D3.js: A Survival Guide

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D3 Intro
Survival Guide

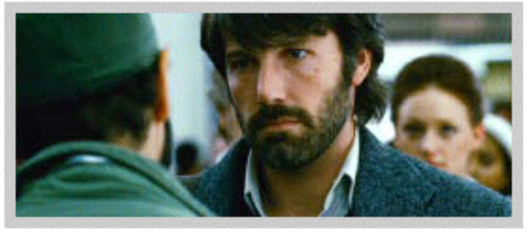
D3 = Data Driven Documents

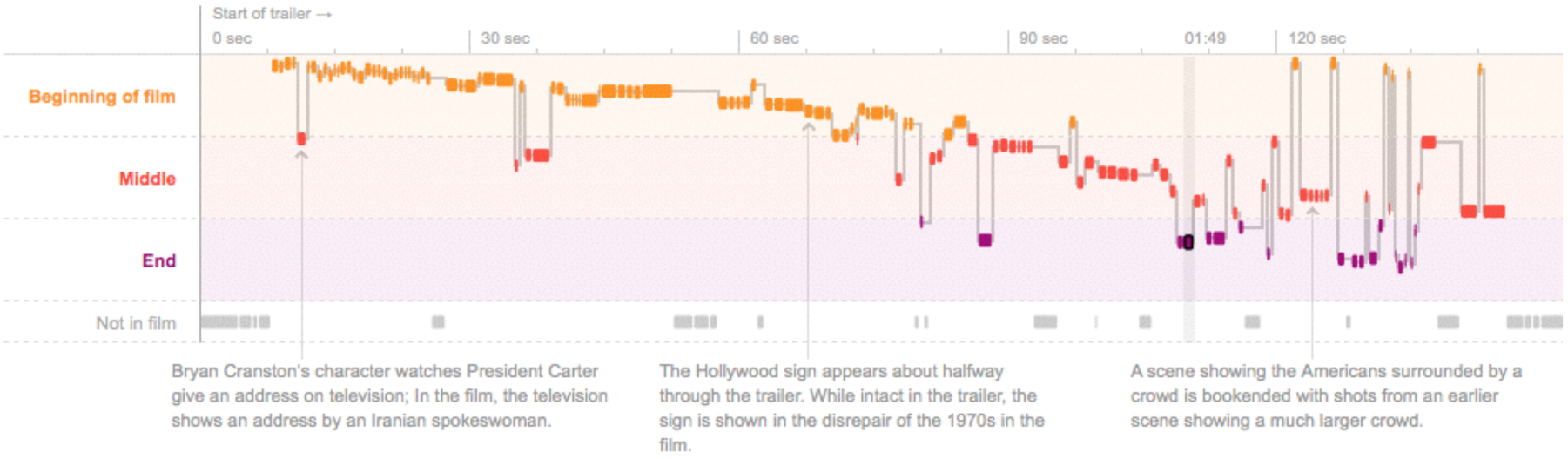
D3 = Data Driven DOM

The Things You Can Do

Argo

The trailer for “Argo” balances two different tones, according to Mr. Garrett: thriller and Hollywood satire. “Thrillers have a very fast cutting style,” he said. “It’s a way of ratcheting up attention.” Shots are longer, on average, when the trailer turns to satire.



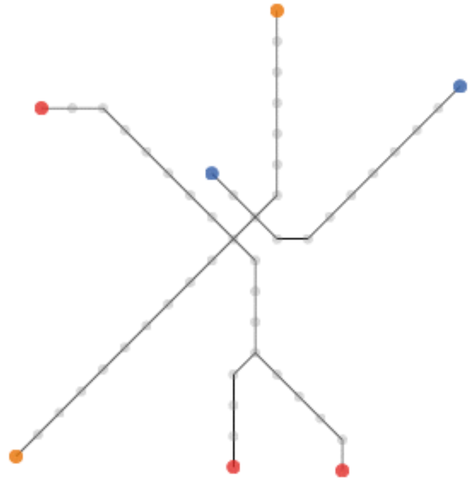


Bryan Cranston's character watches President Carter give an address on television; In the film, the television shows an address by an Iranian spokeswoman.

The Hollywood sign appears about halfway through the trailer. While intact in the trailer, the sign is shown in the disrepair of the 1970s in the film.

A scene showing the Americans surrounded by a crowd is bookended with shots from an earlier scene showing a much larger crowd.

