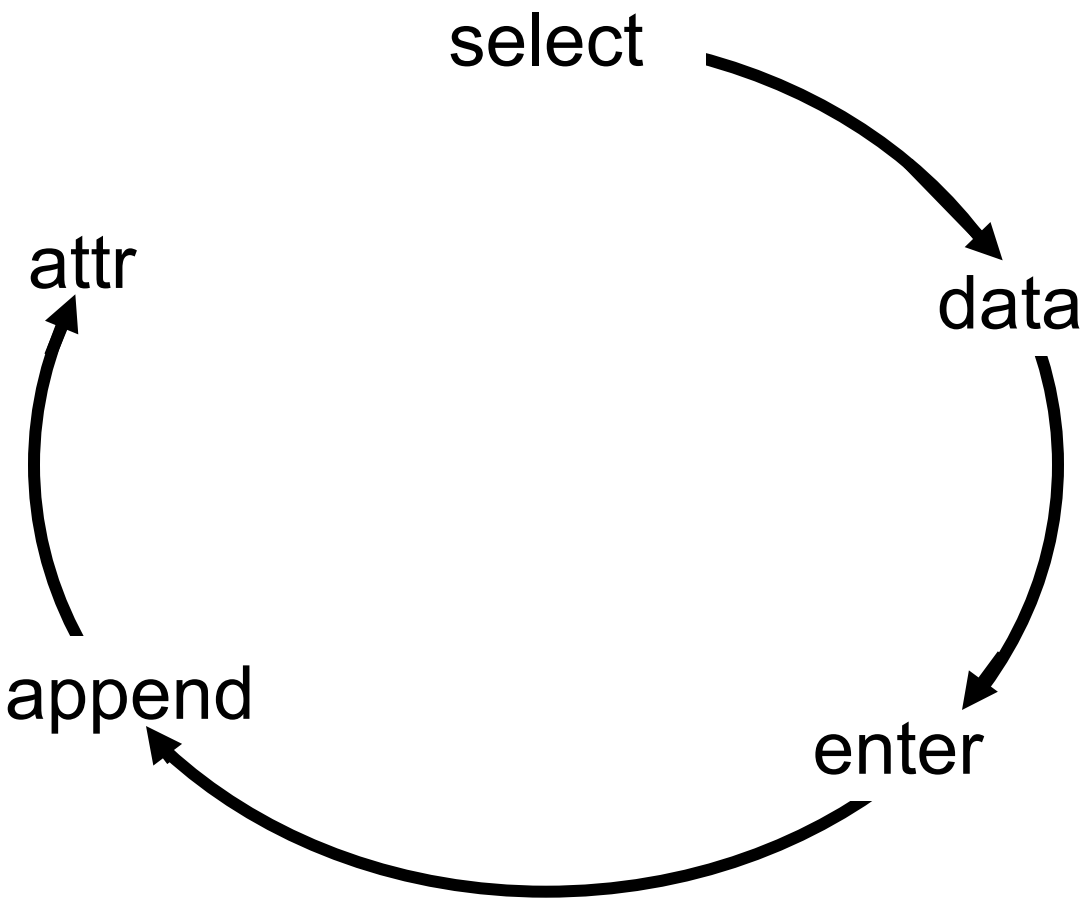
Core Modules in D3

Greater data flexibility

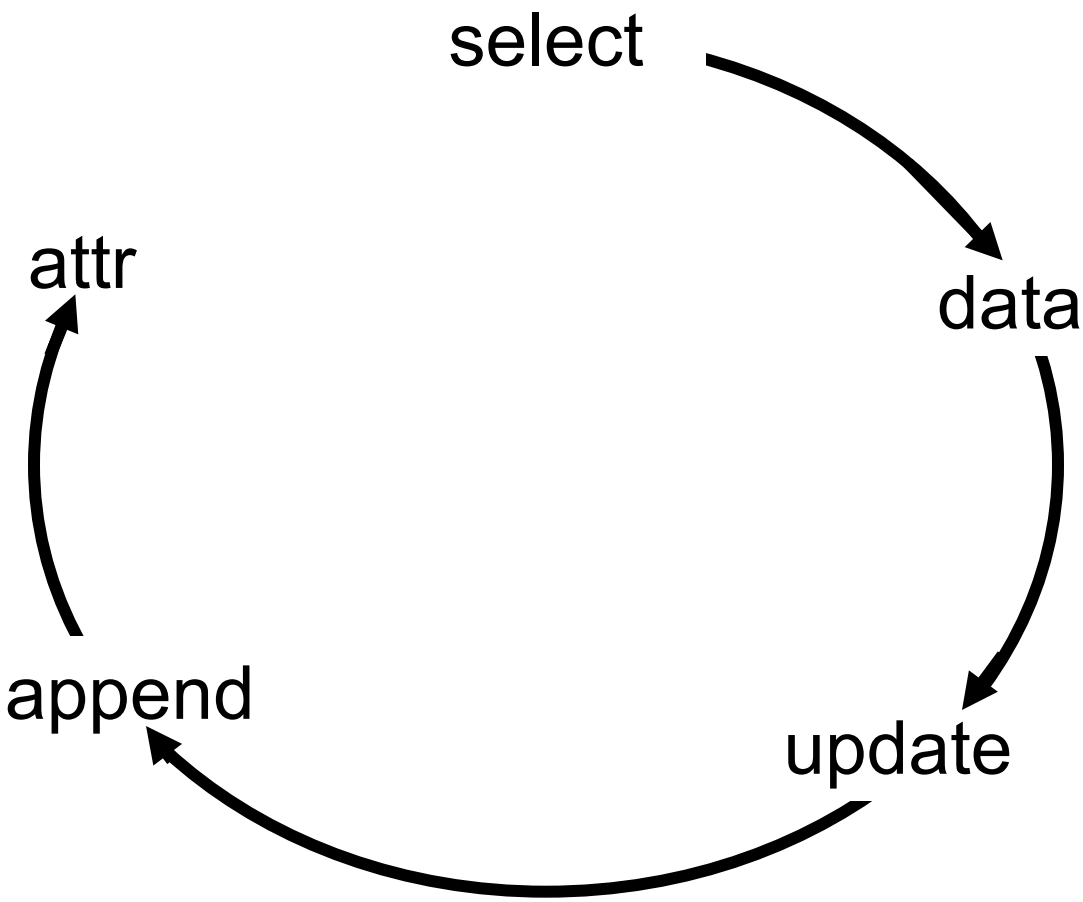
d3-selection

Recall, this is the core object we'll be working with in D3!

The Circle of D3



The Circle of D3



Why did we *need* D3?

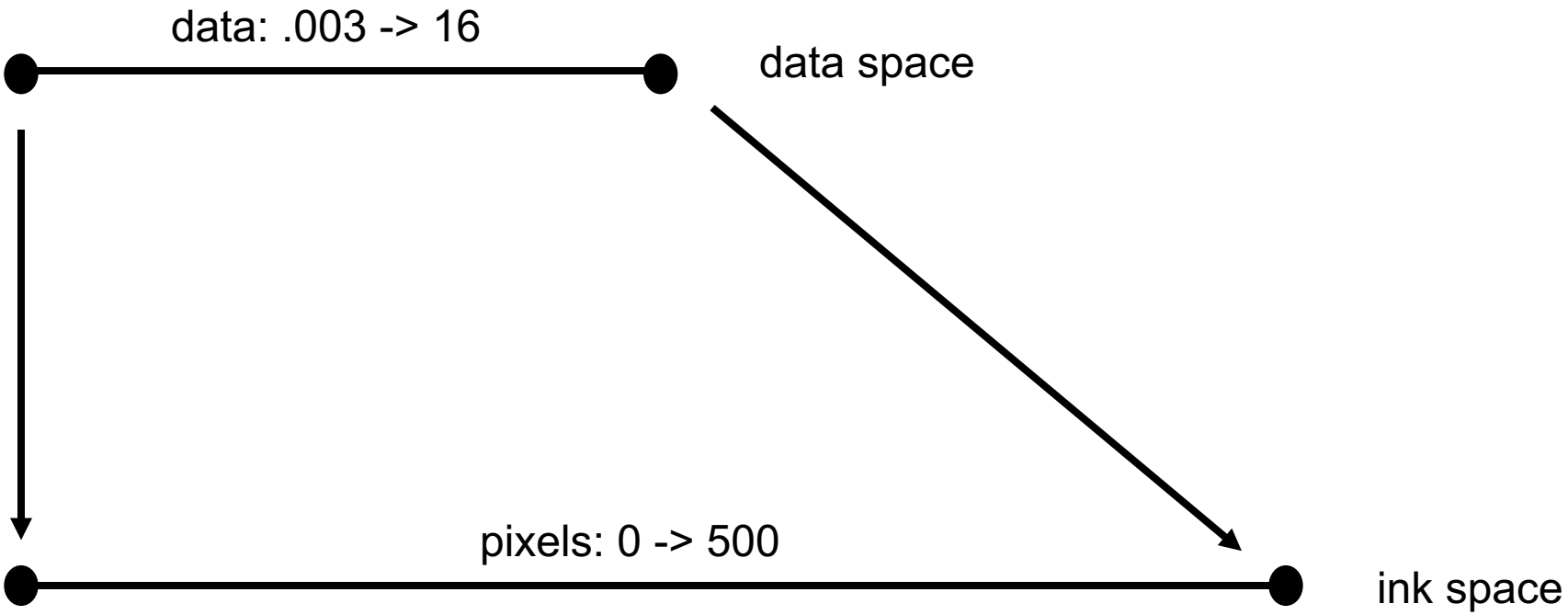
```
var data = [ [ { "x": 10, "y": 8.04 }, ] ];
var svg = document.getElementById("mysvg");
for (var i = 0; i < data[0].length; i++) {
  var newDataEl = document.createElement("circle");
  var cx = document.createAttribute("cx");
  cx.value = data[0][i].cx;
  var cy = document.createAttribute("cy");
  cy.value = data[0][i].cy;
  var r = document.createAttribute("r");
  r.value = 10;
  newDataEl.setAttributeNode(cx);
  newDataEl.setAttributeNode(cy);
  newDataEl.setAttributeNode(r);
  svg.appendChild(newDataEl);
}
```

```
var xscale = function(x) {
   return 100+(x-4)/10*500;
}
```

