Hi everyone, my name is Sean Lilley and I'm a developer on the Cesium team. I primarily work on the rendering engine and here I'm going to talk about some new features in Cesium and talk about our new format for streaming massive datasets, called 3D Tiles.
So what is Cesium? Cesium is an open-source Javascript library for 3D globes and maps. Cesium was founded by AGI in 2012 started in 2012 and went open source in 2013. We've seen a wide range of uses with Cesium in many different areas. Starting on the top left is hi res terrain and imagery captured from matt nolan at the university of alaska. To the right is a view of New York City fro CityGML data, which will show up later in the talk. To bottom left is the roots of Cesium, which was founded by AGI, showing all the unclassified satellites in space. Next is Norad tracks santa which has been running on Cesium since 2012 and gets about 20 million unique visitors on Christmas Eve. And the last image is from the GEFS flight simulator, which migrated from Google Earth to Cesium due to the google earth plugin deprecation.
Now I'm going to cover a small selection of the newest things we've been working on. Cesium can run on WebVR so it's great for Google Cardboard. We also recently added shadows to the Cesium engine. Thw shadows work for 3d models, cities, and terrain. You'll see this in action soon.
Cesium is used for every building Manhattan to every satellite in space. Cesium of course does the classic streaming on high resolution terrain and imagery, however our users also want to take advantage of 3D to stream million of buildings, billions of points, render instanced trees, and draw 3d vector data that conforms to terrain.
To handle all these cases we designed 3D Tiles. In summary, 3D tiles is an open specification for streaming massive heterogeneous 3D geospatial datasets. And here I'm going to show what these datasets look like.
Enter 3D Tiles.

3D Tiles are an open specification for streaming massive heterogeneous 3D geospatial datasets. That is a mouthful, but each of those words is important. 3D Tiles provides the flexibility needed for the overlay but diverse 3D use cases.

I alluded to this at Web3D in 2014: http://cesiumjs.org/presentations/CesiumCzmlGltf.pdf

And presented some of the technical approaches at MIT a bit later in 2014: http://cesiumjs.org/presentations/RenderingMassiveGeospatialDatasetsInCesium.pdf
3D Tiles Showcases

https://youtu.be/KoGc-XDWPDZ
Check out 3D Tiles

https://github.com/AnalyticalGraphicsInc/3d-tiles
We’re hiring!

Software Developers and Geospatial Data Wranglers

cesiumjs.org/jobs
Join us for the Cesium BOF

Tuesday, 10:30am-12:00pm. Room 203B

- Cesium State of the Union. Patrick Cozzi, Cesium
- 3D Tiles and OGC’s 3D Portrayal service standard. Raff Gutbell, Fraunhofer
- Making Drone Data Useful in Cesium. Chris Cooper, Propeller
- Publishing Reality Meshes to Web from Bentley ContextCapture using Cesium 3D Tiles. Makai Smith, Bentley
- Baking AO in the glTF Pipeline. Gary Li, Cesium
Contact

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