

SVG

- Elements are part of the DOM
- CSS
- Drawing with vectors
- Animations & effects built in
- Standard syntax, accessibility
- Responsive to resolution/text changes

Canvas

- Elements drawn programmatically
- Drawing by pixels
- Animation not built in
- Can be fuzzy at other resolutions
- High-performance for many, small objects – especially on mobile

WebGL

- ...
- Even higher performance for many, small objects

SVG

- D3

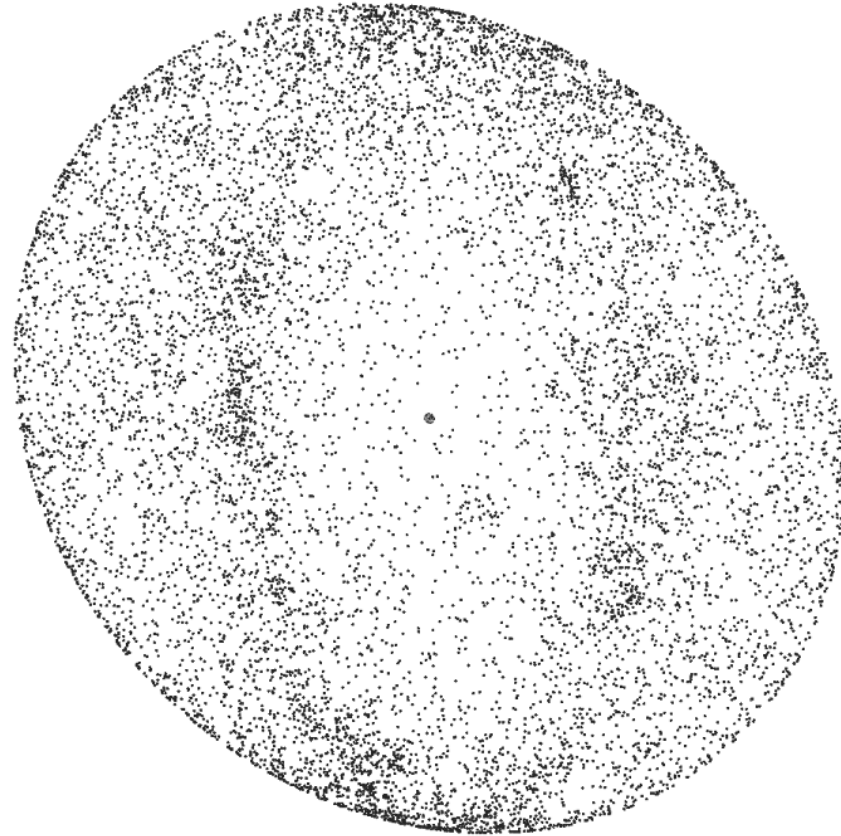
Canvas

- D3 (sort of)
- Pixi.js

WebGL

	SVG	Canvas	WebGL
D3	Y	Sort of...	N
Two.js	Y	Y	Y
Three.js	Y	Y	Y
Pixi.js	N	Y	Y
NetworkCube	N	N	Y

Comparison of SVG, Canvas, WebGL, etc.

