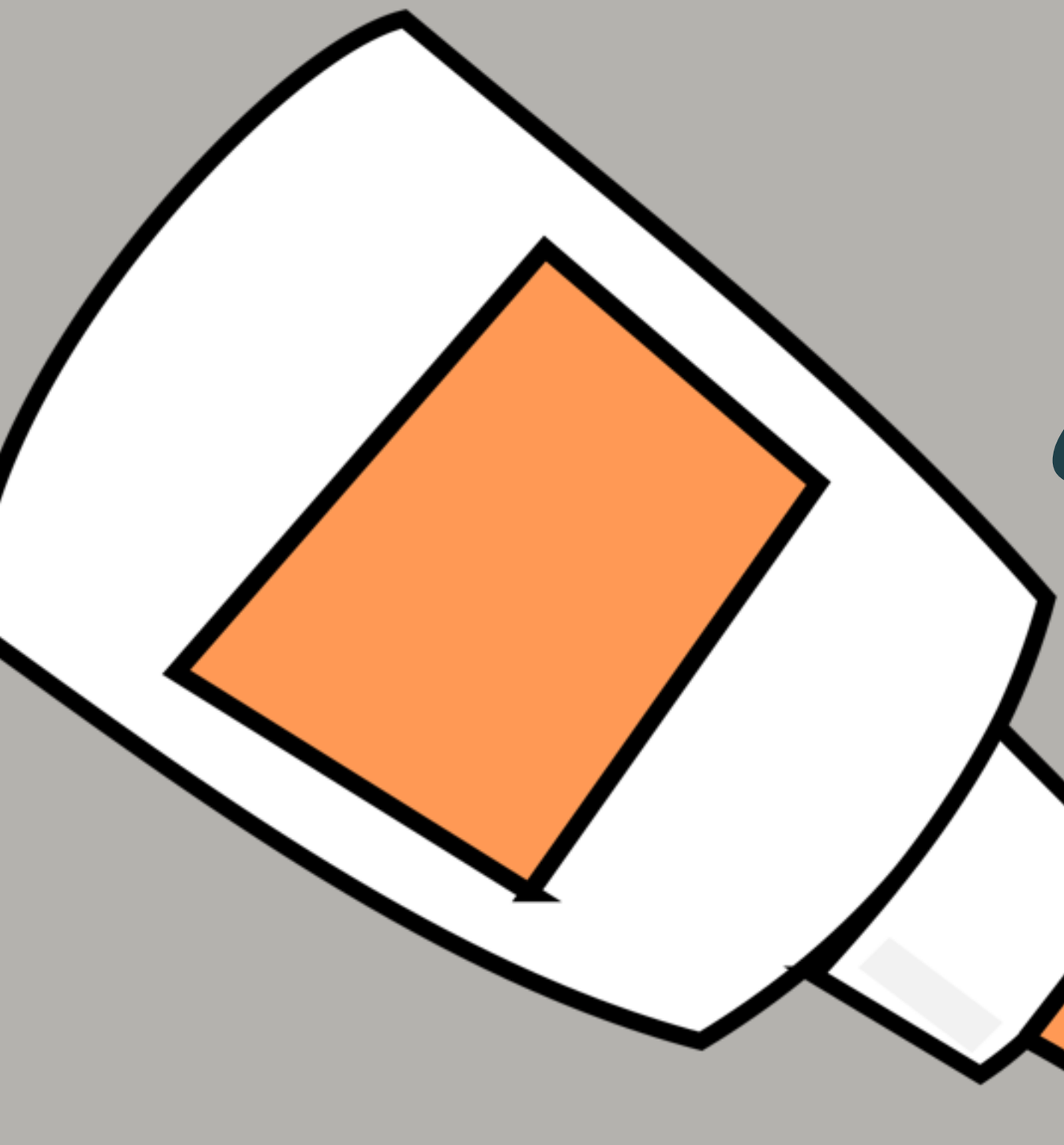
Data Driven Documents

First Steps

Hello World!



