

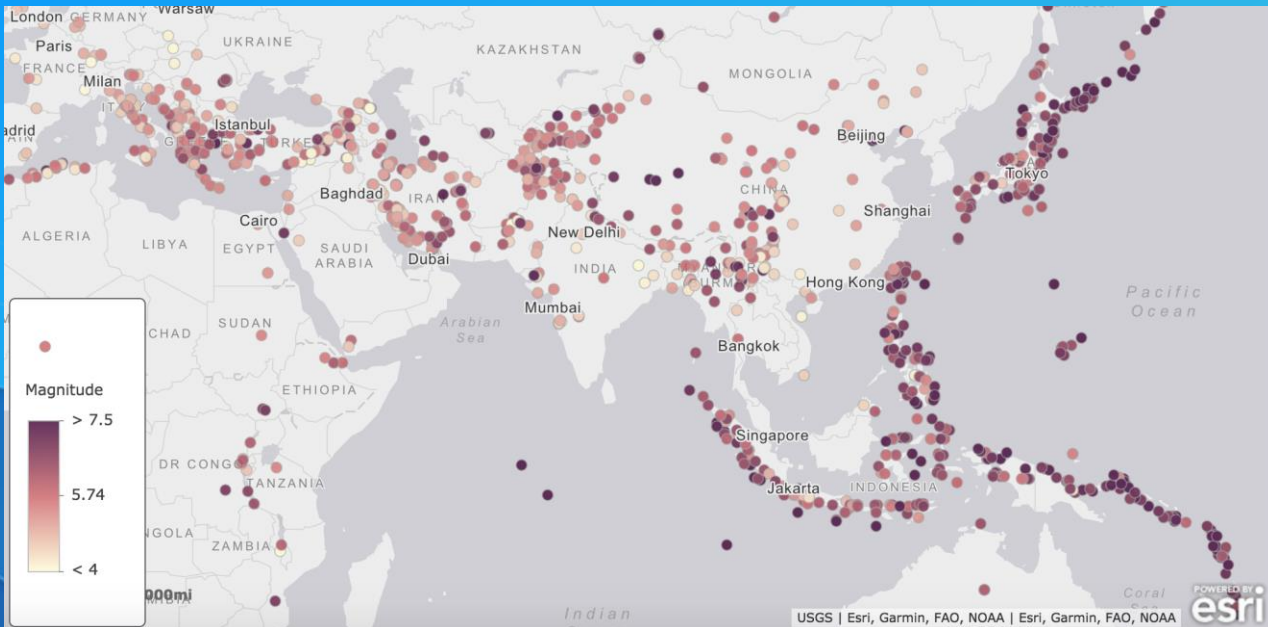


Building a Web App for Data Exploration with Smart Mapping

Kristian Ekenes

Visualization in the ArcGIS API for JavaScript

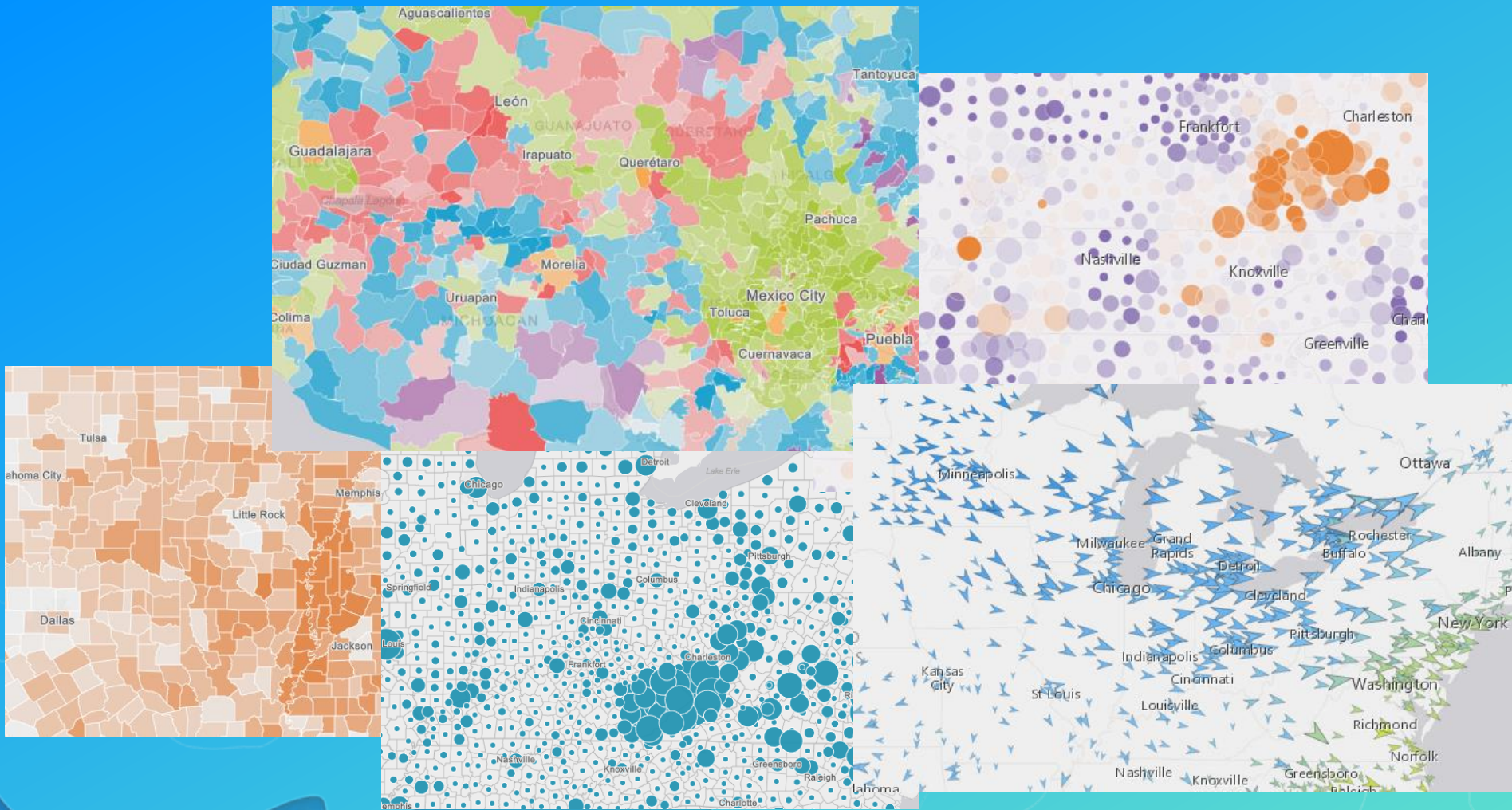
FeatureLayer/SceneLayer/MapImageLayer/CSVLayer
renderer
visual variables



Visualization
is hard

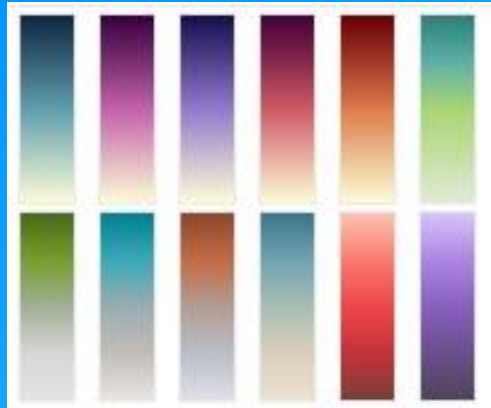
```
var renderer = {  
  type: "simple",  
  symbol: {  
    type: "simple-marker",  
    outline: {  
      width: 0.5,  
      color: "white"  
    }  
  },  
  visualVariables: [{  
    type: "color",  
    field: "MAGNITUDE",  
    stops: [  
      {  
        value: 2.0,  
        color: "#FFCD42"  
      },  
      {  
        value: 7.5,  
        color: "#350242"  
      }  
    ]  
  }  
];  
layer.renderer = renderer;
```