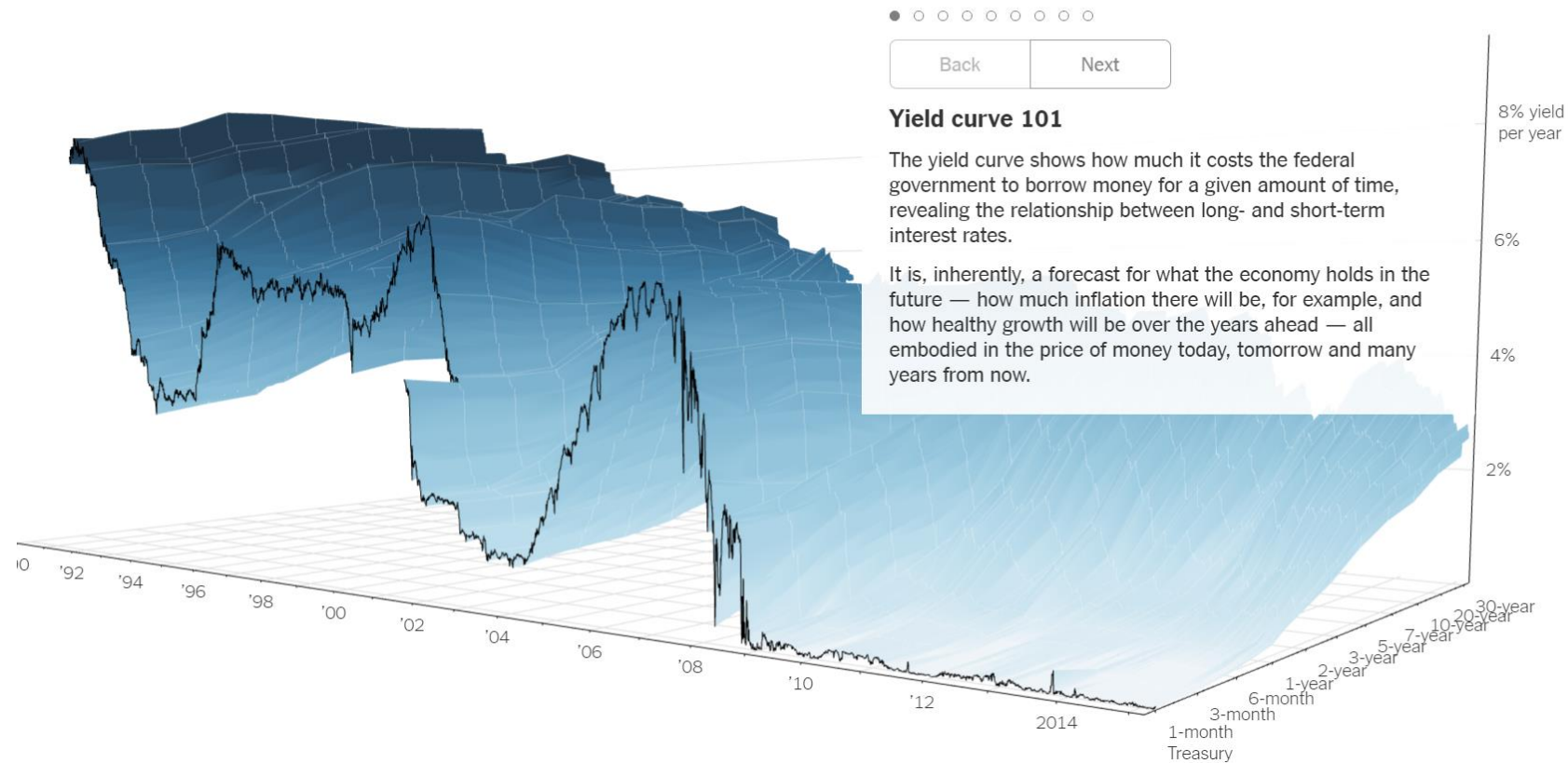


Hybrid approaches

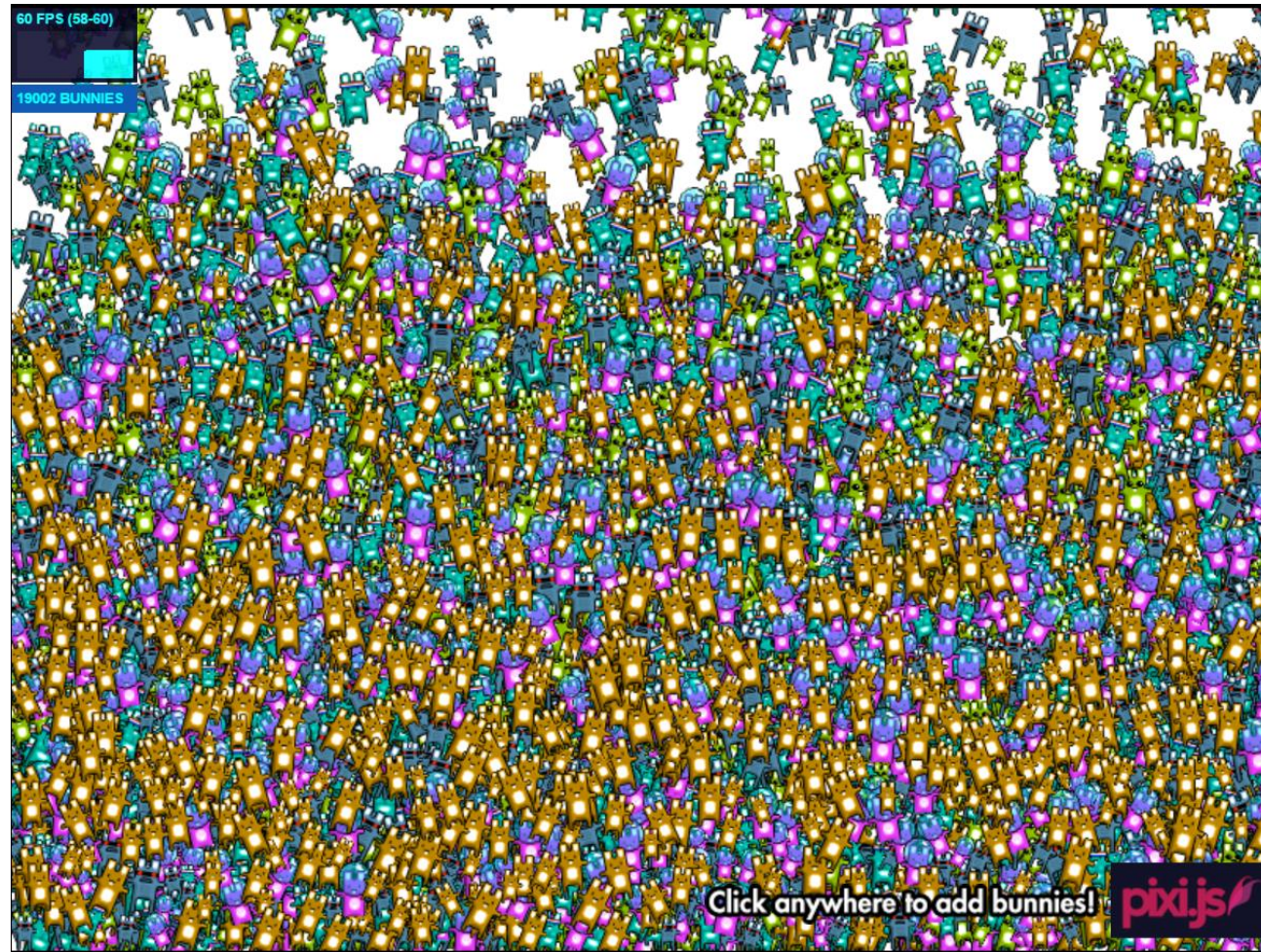
