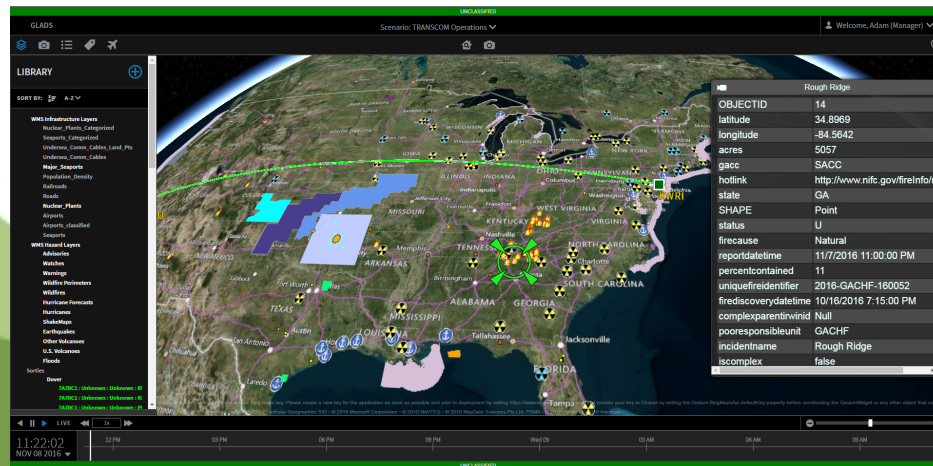
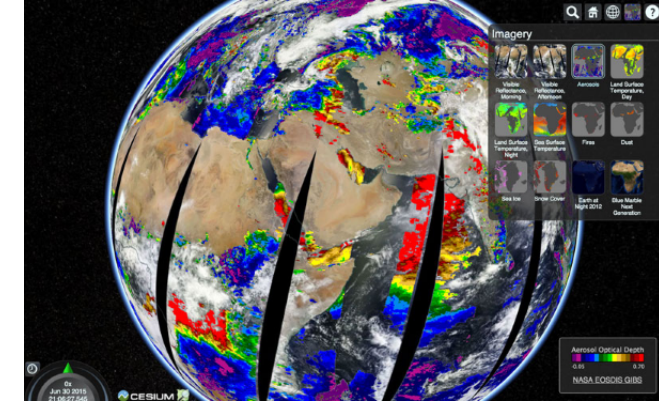
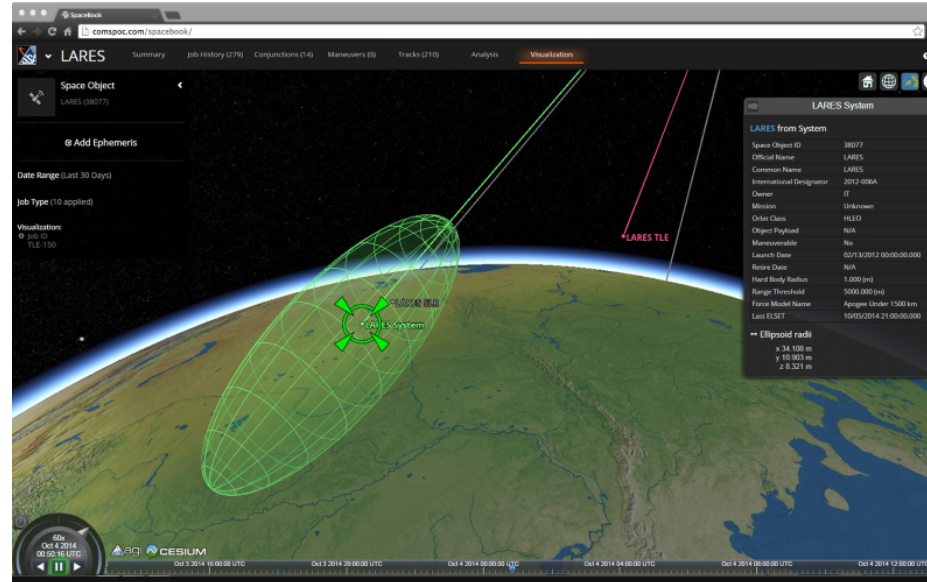
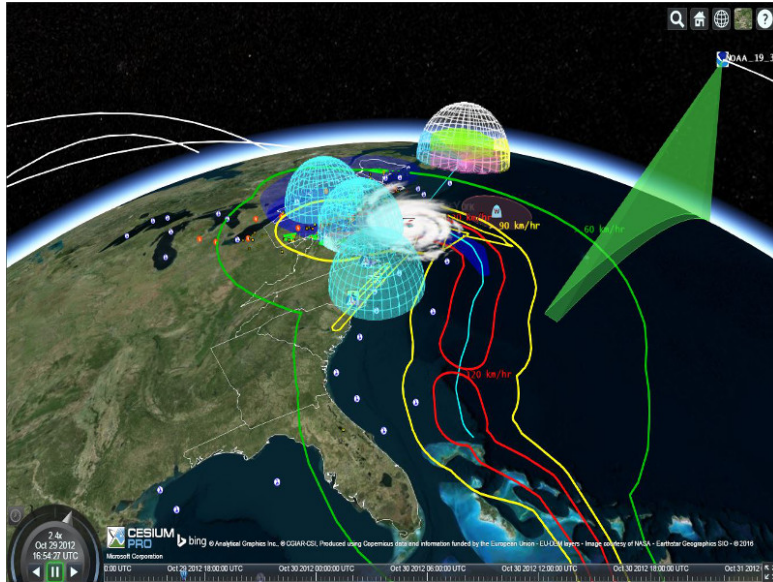




