

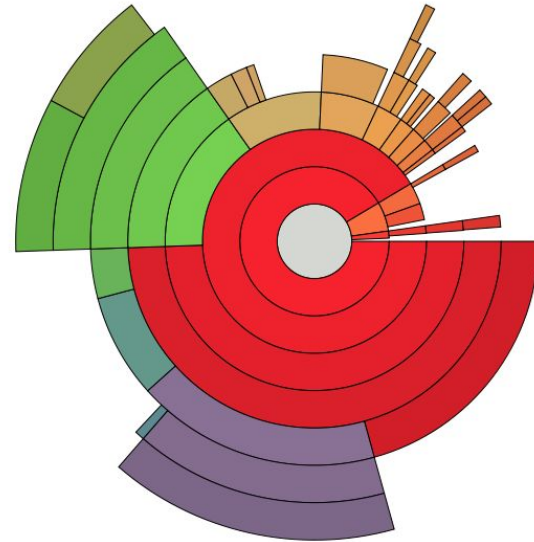
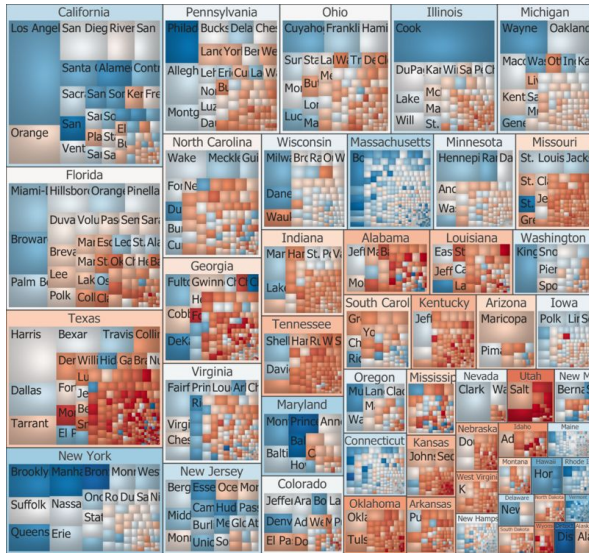
Sunburst Graphs



Mike Pettit and Tim Baeder

What is a sunburst graph?

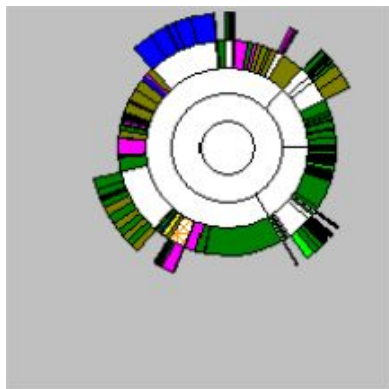
- Expansion of the donut chart to include hierarchical information
- Alternative to other space-filling techniques like TreeMaps
- Designed and evaluated by John Stasko



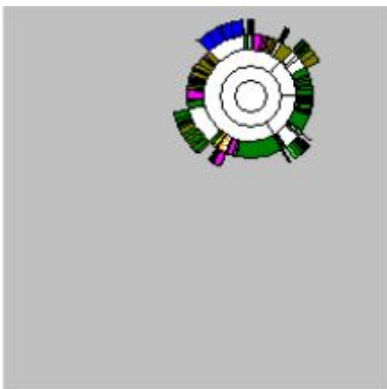
How is data encoded?