D3

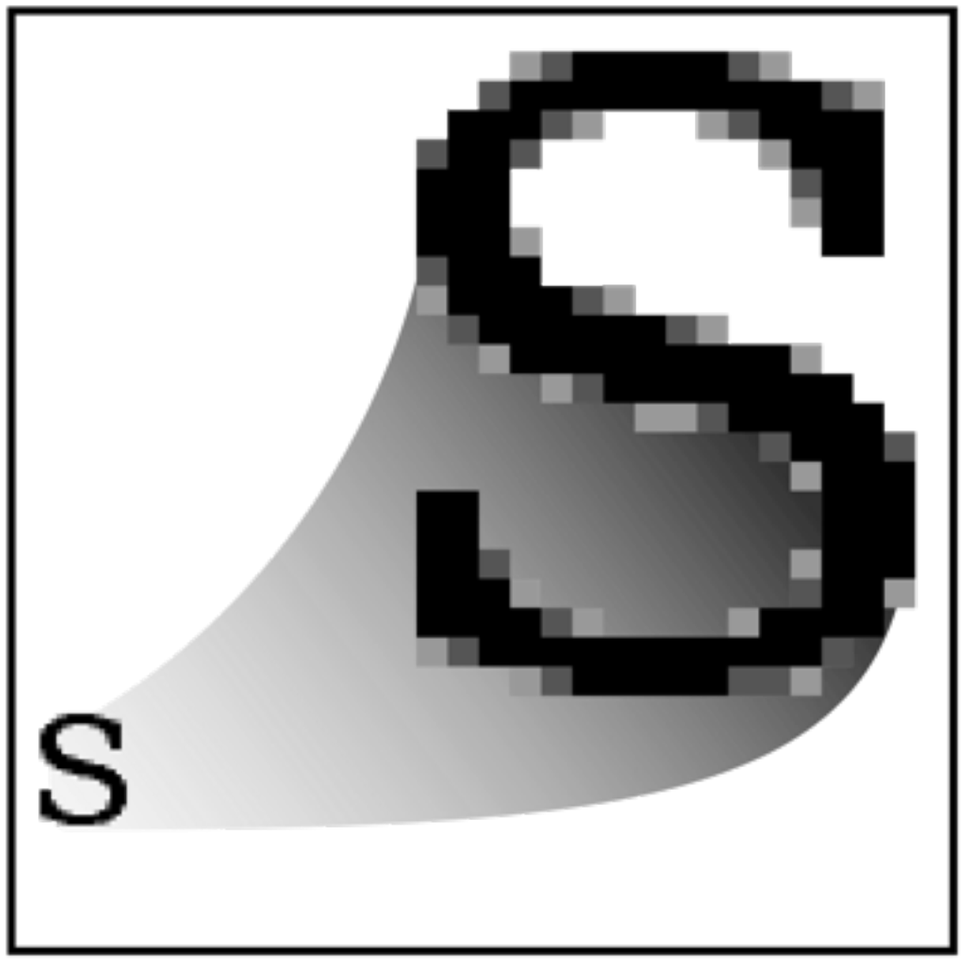
connects

data *to* **svg**

Building Blocks

Scalable Vector Graphics (SVG)

XML-based vector image format
for two-dimensional graphics



Raster

.jpeg .gif .png

Vector

.svg

SVG Basic Elements

svg — container element
circle, rect, line — basic shapes
path — drawing paths
g - used for grouping
text - for text

  d3.select(‘#test’)
 d3.select(.test)

SVG Path

<path d = “M 0,300 A 200, 200 0 0, 1, 400, 300”/>

- M = move to
- L = line to
- H = horizontal line to
- V = vertical line to
- C = curve to
- S = smooth curvet
- Q = quadratic Bezier curve
- T = smooth quadratic Bezier curve to
- A = elliptical arc
- Z = close path

No Selection | Stroke: 1 pt | Uniform | 3 pt. Round | Opacity: 100% | Style: | Document Setup | Preferences

gen2.ai @ 400% (RGB/Preview)

Transform | Align | Pathfinder

Basic SVG Manipulation

Getting started with d3 — Codepen

rxYbbN
A PEN BY CAPTAIN ANONYMOUS

Save | Fork | Settings | Change View | Log In | Sign Up

HTML

```
<div id="canvas"></div
```

Tidy

```
ale(' + scale_x + ',' +
le_y + ')')

  current_id += 4
  if (current_id >= 1750) {

    current_id = 0
  }

}

function translate(x, y) {
  return 'translate(' + x +
+ y + ')'
}
```