Smart Mapping



Color schemes and themes

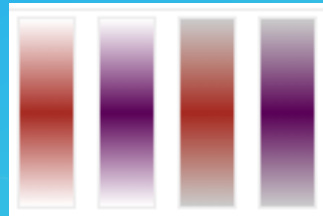
High to low



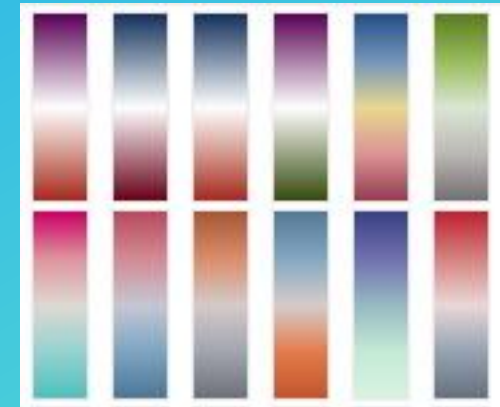
Extremes



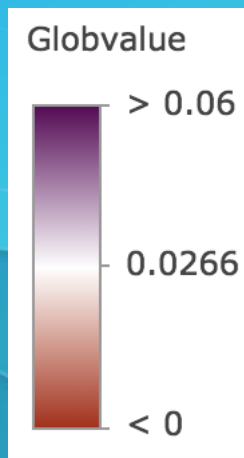
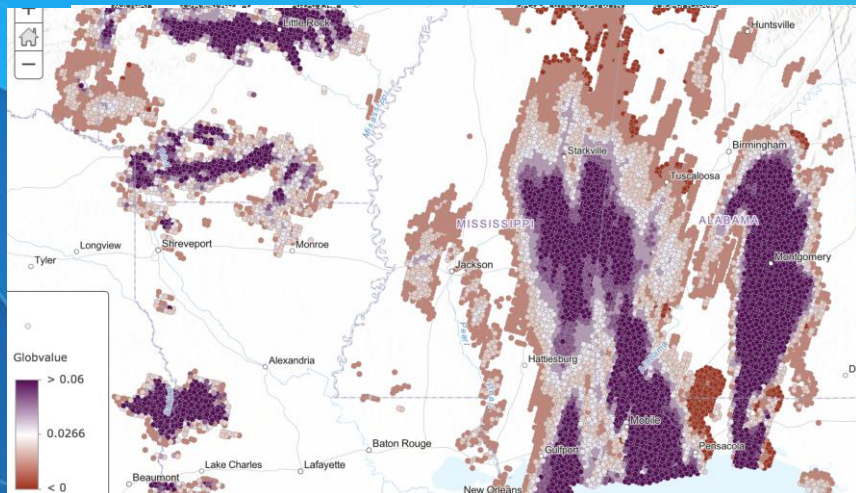
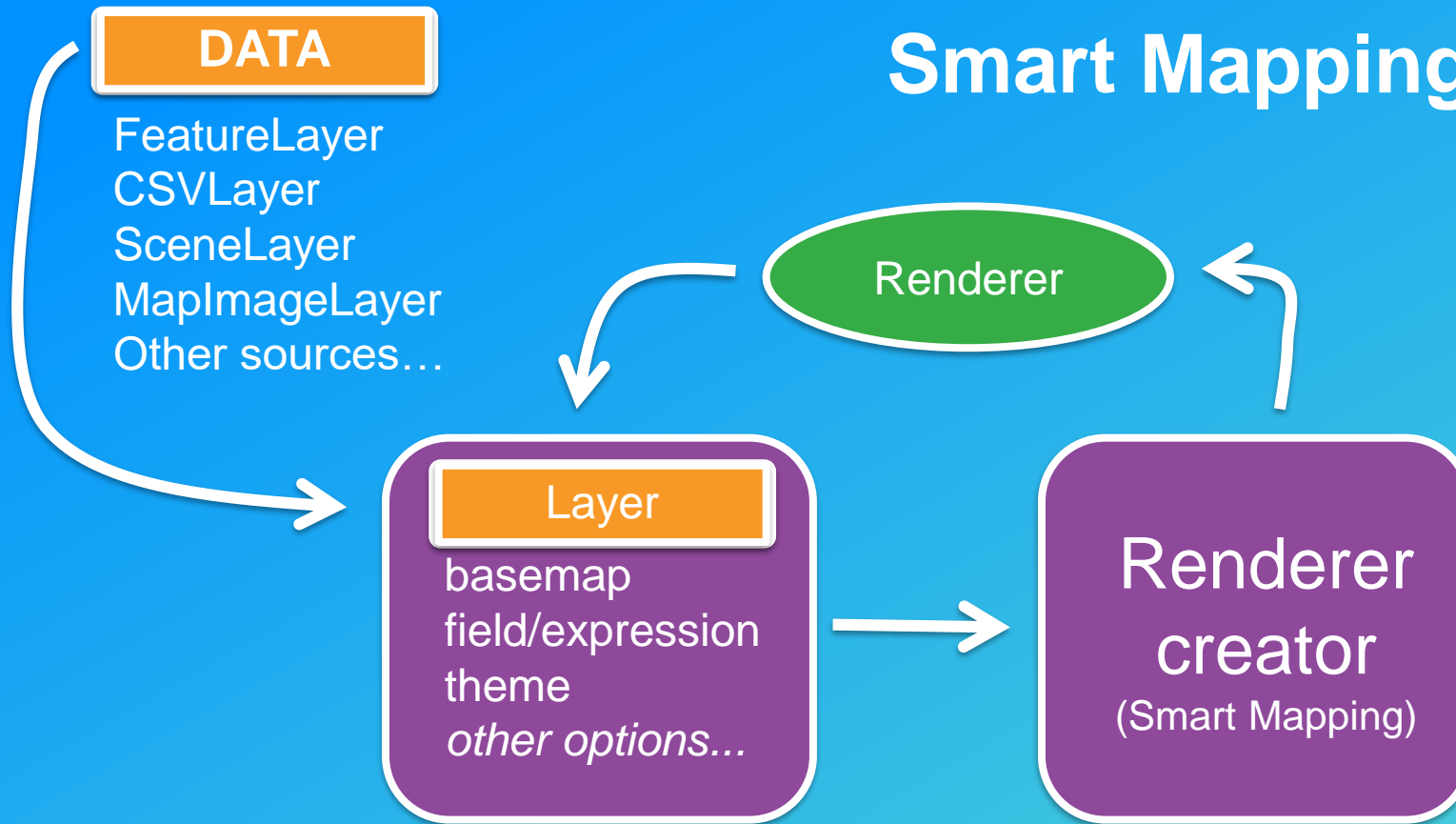
Centered on