**Next dimension mapping**

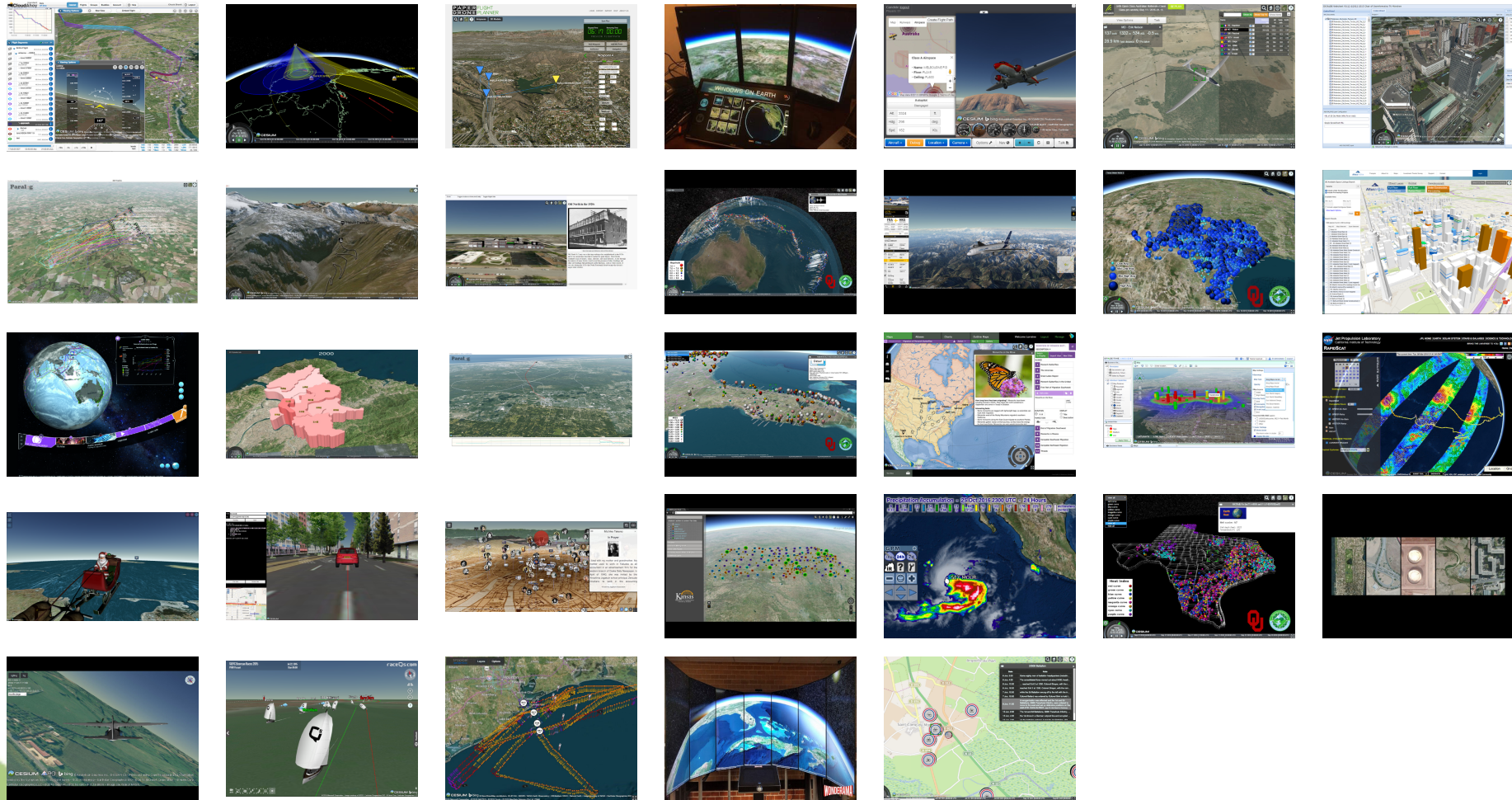
Todd Smith  
tsmith@agi.com  
@tsmith717