Pen Settings

HTML CSS **JavaScript** Behavior

JavaScript Preprocessor

None

Add External JavaScript

These scripts will run in this order and before the code in the JavaScript editor. You can also link to another Pen here, and it will run the JavaScript from it. Also try typing the name of any popular library.

https://cdnjs.cloudflare.com/ajax/libs/d3/3.5.6/d3.min.js

http://codepen.io/username/pen/aBcDef

Quick-add: ---

+ add another resource

Analyze JS via JS Hint

Save & Close

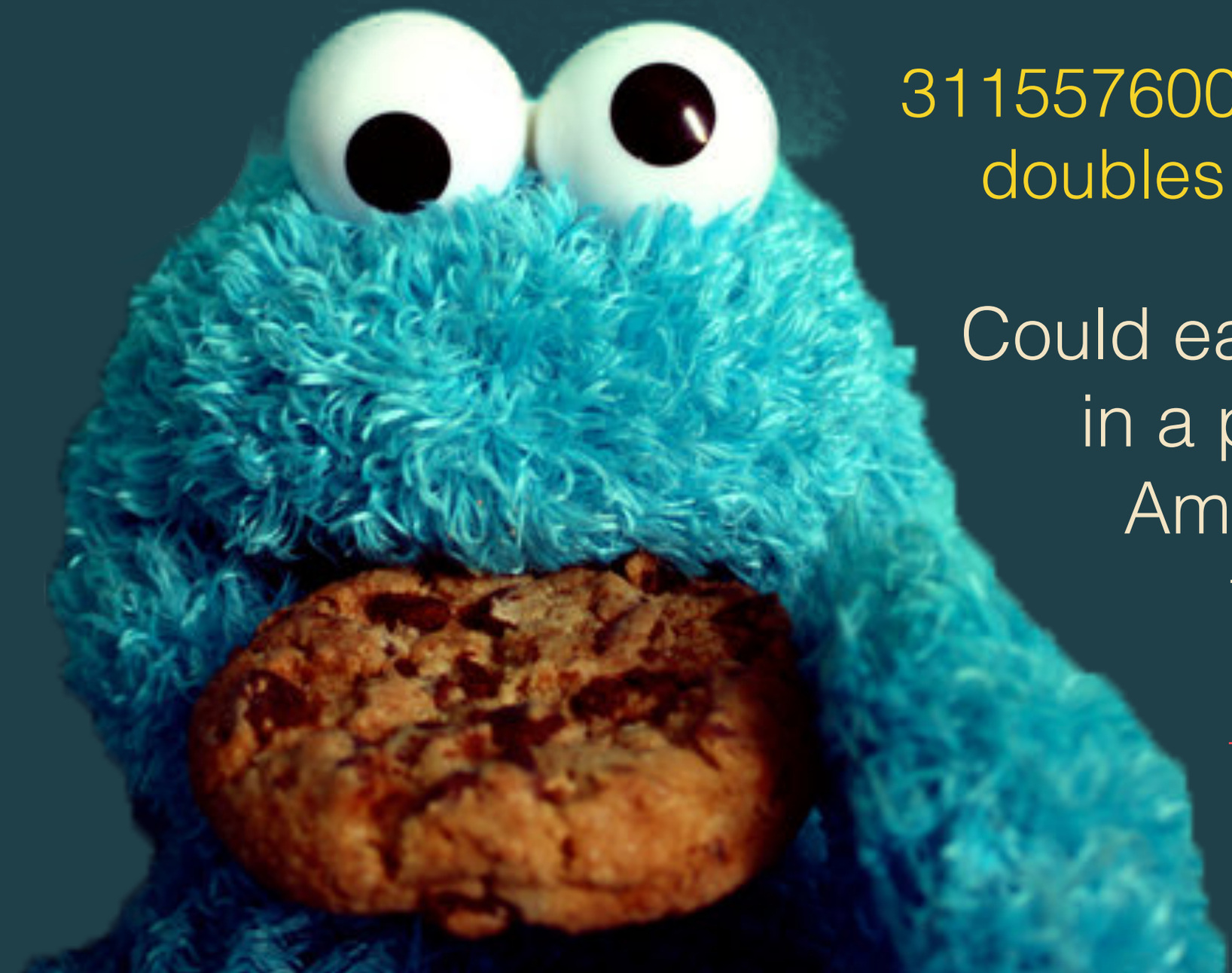
Happy Recursive Trees

Gotchas

Give me all the datas

–Frustrate the javascripts

1 year = 365 days * 24 hours/day * 3600 seconds/hour = 311557600 seconds/year



311557600 javascript Numbers = doubles = 252.4 megabytes

Could easily have 50 sensors in a project the size of American Samoa = 12 gigabytes