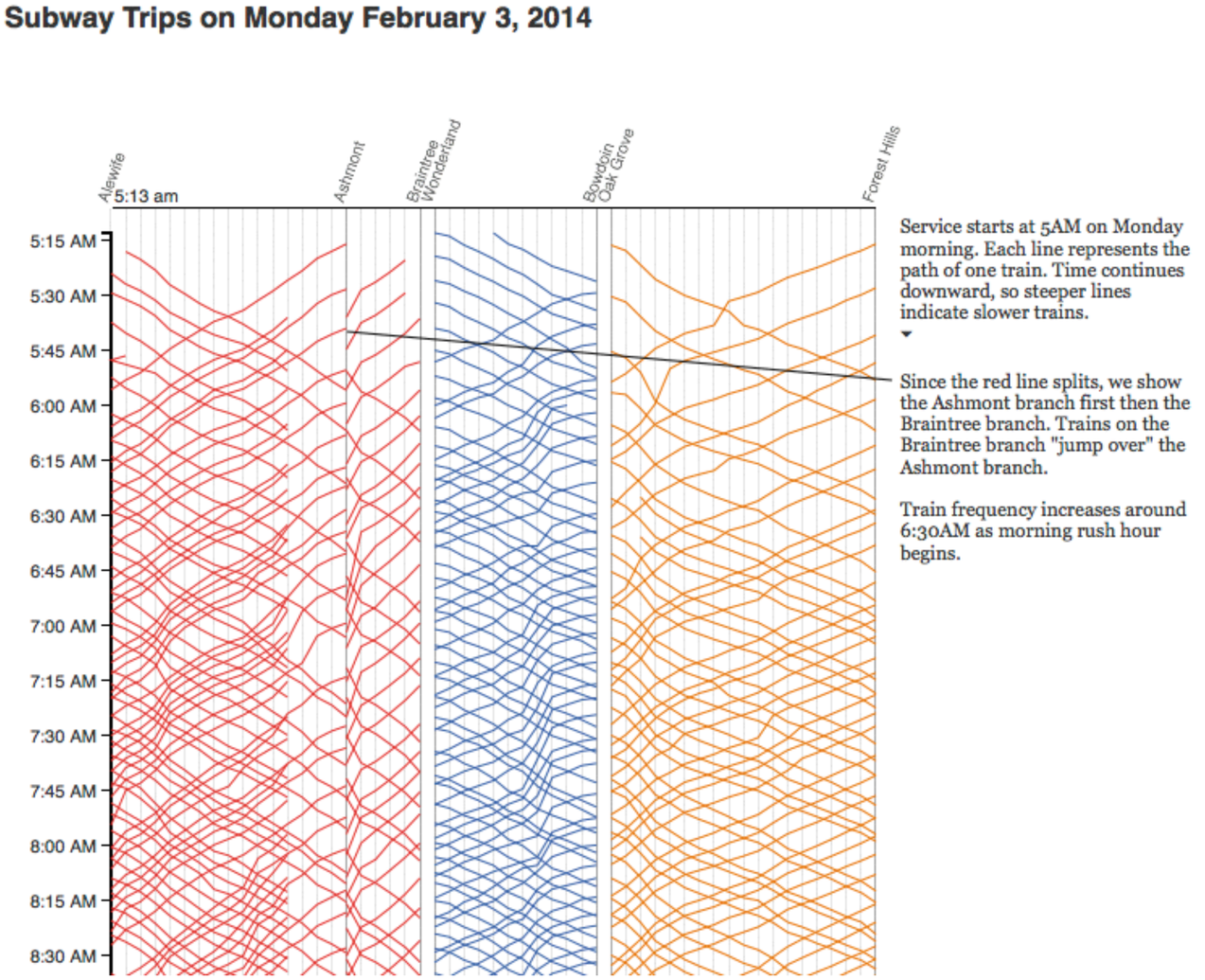
The Things You Can Do



Locations of each train on the red, blue, and orange lines at 5:13 am. Hover over the diagram to the right to display trains at a different time.