# Cesium is 3D born in Aerospace





# Google Earth to Cesium Momentum







**10,000+ downloads a month**

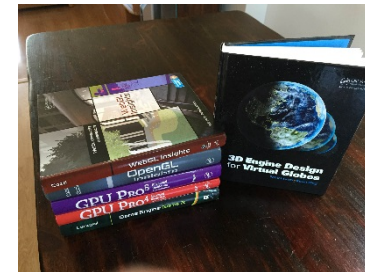
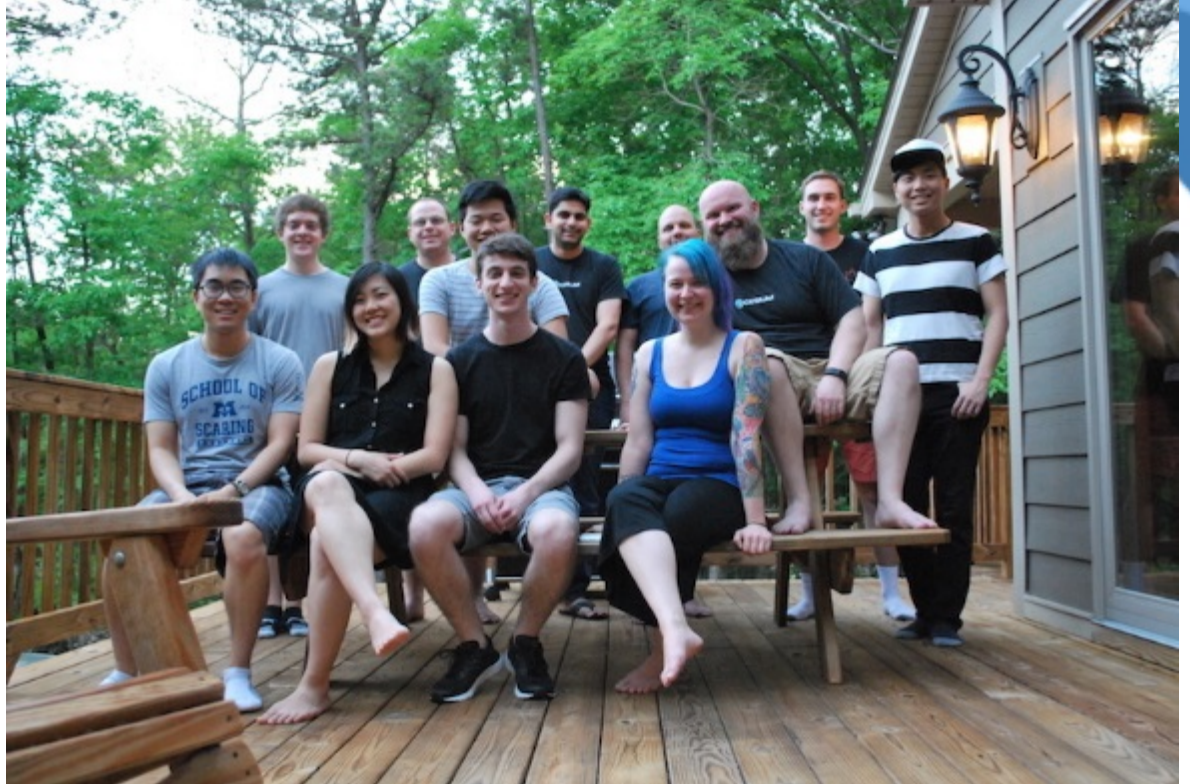
**Millions of end users**

