

Arranging Data with Layouts



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Pie Charts



Don't Use Pie Charts



One-trick ponies

Show proportionality reasonably well...

And do NOTHING else well

The Aquaman of data visualization

They don't tessellate

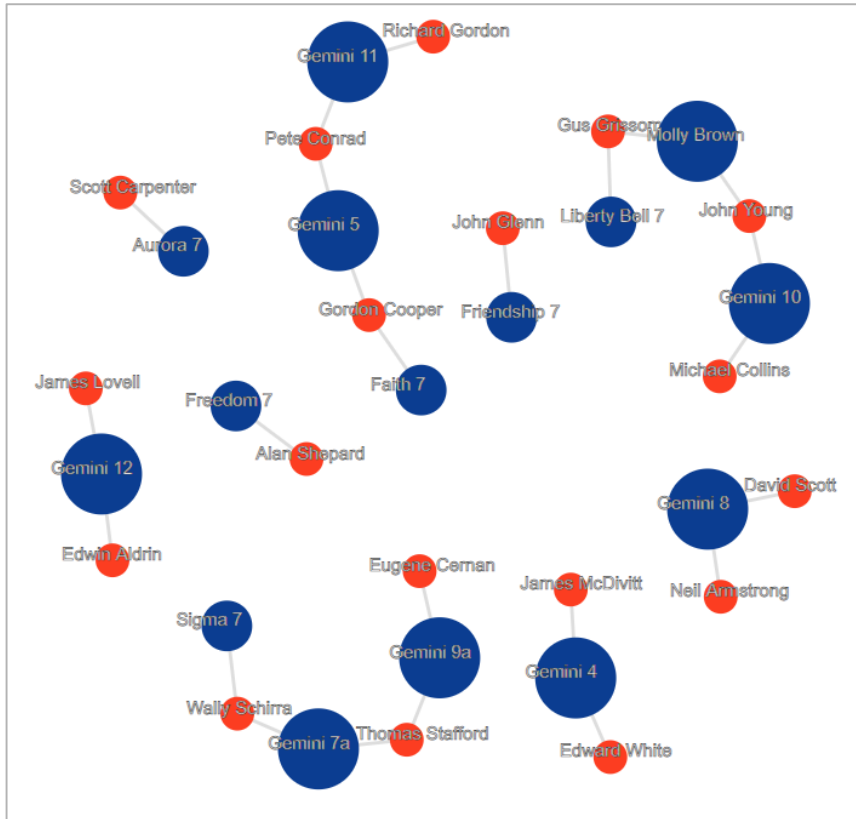
Don't scale effectively

Too many wedges breaks a color scheme

And on, and on, and on...



Force-directed Layouts



A simulation-based alternative to...

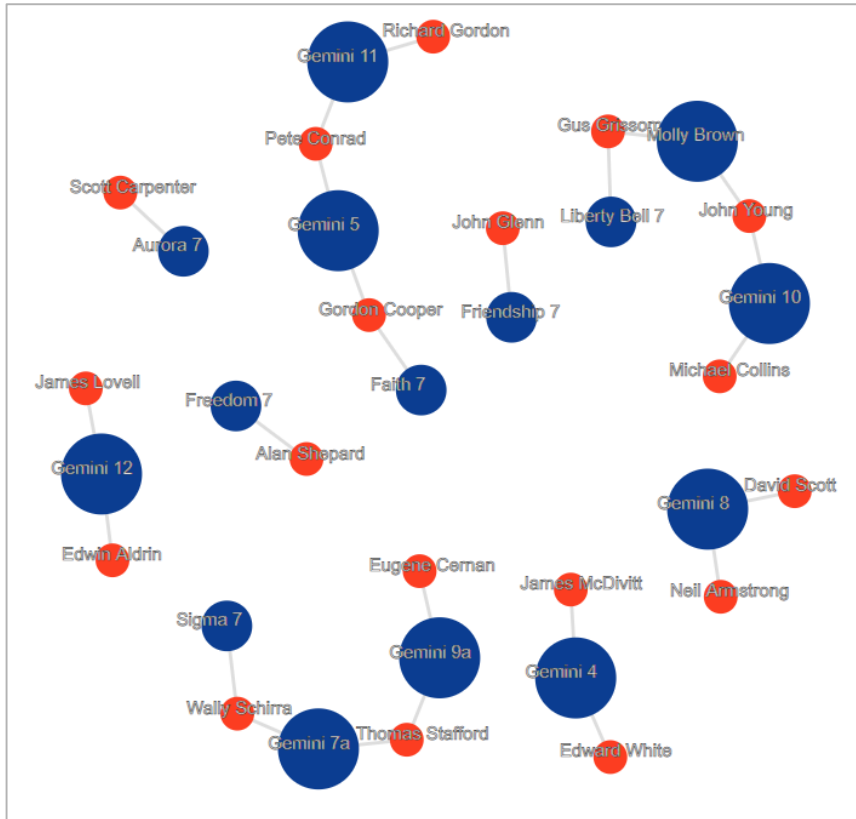
- Manual positioning
- Animation
- Easing

