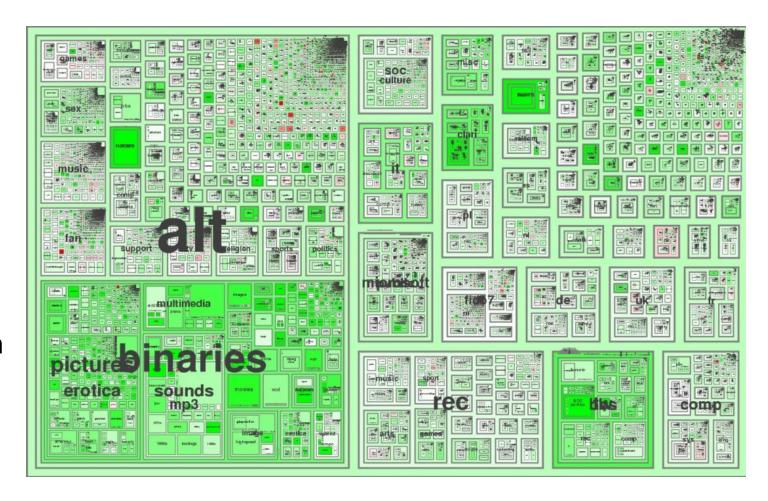
Demo

## **Internet News Groups**



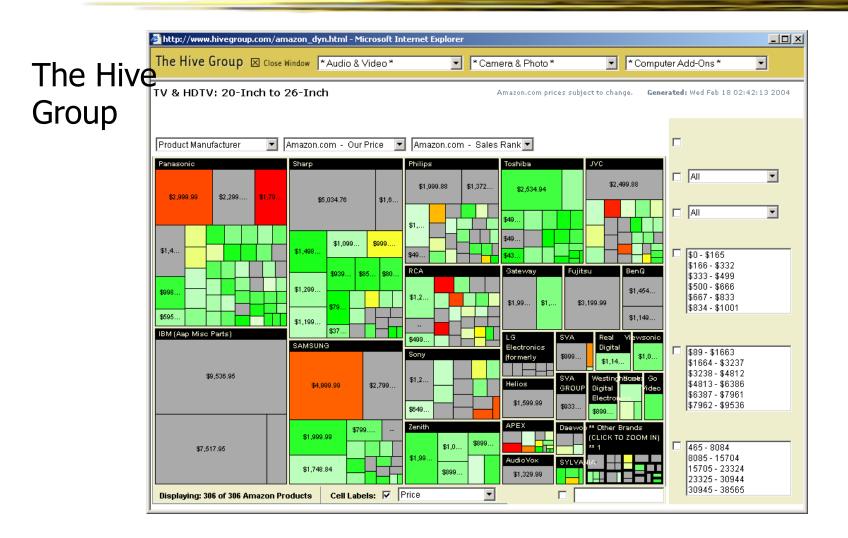
**NetScan** 

Fiore & Smith Microsoft



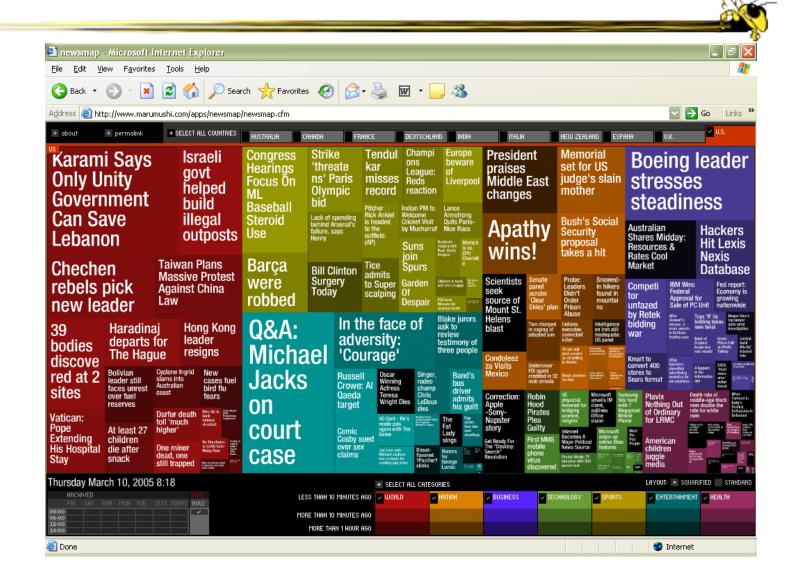
### **Product Sales**





### **News Stories**

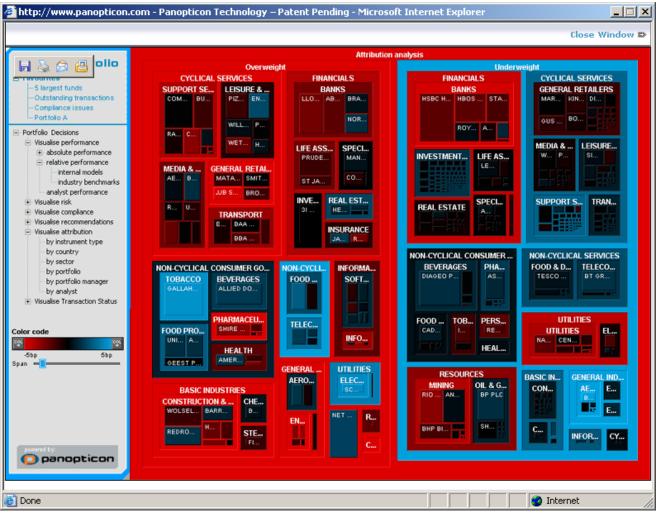
#### Marumushi



### **Investment Portfolios**



#### **Panopticon**



# Let's Use a Tree-Map Program

- O to http://www.cs.umd.edu/hcil/treemap/demos/umd.edu/hcil/tree □ c → ↑ ☆ □ ▼ ✓ Ireem
- DownloadTreemap 4.1.2
- Run the program
- Open file
  - 43causesofdeath-65plus.tm3

#### **Treemap Demo**

If you agree to the Terms and Conditions of the <u>Treemap Non-cc License</u>, and have registered your license by filling out the <u>Treer Form</u>, you may download the Treemap Demo.

This zip file contains the complete software needed for the Treemap Demo. The available for non-commercial use. By installing this software, you agree to this offered on an AS IS basis, and is not supported.

For commercial licensing information, please contact the Office of Technology The University of Maryland (www.otc.umd.edu) 301-403-2711, James Poulos

#### **Download Treemap 4.1.2 (requires Java 1.4)**

All the documentation is ONLINE!

Note: Treemap 4.1.2 is a **BETA** version, which means it is expected that you fi unexpected behavior.

Please feel free to report them to us as you find them. There are many new fe