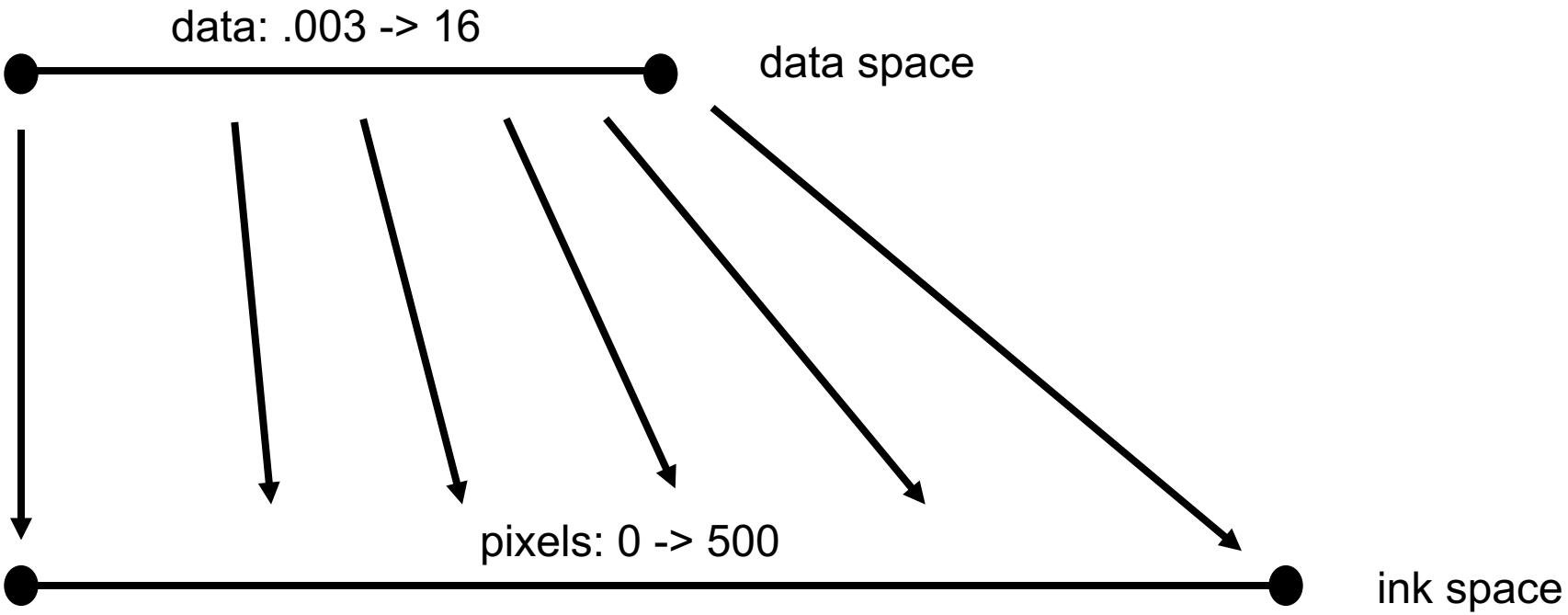
```
var svg = document.getElementById("mysvg");
for (var i = 0; i < data[0].length; i++) {
  var newDataEl = document.createElementNS(
    "http://www.w3.org/2000/svg", "circle");
  var cx = document.createAttribute("cx");
  cx.value = xscale(data[0][i].cx);
  var cy = document.createAttribute("cy");
  cy.value = data[0][i].cy;
  var r = document.createAttribute("r");
  r.value = 10;
  newDataEl.setAttributeNode(cx);
  newDataEl.setAttributeNode(cy);
  newDataEl.setAttributeNode(r);
  svg.appendChild(newDataEl);
}
```

```
var xscale = function(x, domain, range) {
  return range[0] + (x - domain[0]) /
    (domain[1] - domain[0]) * (range[1] + range[0]);
}
```