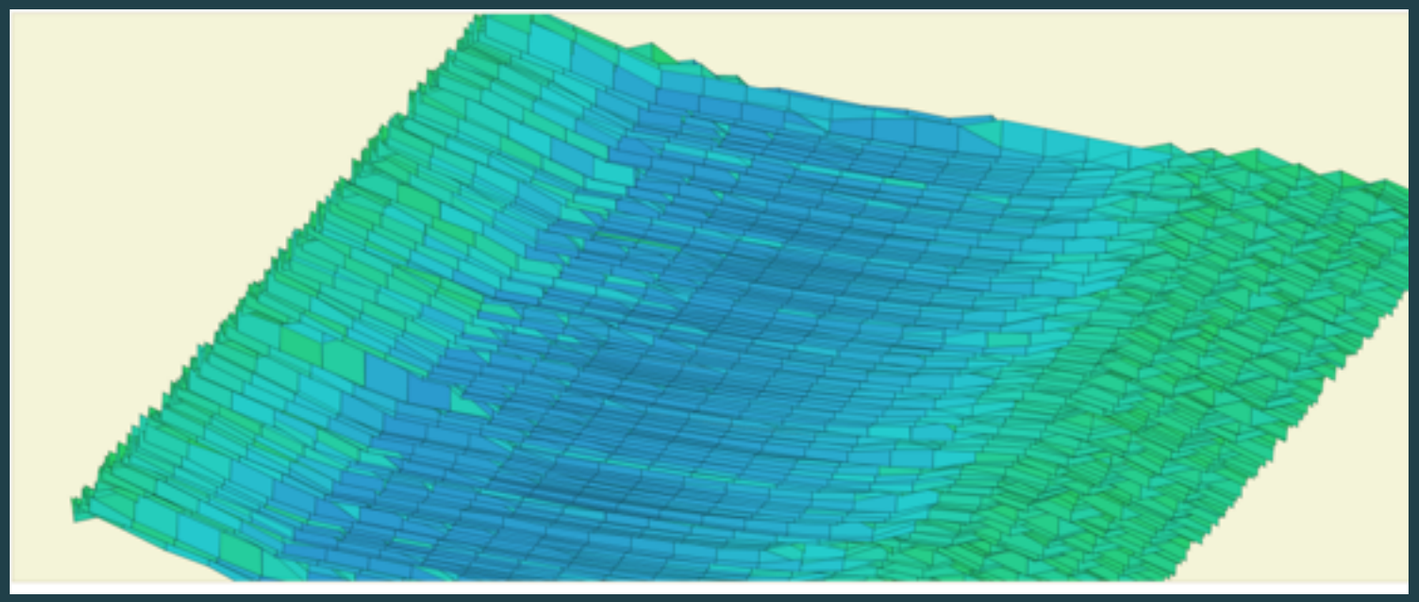
–Some paying clients would like to use milliseconds = 12 terabytes

Visualizing Lots of Data

Making sense out of numbers.

Monthly Hourly Load Profile Data Tables
(kW, See Charts Above)

Hour	Jan	Feb	Mar	Aprl	May	June	July	Aug	Sept	Oct	Nov	Dec
1	477	470	388	342	305	367	439	412	345	306	347	419
2	471	465	381	337	295	348	424	400	337	300	342	412
3	470	464	381	338	288	336	412	388	333	299	341	412
4	474	467	385	342	288	332	409	383	333	302	345	415
5	479	473	393	346	289	334	413	382	337	307	350	418
6	495	488	411	359	299	352	429	395	349	321	364	432
7	550	545	467	413	350	416	490	452	402	373	419	486
8	658	646	570	513	458	547	615	573	514	474	522	591
9	751	734	655	598	559	673	731	688	618	565	610	681



Data Viz with dimple

Encapsulating Complexity

Integration with Angular