**140+ contributor community  
(14 in the past month)**



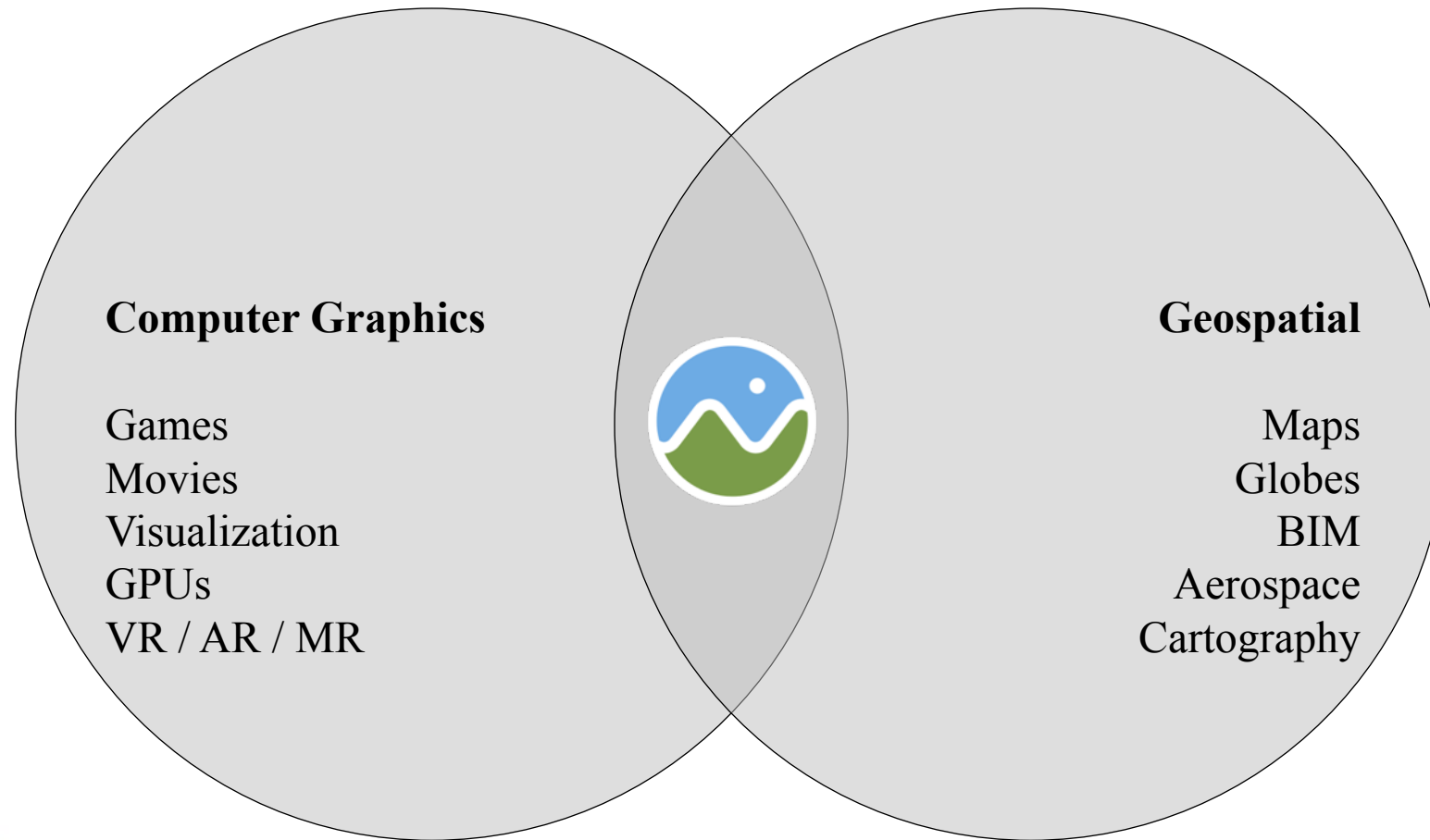
# Built with Care

- **Great team**
- Over 9,200 tests
- 93% test coverage
- 129K lines of code
- 131K lines of test code
- Public peer review
- Static analysis