Above and below



Smart Mapping Flow



query data stats
get optimal color scheme
map data values to colors

Sample Apps

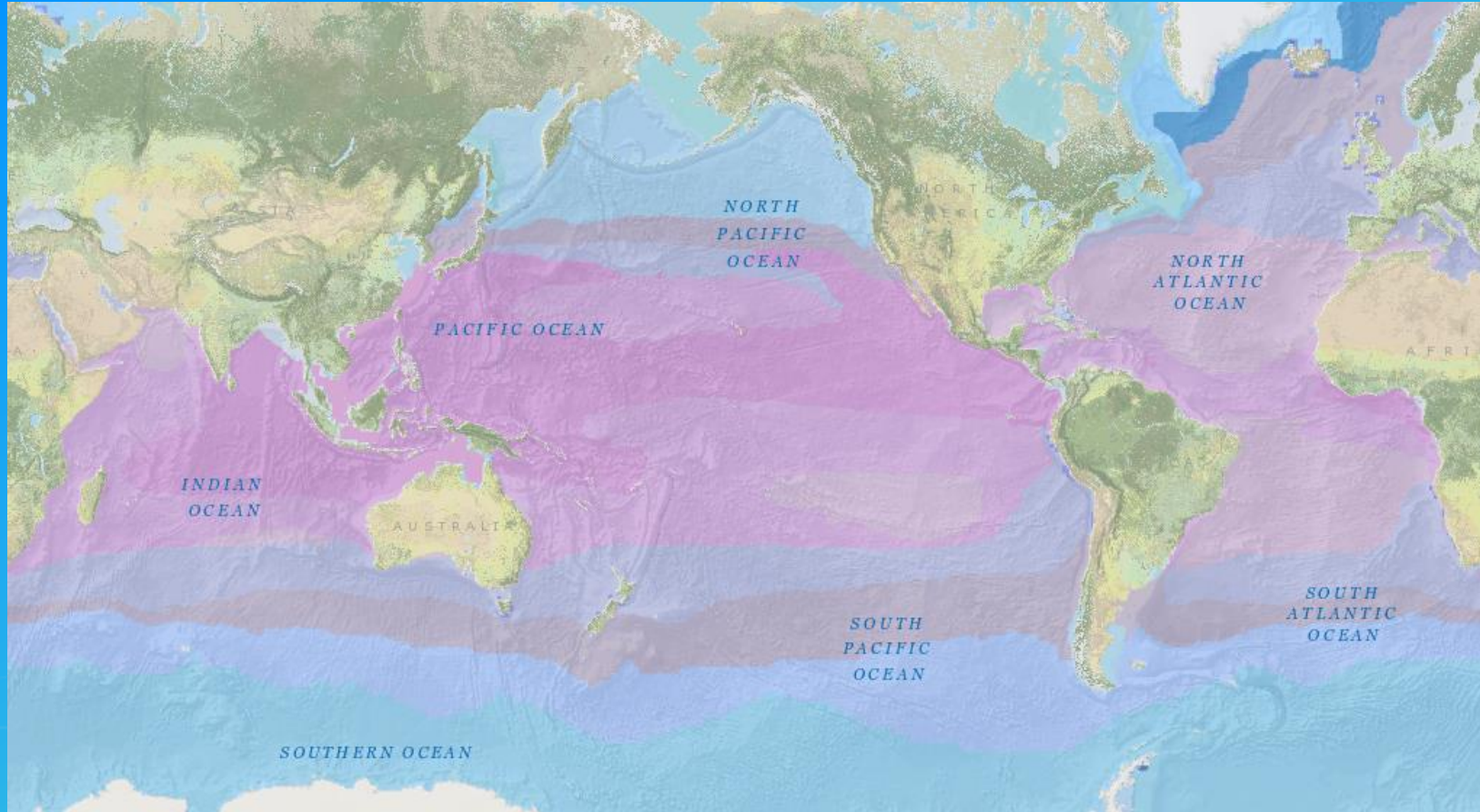
Election data exploration

Ecological Marine Units (3D)

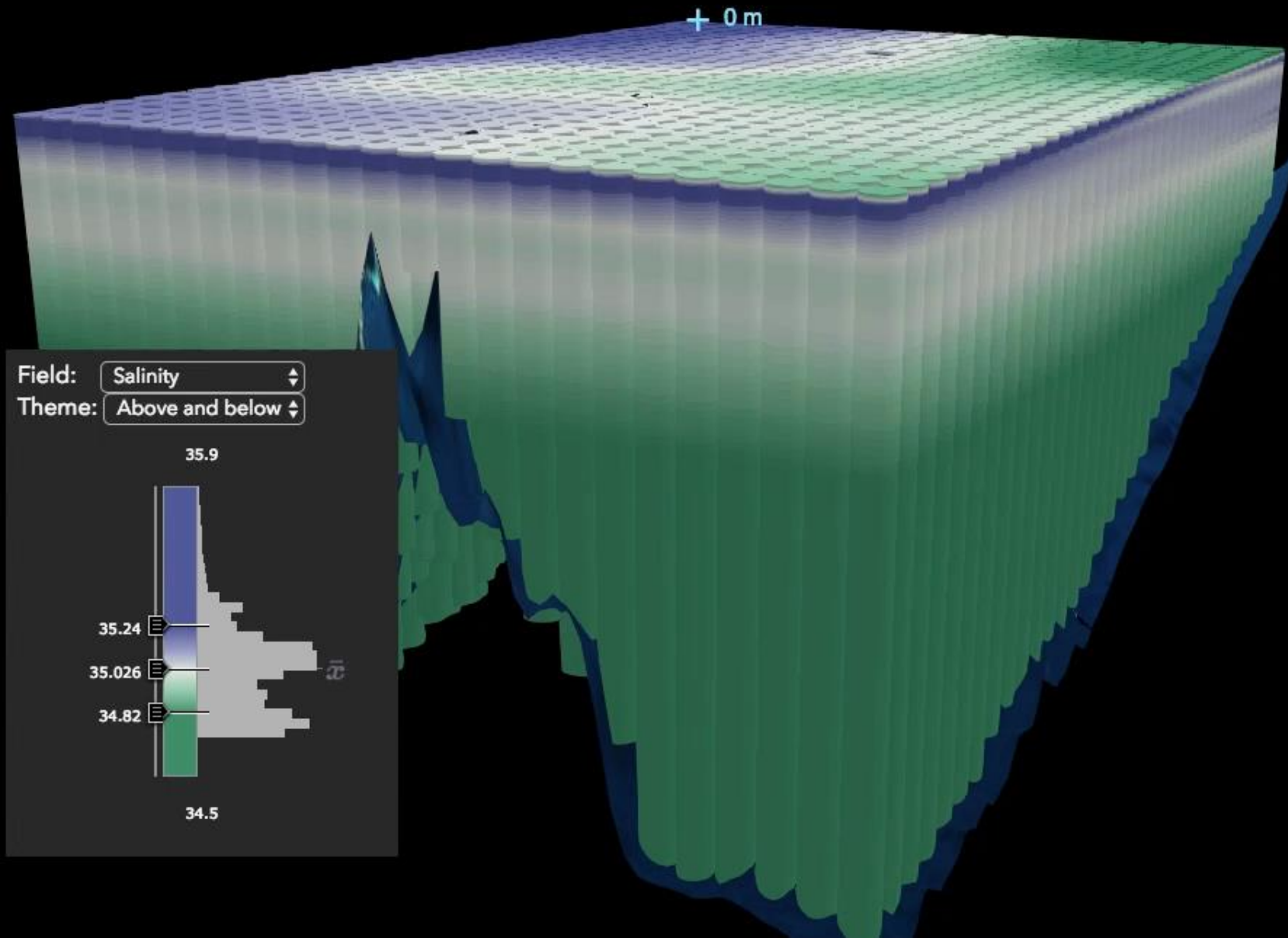
Other samples...