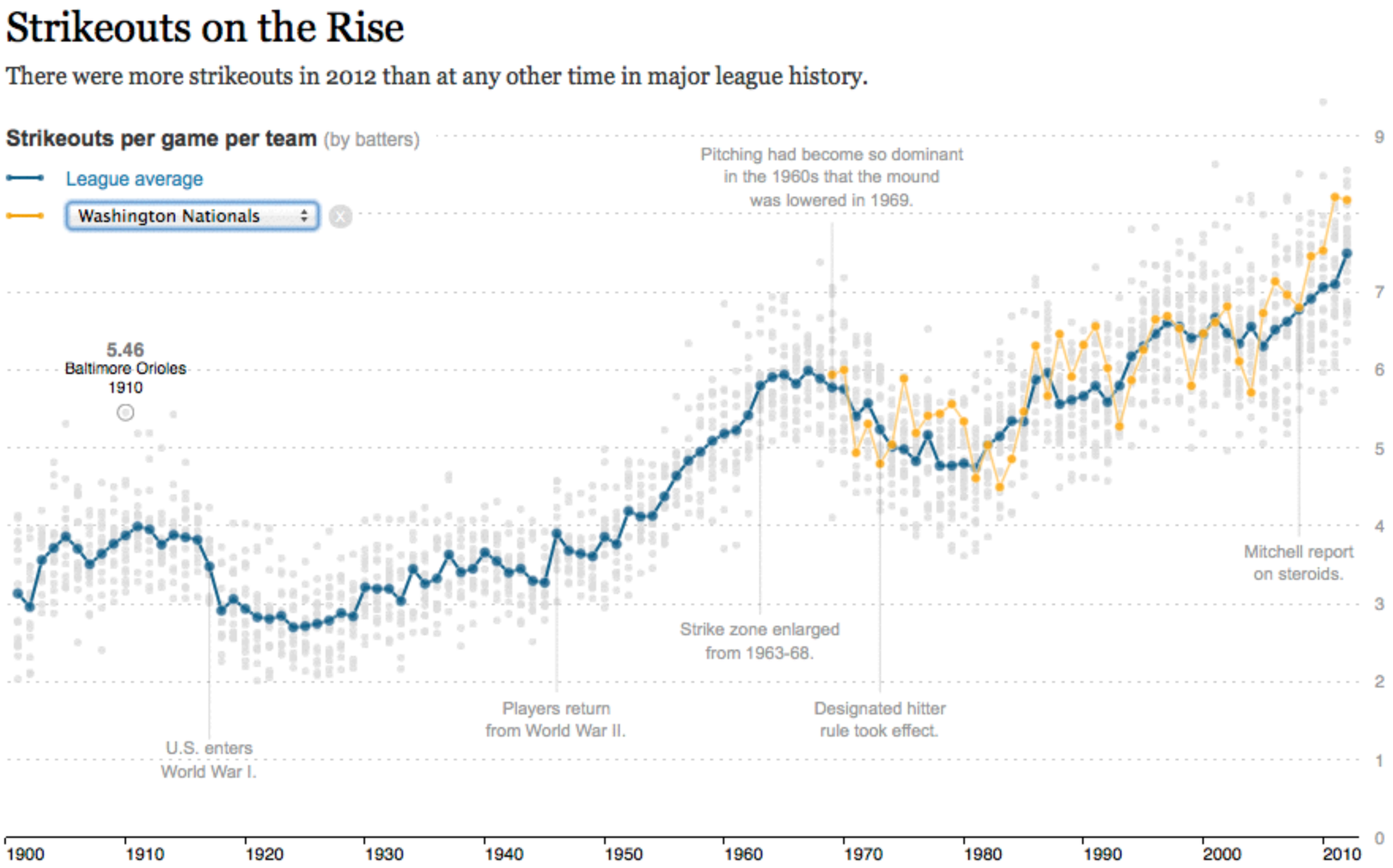
Trains are on the right side of the track relative to the direction they are moving.

See the morning rush-hour, midday lull, afternoon rush-hour, and the evening lull.