- Center is a root node
- Each slice coming off of that is a child of that root
- Each of those slices can have their own children
- As we expand outward from the center, we are going deeper in each tree
- So the angle sweep corresponds to the value of each node
- Additional encodings possible like varying the width of the slice for additional dimensionality

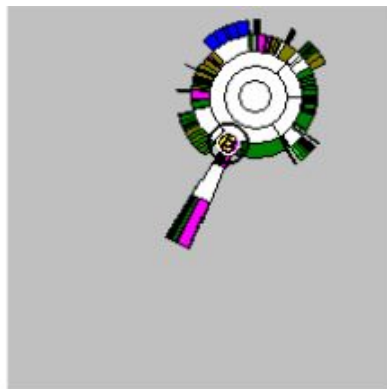
Angular Detail Method



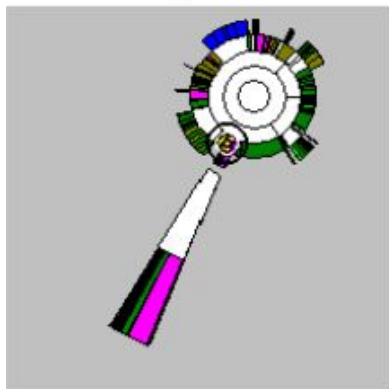
(a)



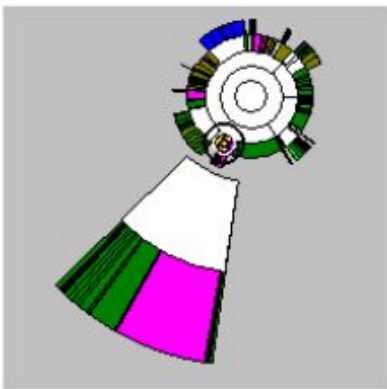
(b)



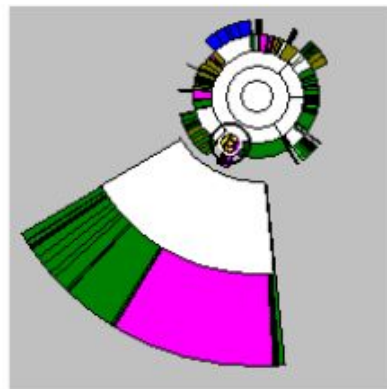
(c)



(d)

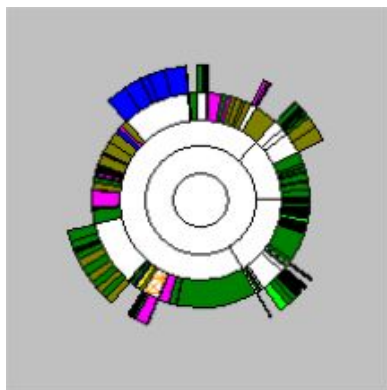


(e)

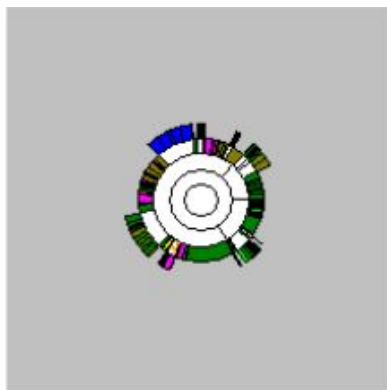


(f)

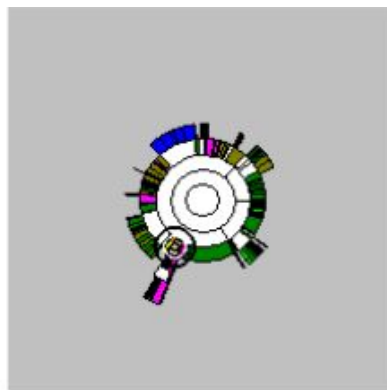
Detail Outside Method



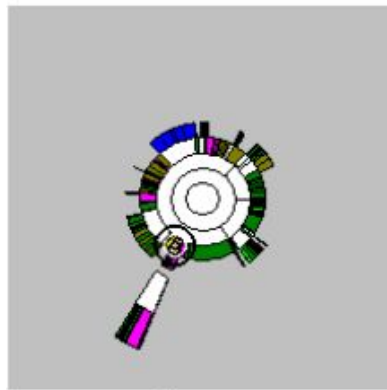
(a)