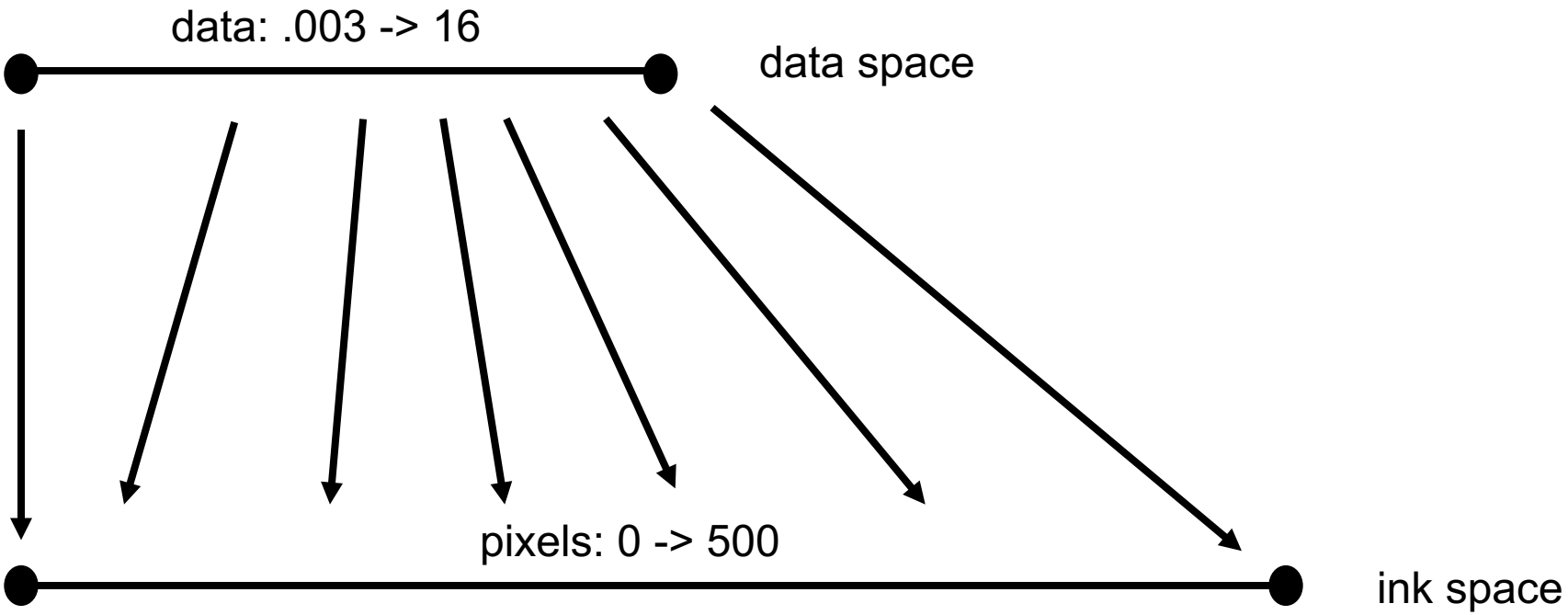
d3-scale



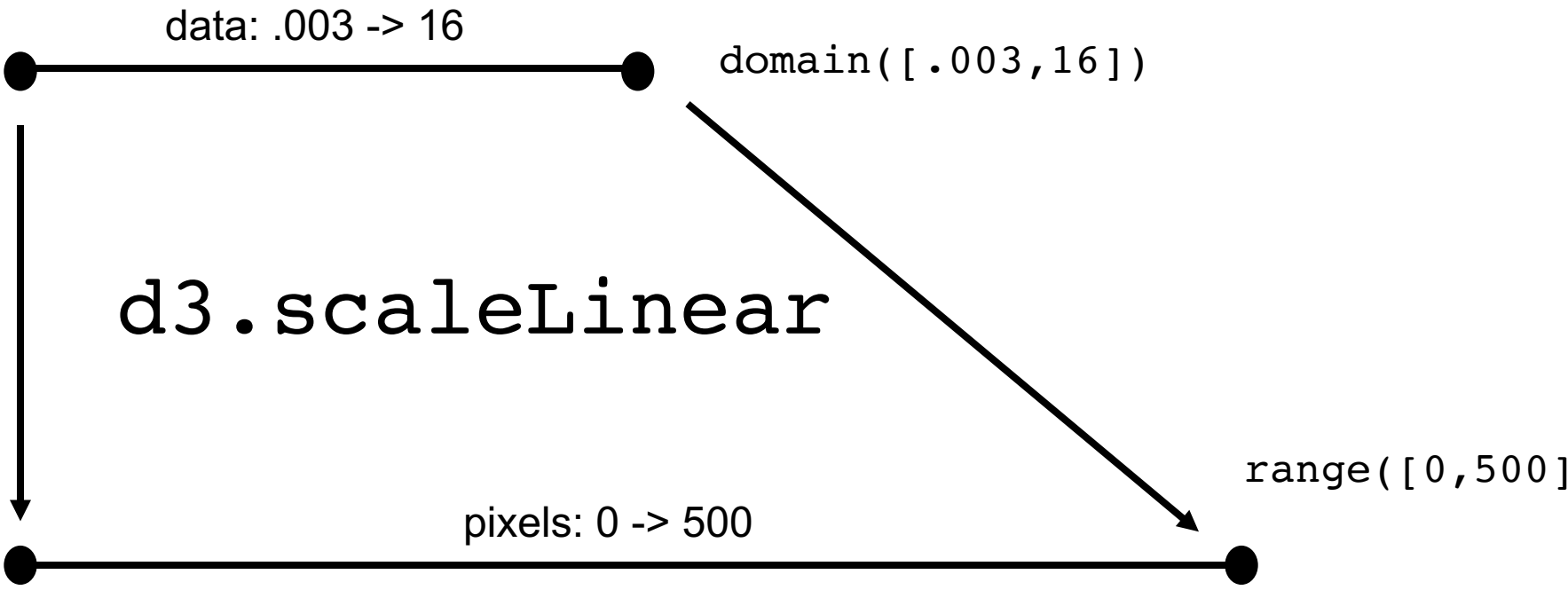
d3-scale



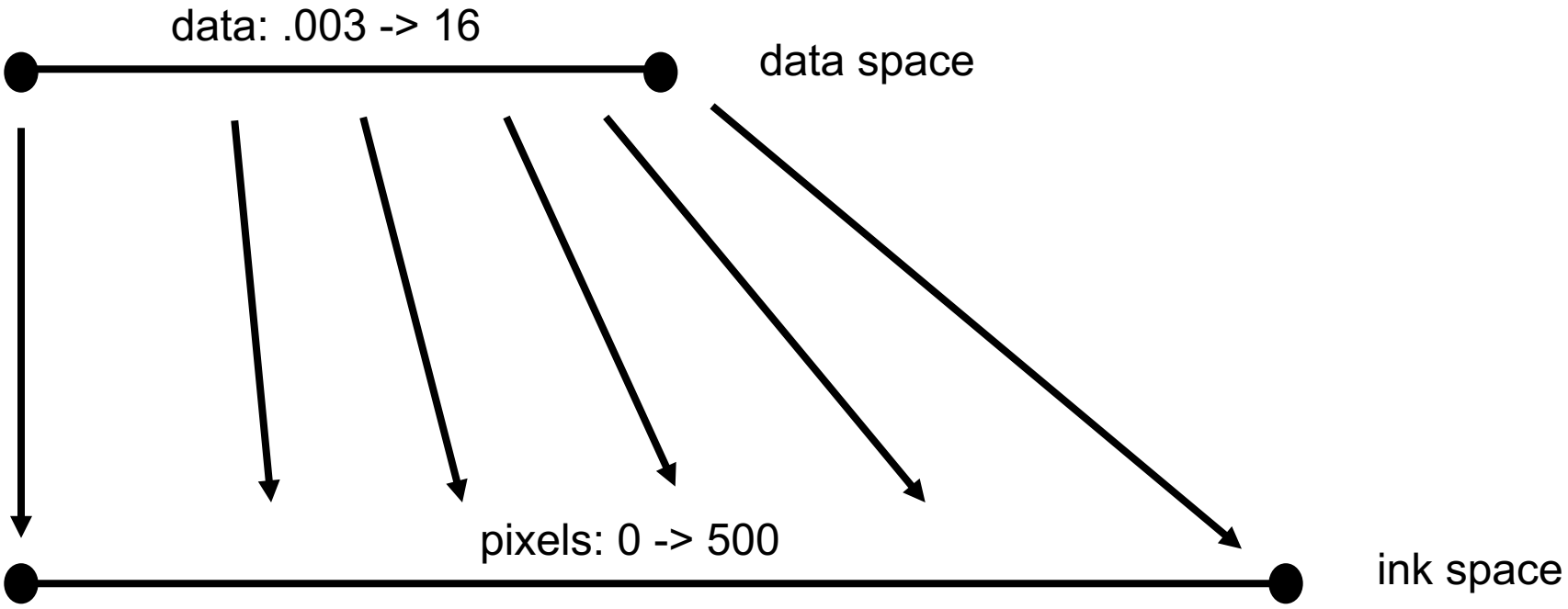
d3-scale



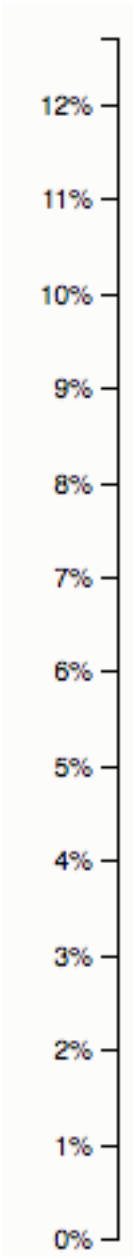