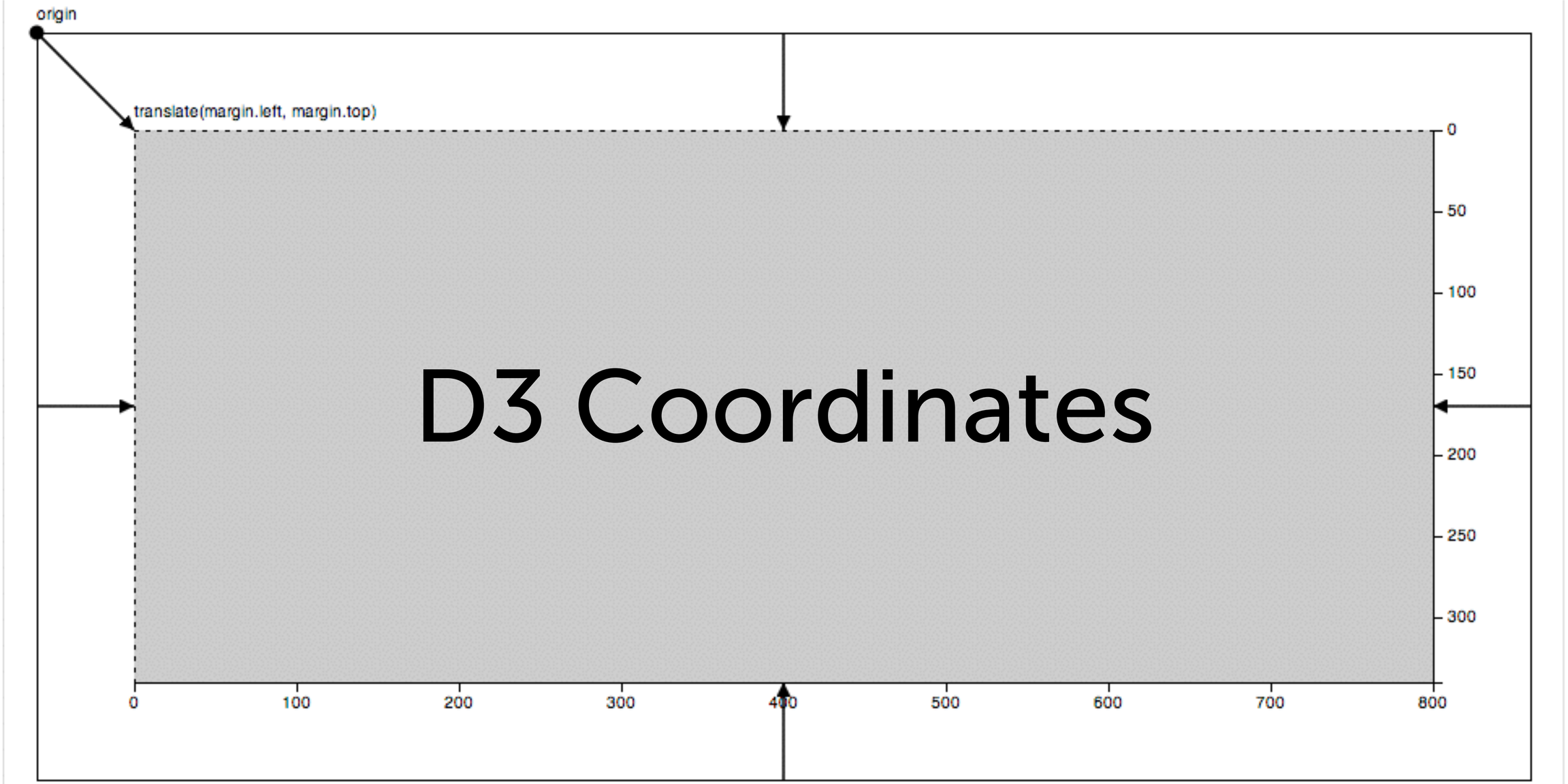


http://mbtaviz.github.io

The Things You Can Do



Simple Example



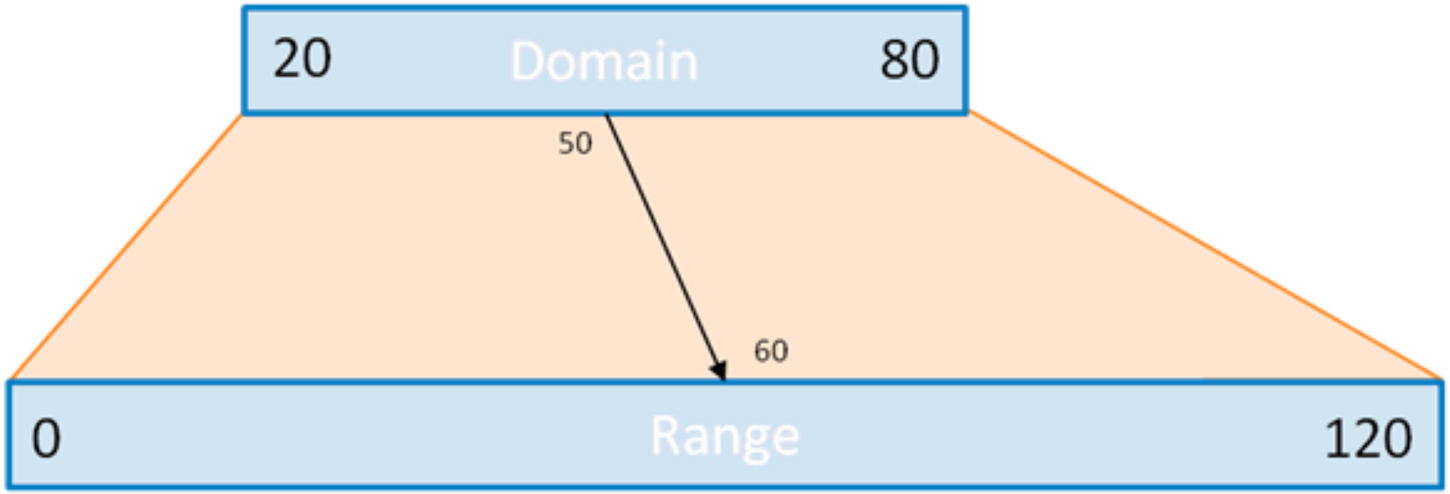
D3 Coordinates

http://bl.ocks.org/mbostock/3019563