Represents hierarchies well

- Dynamic relationships



Force-directed Layouts



Positions and spacing are driven by forces

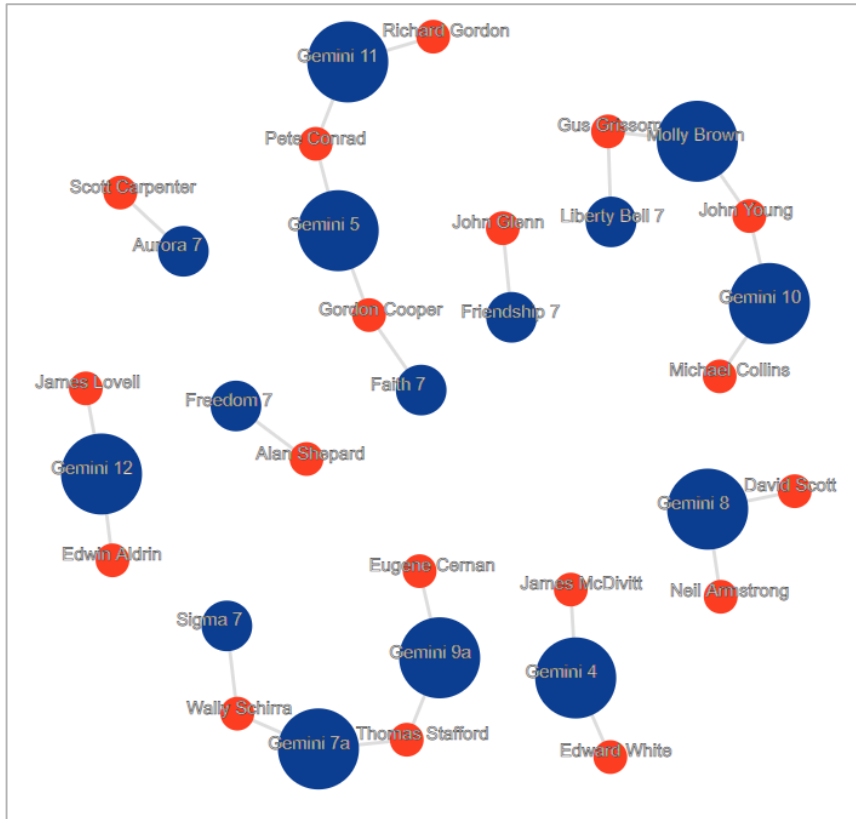
- The D3 engine figures it out for you

Forces like

- Gravity / charge
- Linking
- Collision-detection



Ticks



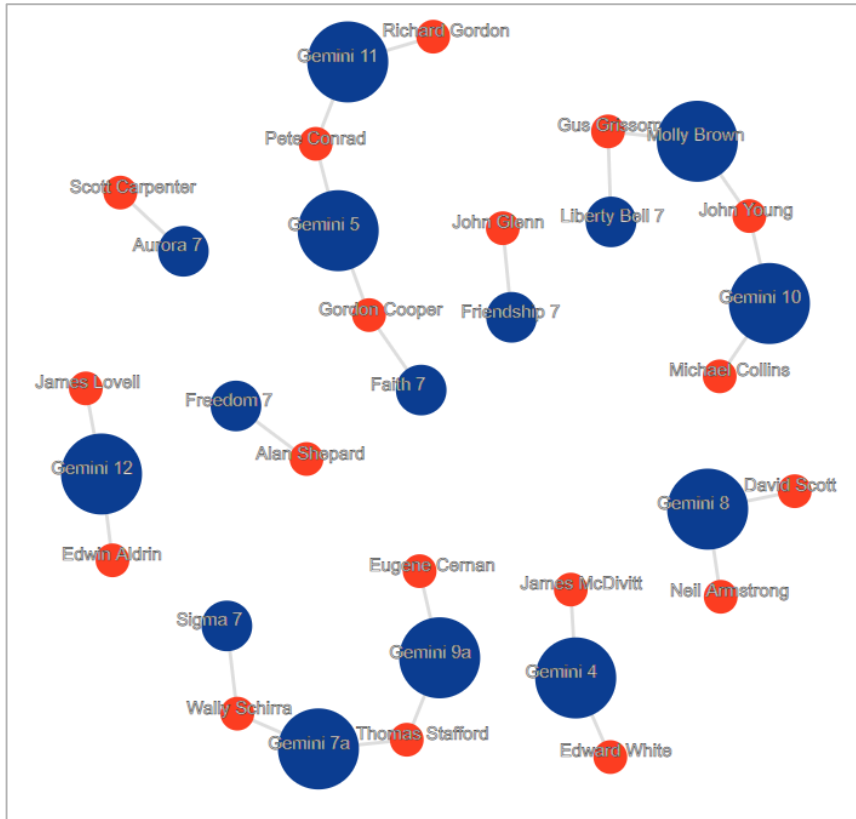
Ticks represent increments of the simulations

Correspond (roughly) to frames

The Tick function allows you to reposition your elements according to the effects of the simulation



REAL Graph Data



Nodes

- Name property
- Optional id

Links

- Optional
- Source and Target
- Links nodes to each other



Parting Thoughts on Force-directed Layouts



Summary



D3 Layouts

- What they are
- A pie chart
- You shouldn't use pie charts
- We made one anyway
- Annular visualization
 - With different inner radius values
- How this stuff is stored in the DOM

Force-directed Layouts

- With an astronaut graph
 - Yes, graph
- We broke down a handful of forces
- What their effects are on the layout
- Walked through the tick function
 - Two different ways to apply the results