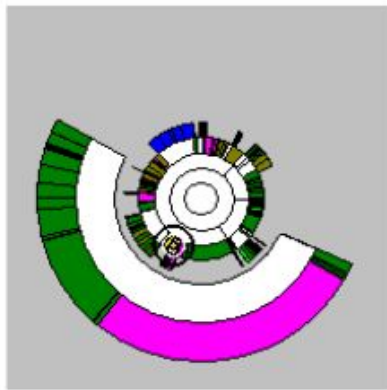
(b)



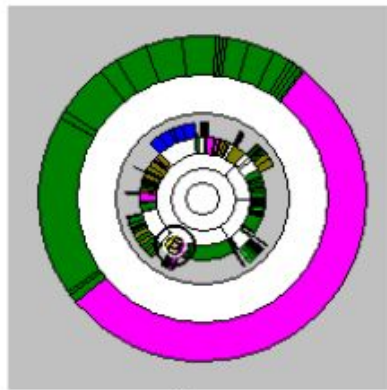
(c)



(d)

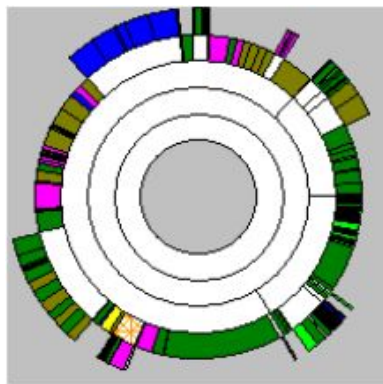


(e)

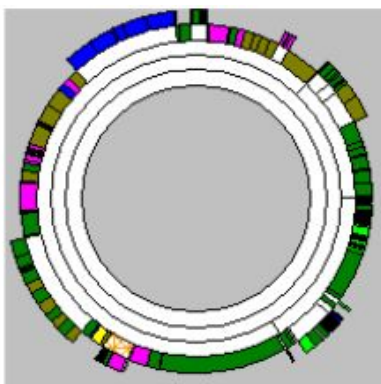


(f)

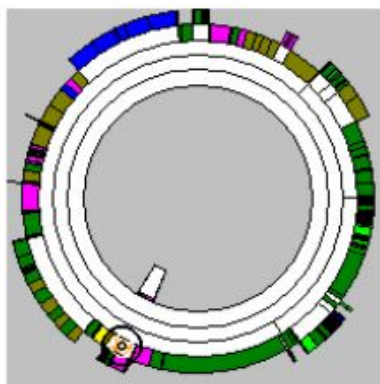
Detail Inside Method



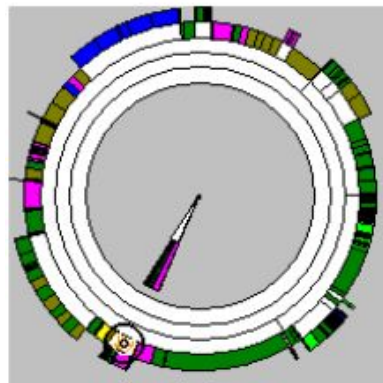
(a)



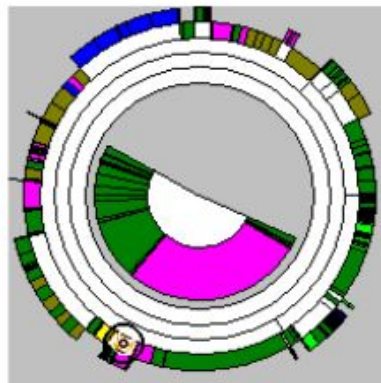
(b)



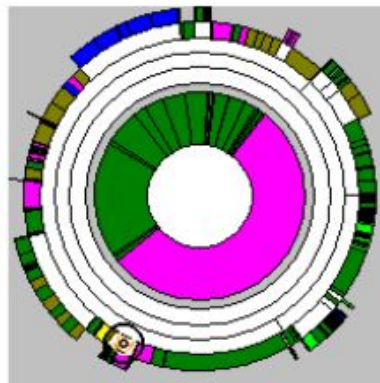
(c)



(d)



(e)



(f)