$('.selector')

D3 Scales

d3.linear.scale().domain([1982,2014]) .range([0, width])



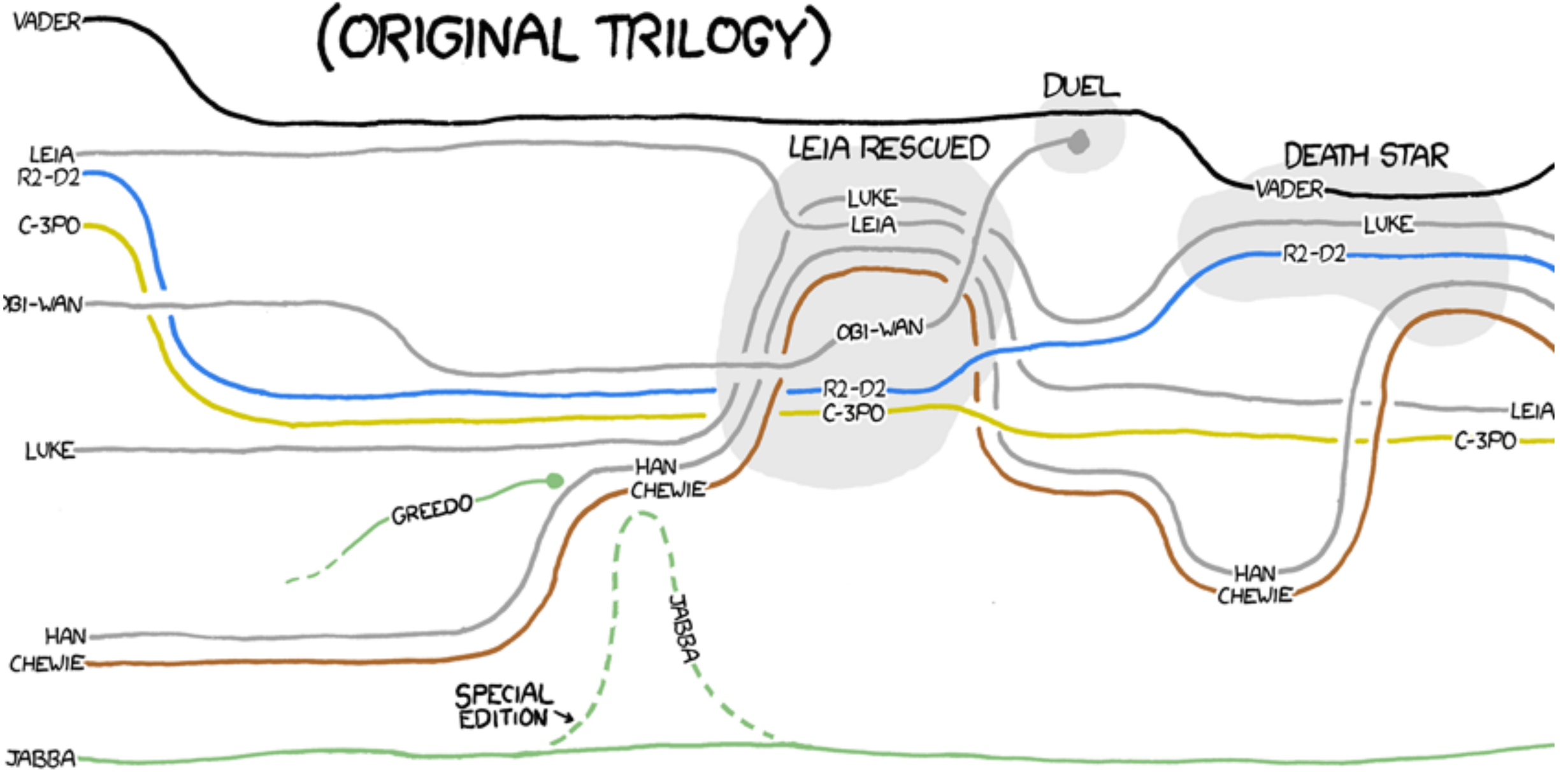
http://www.jeromecukier.net/blog/2011/08/11/d3-scales-and-color/