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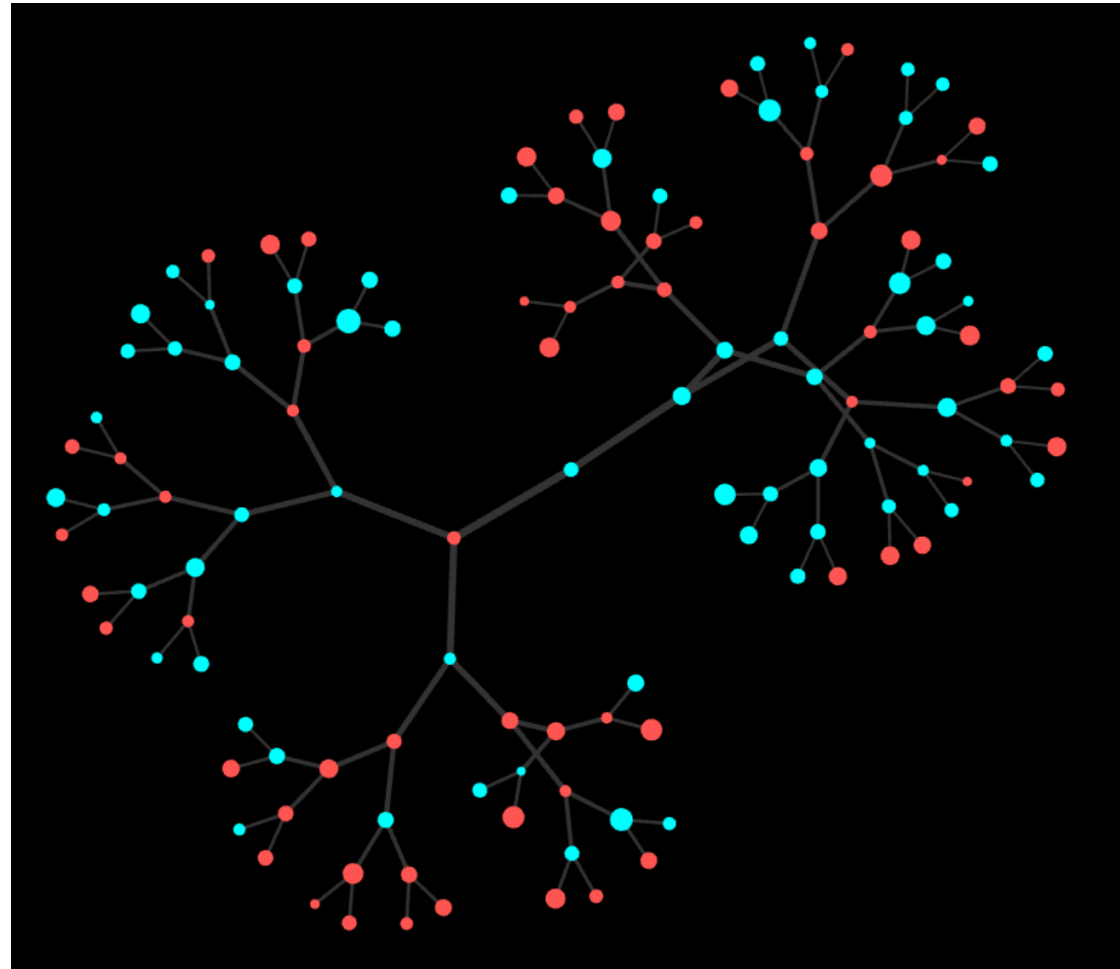
By GREGOR AISCH and AMANDA COX MARCH 18, 2015