Our Implementation

(go/sunburst)

Pros and Cons

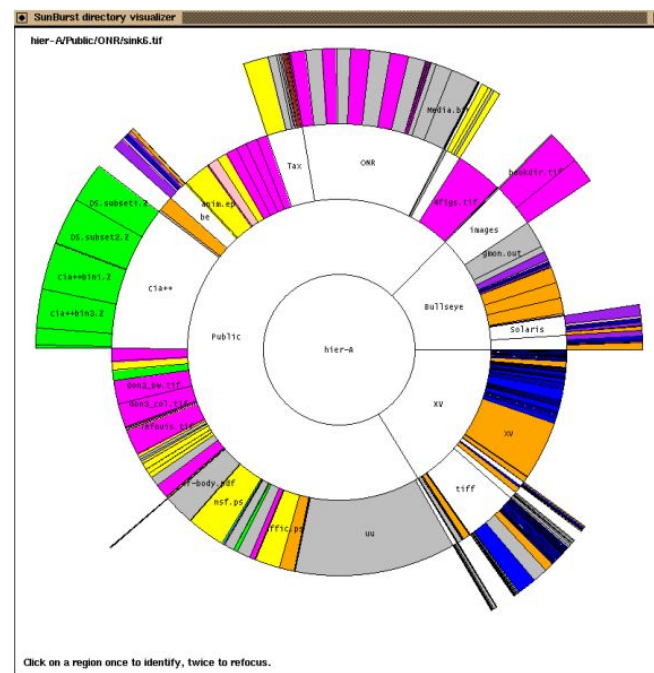
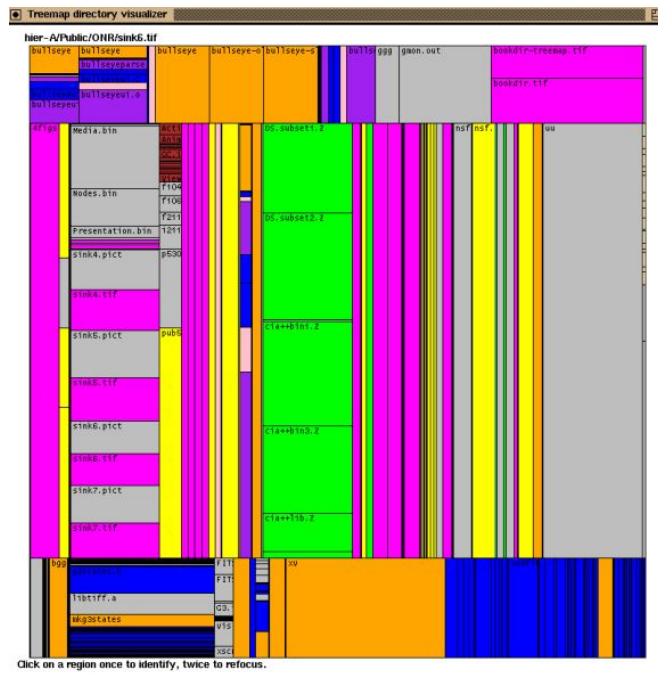
Pros:

- Great for navigating hierarchical data
- Shown to be more effective at visualizing a “large” dataset
- Doesn't lose the middle layers of hierarchy
- More intuitive and easier to learn than alternatives (e.g. TreeMap)

Cons:

- Hard to estimate the exact value using arc length
- Small, periphery arcs can be hard to see/analyze without interaction
- Not as space-filling as alternatives

TreeMap vs Sunburst



References

<http://www.cc.gatech.edu/~john.stasko/papers/ijhcs00.pdf>

<http://www.cc.gatech.edu/gvu/ii/sunburst/>

[https://en.wikipedia.org/wiki/Pie_chart#/media/File:Disk_usage_\(Boabab\).png](https://en.wikipedia.org/wiki/Pie_chart#/media/File:Disk_usage_(Boabab).png)

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<http://www.cc.gatech.edu/~john.stasko/papers/infovis00.pdf>