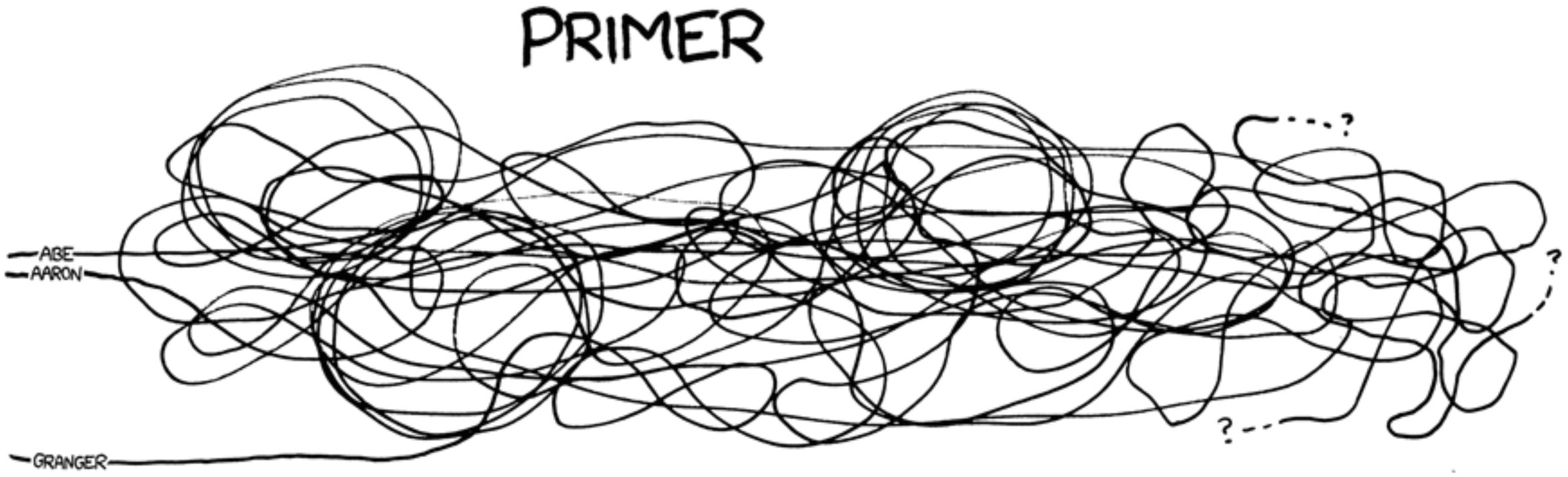
d3.selectAll('.selector')

```
var items = $('.selector');

for(var i = 0; i < items.length, i++){
    draw(items[i]);
}
```

```
var items = $('.selector');

for(var i = 0; i < items.length, i++){
    draw(items[i]);
}
```

STAR WARS
(ORIGINAL TRILOGY)




PRIMER
ABE
AARON
GRANGER
?
?
?

Enter — Data not bound to any element

Update — Data bound to an element

Exit — Element not bound to any data

http://bost.ocks.org/mike/join/

step 1:[1,2,3]

Enter() Update() Exit()

1

2

3

step 2:[4,5,6,1,2,3]

Enter()	Update()	Exit()
4	1	
5	2	
6	3	

step 3:[7,8,9,4,5,6]

Enter()	Update()	Exit()
7	4	1
8	5	2
9	6	3

Styling Gotchas

Color → Stroke

Background-Color → Fill

D3 Survival

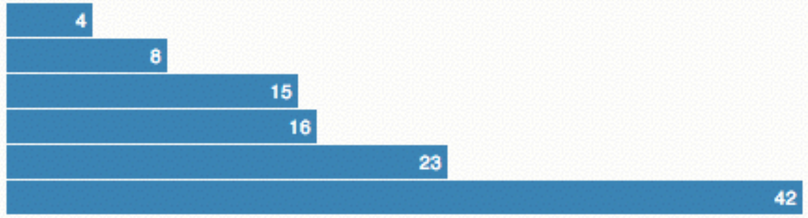
“Are the tutorials for d3 particularly horrible or what? There's like a smattering of really shallow tutorials out there and then it's like kaboom! bo.stocks.”