d3-scale

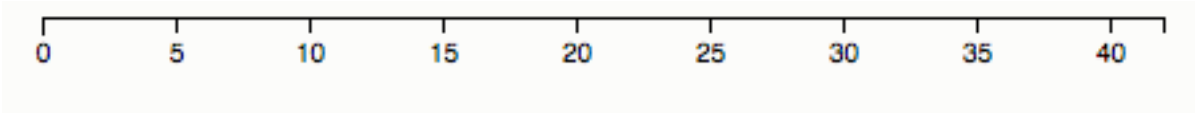

data: .003 -> 16
domain([.003,16])
d3.scaleLinear
range([0,500]
pixels: 0 -> 500

d3-scale

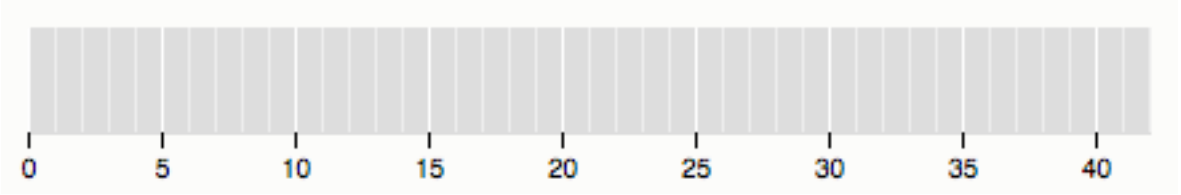



```
var xscale = d3.scaleLinear()
    .domain([.003, 16])
    .range([0, 500]);
```





d3-axis



d3-path, d3-shape, d3-polygon

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