# The Intersection of Computer Graphics and Geo

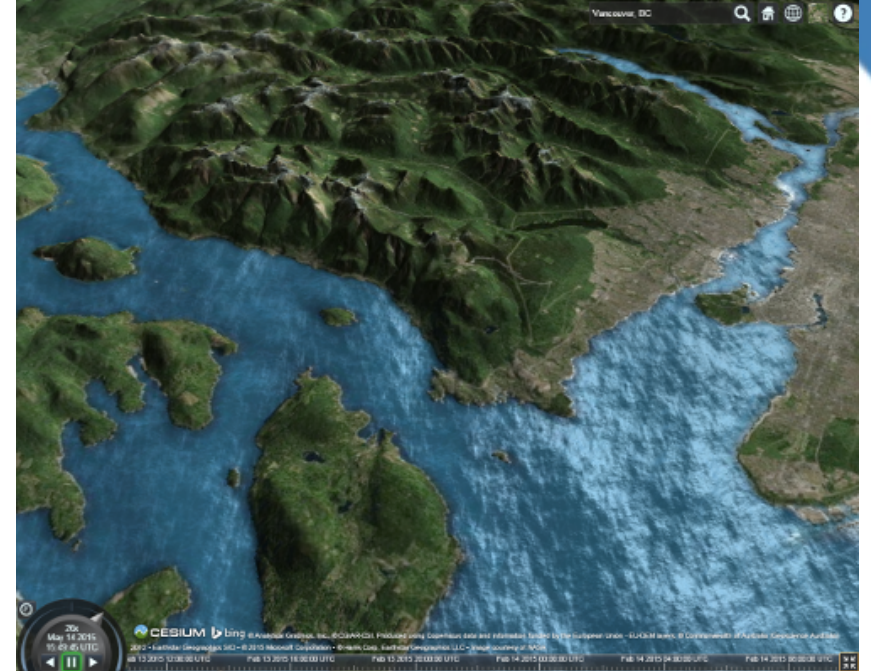




# Terrain and Imagery



Mount Chamberlin. 50cm terrain and 25cm imagery



Lighting and water

- DEM, DTED, etc.
- GeoTIFF

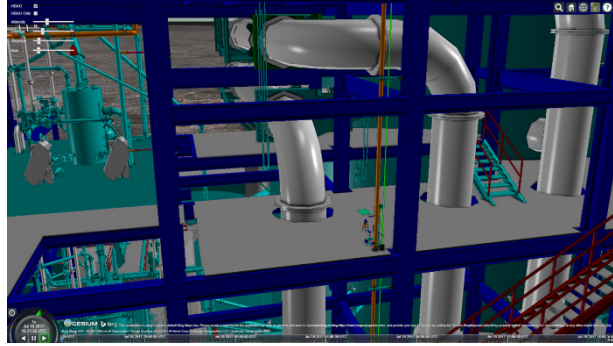


quantized-mesh, TMS

 **3DTiles** coming



# Heterogeneous Data Interoperability



**Photogrammetry**

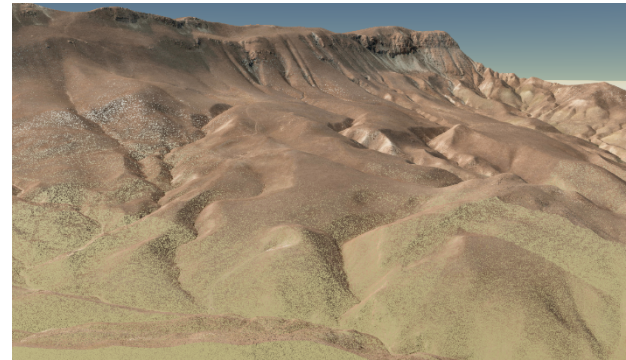
**Terrain and imagery**



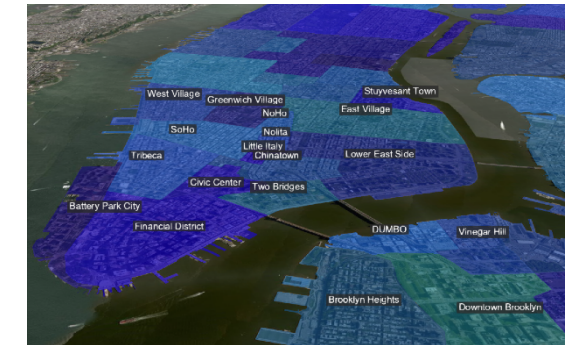
**3D buildings**



**BIM**



**Point clouds**



**Vector data**



**3D models**



# Interoperability via Open Standards



- **Runtime 3D format**
- **Chair, Khronos 3D Formats**
- **Spec Co-editor**



- **Massive heterogeneous 3D datasets**
- **Creators**
- **OGC Community Standard in-progress**