http://bl.ocks.org/mbostock

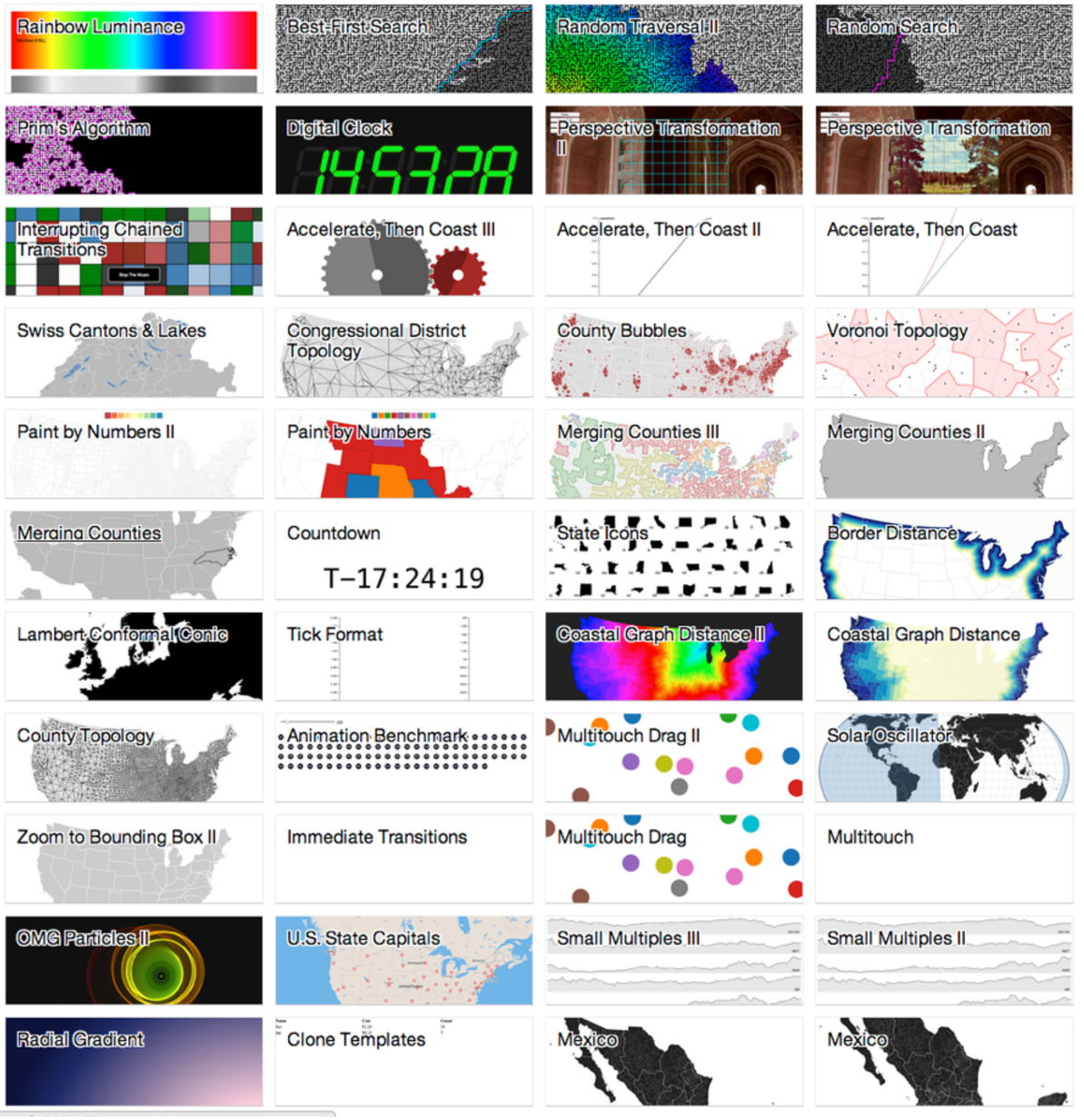
Shallow Tutorial

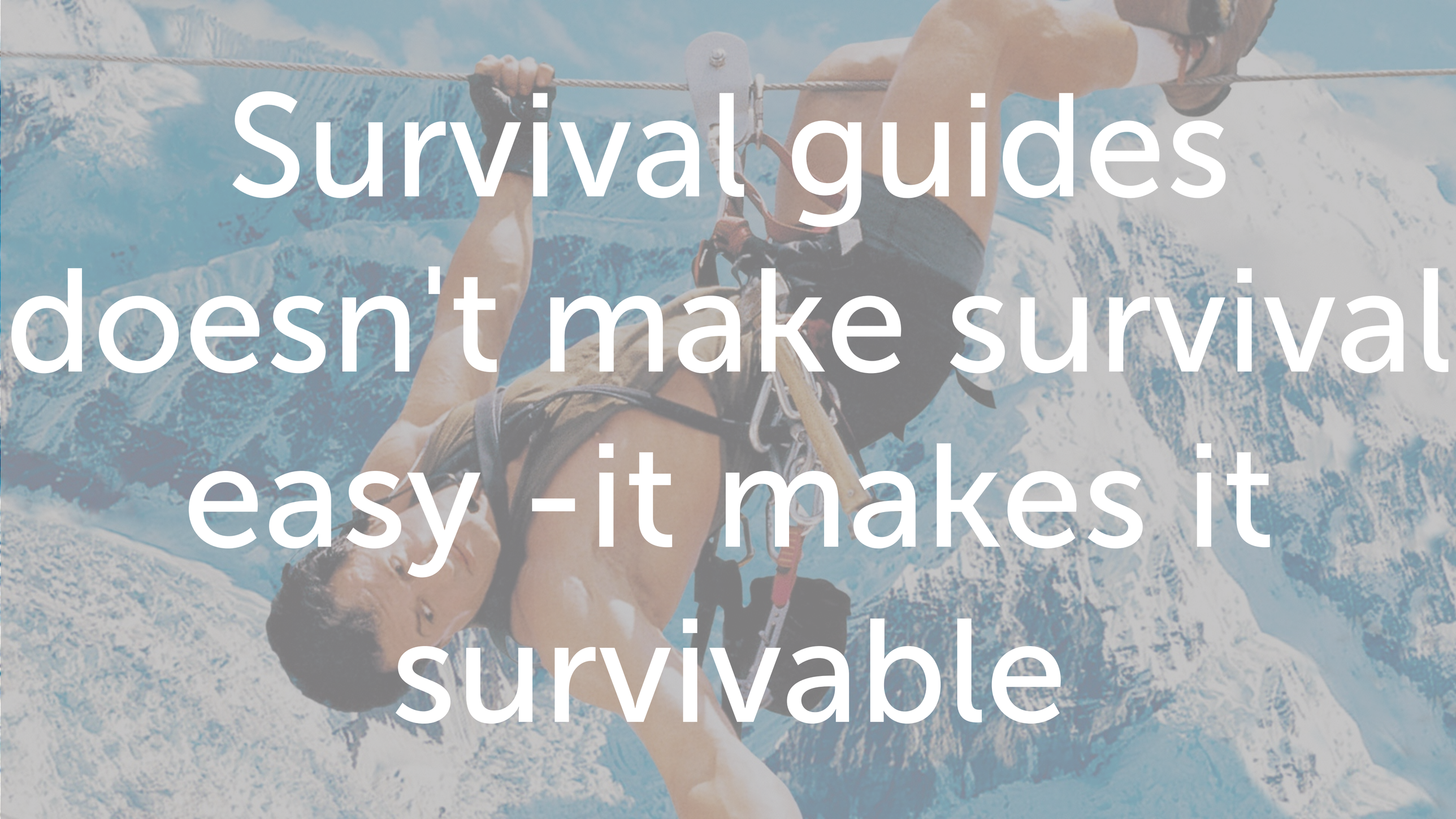
```
<!DOCTYPE html>
<style>

.chart div {
  font: 10px sans-serif;
  background-color: steelblue;
  text-align: right;
  padding: 3px;
  margin: 1px;
  color: white;
}

</style>
<div class="chart">
  <div style="width: 40px;">4</div>
  <div style="width: 80px;">8</div>
  <div style="width: 150px;">15</div>
  <div style="width: 160px;">16</div>
  <div style="width: 230px;">23</div>
  <div style="width: 420px;">42</div>
</div>
```

That looks like this:



Kaboom! Bostocks!




Survival guides
doesn't make survival
easy -it makes it
survivable

A Culture of Examples

How do we get the most out of examples?

D3 = Data Driven Documents

Survival Guide

1. Look at http://bl.ocks.org/mbostock

2. Find the example closest to what you want.

3. Understand the data binding

Complicated Example

Complicated Example FAIL

Survival Guide

1. Look at http://bl.ocks.org/mbostock

2. Find the example closest to what you want.

3. Understand the data binding

YOU HAVE BRAINS IN YOUR HEAD. YOU HAVE FEET IN YOUR SHOES. YOU CAN STEER YOURSELF ANY DIRECTION YOU CHOOSE.

~ DR. SEUSS

BRIGHT DROPS

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