3D Smart mapping

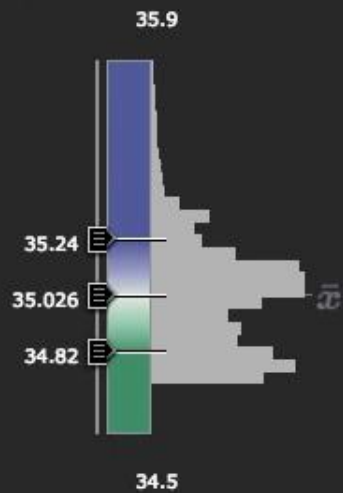


Ecological Marine Units - Maldives

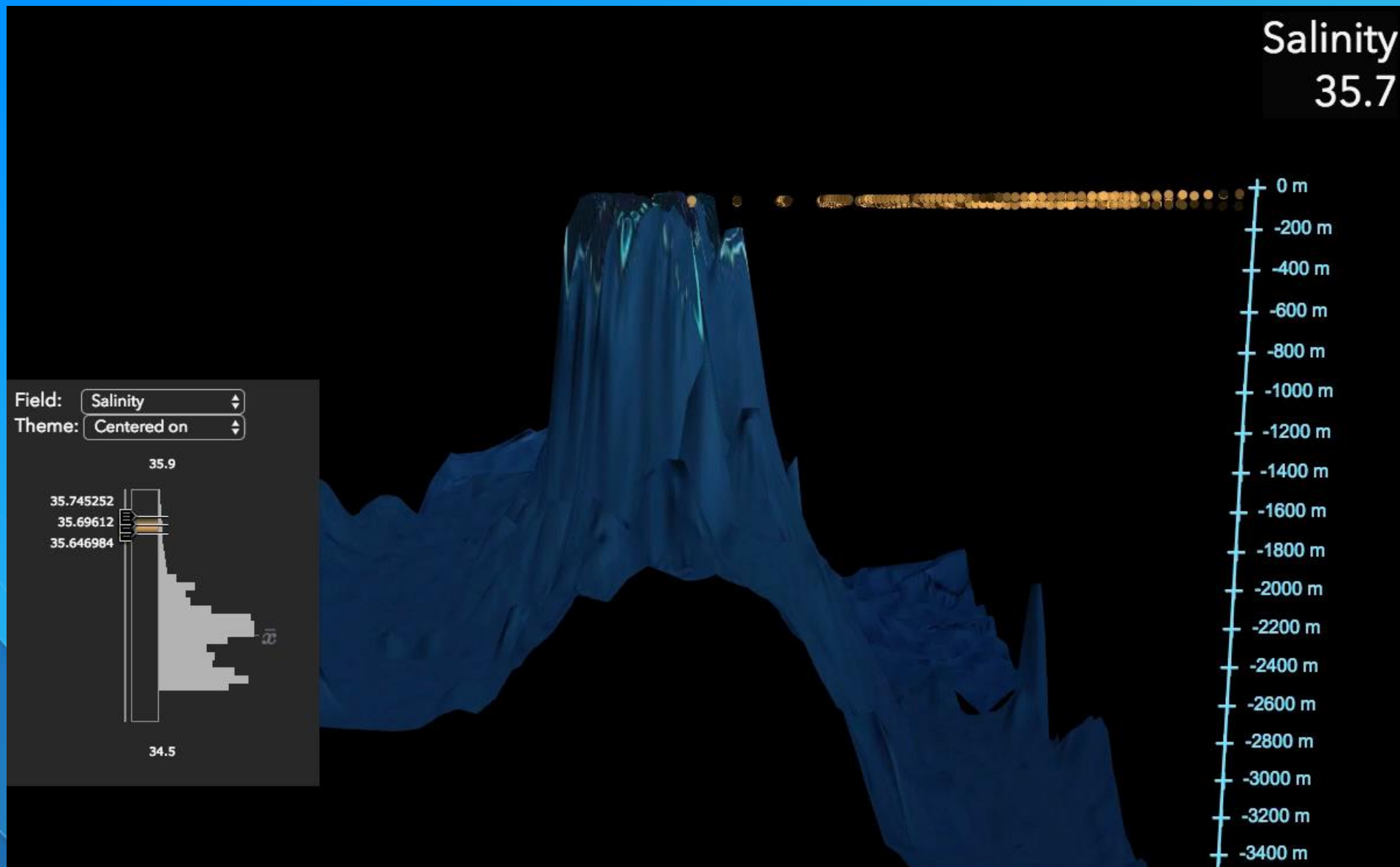


Field: Salinity

Theme: Above and below



3D Smart mapping



Resources

- **Documentation**

- <https://developers.arcgis.com/javascript/latest/guide/visualization-overview/index.html>

- **Demos/samples**

- <https://github.com/ekenesc/conferences/tree/master/ds-2018/smart-mapping>
- <https://developers.arcgis.com/javascript/latest/sample-code/index.html?search=generate>