Pixi.js Bunnymark



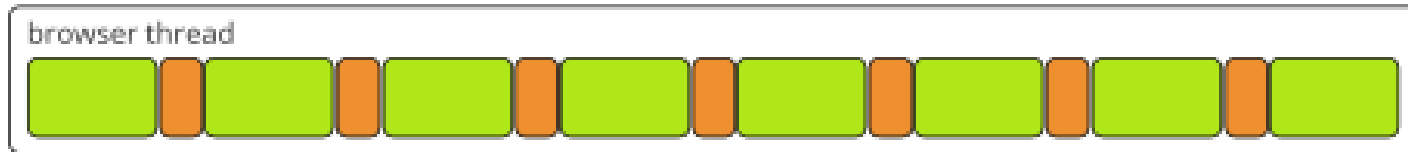
[Ngraph/VivaGraphJS](#) + [Pixi.js](#)



[Ngraph/VivaGraphJS](#) + [Pixi.js](#) layout in web worker

render time layout time

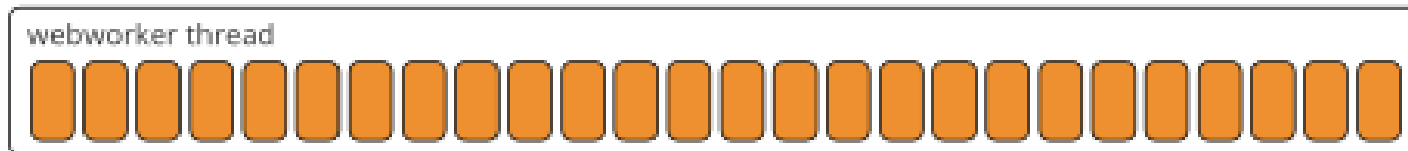
single threaded solution



8 renders, 7 layouts

[Without web workers](#)

multi-threaded solution



10 renders, 26 layouts

[Web workers](#)

Ngraph/VivaGraphJS: Build something!

<https://github.com/anvaka/VivaGraphJS>