

## Geospatial Content Server

A comprehensive enterprise solution for hosting, processing, serving, and analyzing terrain, imagery, and other heterogeneous 3D data

This geospatial content management system, with its rich trove of terrain, imagery, and 3D models, includes:

- High resolution imagery, terrain, and 3D model files (Standard option) or the Premium option that also includes higher resolution terrain
- Support for both STK and Cesium applications

### / Hosting options

- Privately host world terrain and imagery; process and curate your own world terrain data for hosting on-premises, behind the firewall on private networks
- Privately host terrain processing and 3D tile processing that can be used to perform visual analysis
- Local use of terrain, imagery, and models (no hosting required)

### / Secure access to data

- Supports modern security protocols such as OAuth 2.0, OpenID Connect, and SAML 2.0
- Comes with a built in identity management system
- Integrates with standard identity providers, such as LDAP and Active Directory

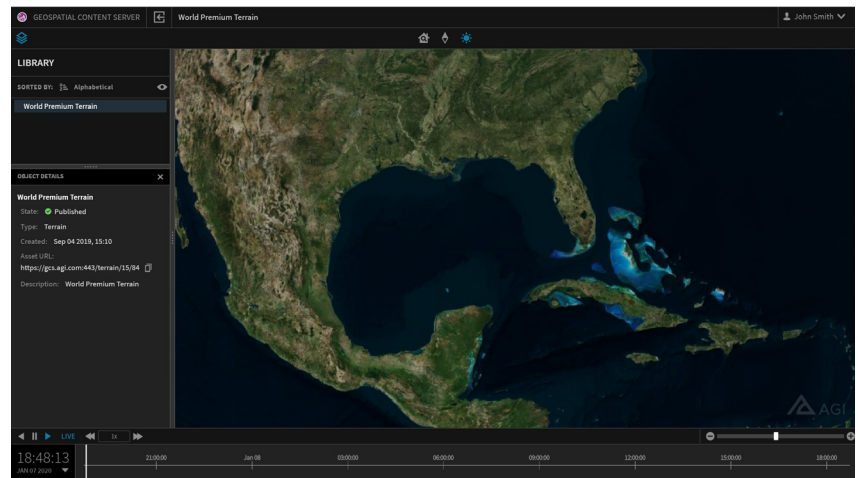
### / Easy access to data

- The web user interface of the Geospatial Content Server is accessible from any standard browser
- Cesium-based user interface allows you to interactively assemble geospatial content. Geospatial Content Server tiles your geospatial data into a single map with layers

### / Distributable architecture

Supports scaling to meet your enterprise needs:

- Ability to support more users as usage grows
- Allows for handling of massive datasets with easy viewing in a Cesium-based user interface



### / Terrain Server

#### / Highlights

- Mosaicking varied terrain data sources into a global unified tileset
- Its own web server for hosting processed terrain
- Designed to run on commodity hardware
- Uses open standards terrain runtime format, Quantized Mesh, avoiding vendor lock-in

#### / Terrain Processing

- Level-of-detail pyramid is simplified within a known glance
- Client applications can precisely request terrain tiles where the difference in mesh geometry from the source data is not visually discernible
- Adaptive level of detail. At the root zoom level, meshes are simplified until roughly 150km in error from original source data. This error is cut in half for each subsequent tile level in the pyramid. (The allowable error between mesh and source data is ~150km for the root zoom level, however at this distance from the globe, there is no discernible difference, with far less geometry.)
- Through use of an irregular mesh for terrain geometry, merging data sources of different resolutions does not require all geometry to be upsampled to the maximum resolution



## / Terrain Hosting

- Uses open standards terrain runtime format, Quantized Mesh, to avoid vendor lock.
- Efficient storage on server through stand-alone database files processed from terrain tile sets.
- Removal of file system clutter by embedding tiles within a database rather than direct storage to the file system.
- Optimization of file management transfers between hosting nodes.
- Designed for processing on dedicated computers, yet easily imported into lightweight hosting nodes.

## / Prepopulated with Rich 3D Geospatial Content

- Includes various-resolution global terrain data sets, 10-meter resolution global Sentinel-2 imagery, and 3D models in standard formats.

### Terrain Data

Source	Coverage	Resolution
<a href="#">USGS GTOPO30</a>	Entire Earth	1000 meters
<a href="#">CGIAR SRTM</a>	60N -60S	90 meters
<a href="#">USGS National Elevation Dataset (NED)</a>	United States	30 meters
<a href="#">USGS GTOPO30</a>	Entire Earth	1000 meters
<a href="#">USGS CGIAR SRTM</a>	60N - 60S	90 meters
<a href="#">USGS National Elevation Dataset (NED)</a>	Continental U.S. and Alaska	10 meters
<a href="#">USGS National Elevation Dataset (NED)</a>	North America	30 meters
<a href="#">USGS SRTM 1 arc sec</a>	60N - 60S	30 meters
<a href="#">EU-DEM</a>	Europe	30 meters

### Imagery Data

Source	Coverage	Resolution
<a href="#">Sentinel-2 2019</a>	56S – 84N	10 meters

### “Pre-processed” Formats:

Format	3D model	Imagery	Terrain	Vector
3D Tiles	X			
Tile Map Service (TMS)		X		
Terrain Database			X	
CZML				X

### Formats that require processing:

Format	3D model	Imagery	Terrain	Vector
CityGML	X			
NITF		X		
GeoTIFF		X	X	
USGS ASCII DEM, CDED, DTED, HRE, FLT, HGT, BIL, BIP, BSQ			X	



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