▼ esri/renderers/smartMapping/creators

color

location

opacity

size

type

univariateColorSize

▼ esri/renderers/smartMapping/statistics

classBreaks

histogram

summaryStatistics

uniqueValues

▼ esri/renderers/smartMapping/symbology

color

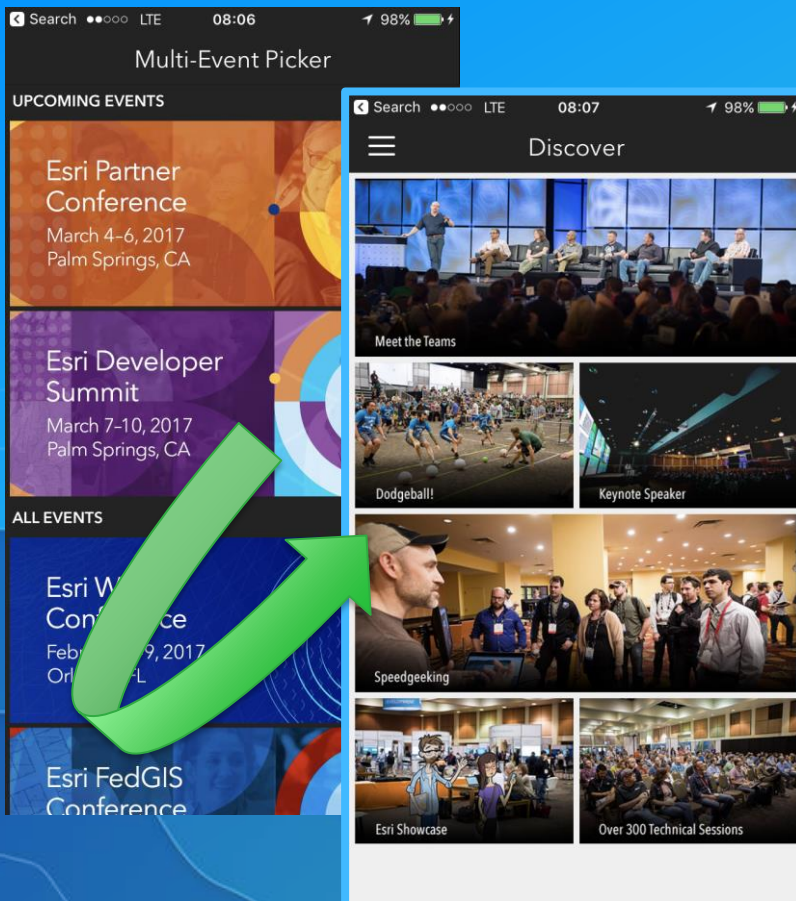
location

size

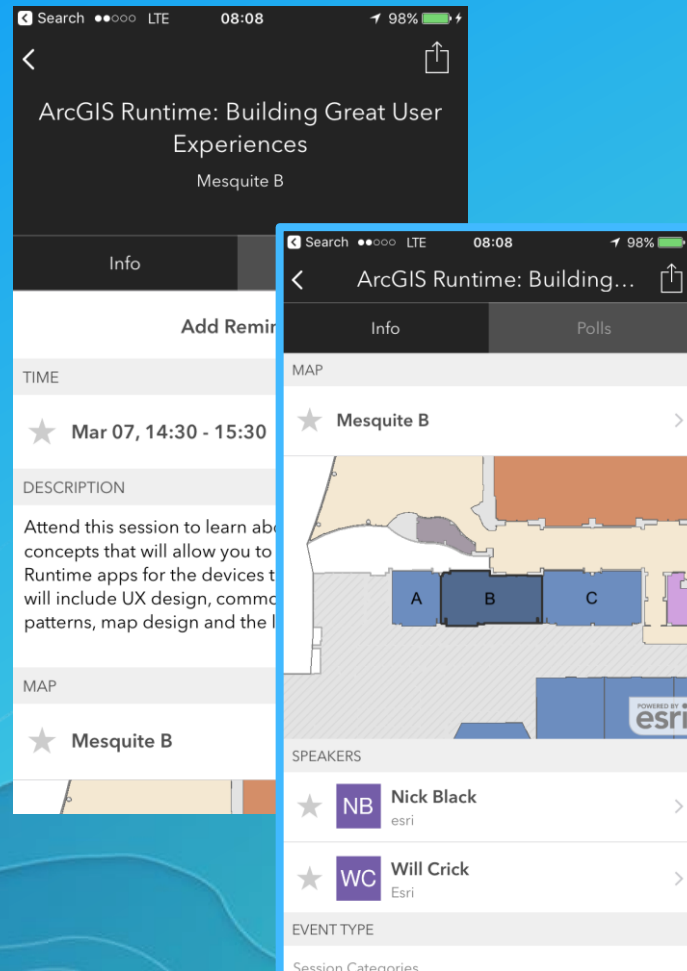
type

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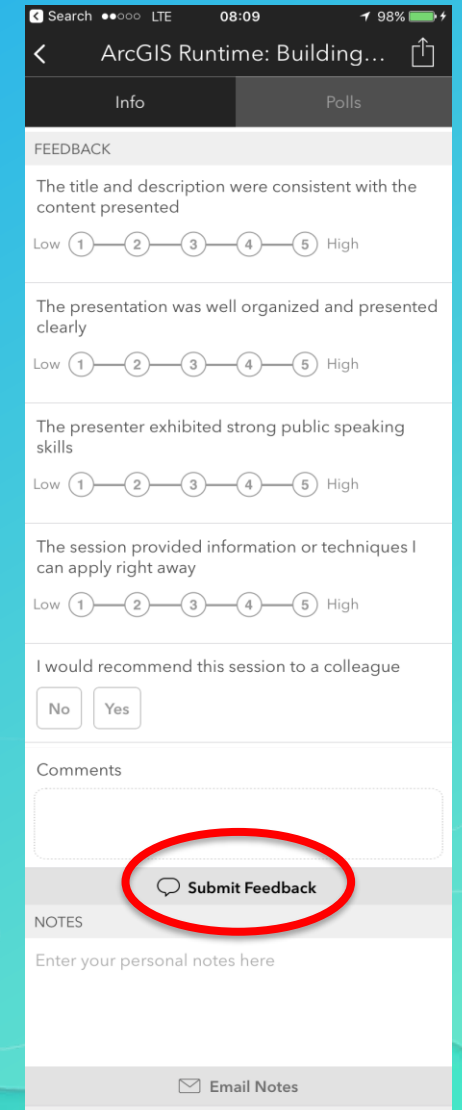


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