Spatial data structures



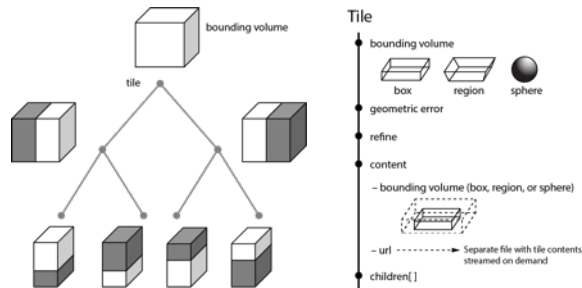
glTF



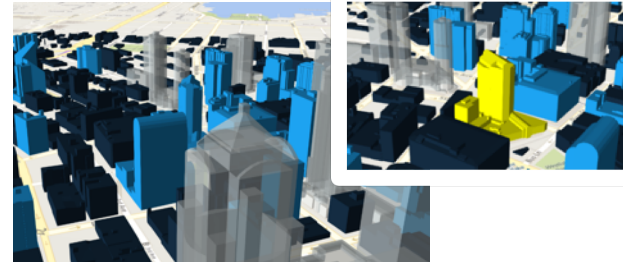
Styling



Metadata



```
{
  "show" : "${Area} > 0",
  "color" : {
    "conditions" : {
      "${Height} < 60" : "color('#13293D')",
      "${Height} < 120" : "color('#1B98E0')",
      "true" : "color('#E8F1F2', 0.5)"
    }
  }
}
```



Massive heterogeneous 3D datasets with semantics



# Video

# 3D Tiles Update

- Testbed 13
  - Demo event 12-13 DEC at USGS, Reston, VA
- Lots of 3D Tiles interest from industry
  - 3D Tiles Pioneer program to help users get their data converted
  - <https://cesium.com/3d-tiles-pioneers/>
- Community Standard status
  - Early next year for final vote



# QUESTIONS?

Todd Smith  
tsmith@agi.com  
@tsmith717



**CESIUM**



**AGI**