

RELEASE NOTES FOR TERRAEXPLORER FOR DESKTOP

7.0.2

About TerraExplorer for Desktop

TerraExplorer is a cutting-edge 3D GIS desktop viewer and creator that provides powerful tools and a high resolution 3D environment in which to view, query, analyze and present geospatial data. With TerraExplorer's robust and extensive capabilities, realistic 3D visualizations can be created by overlaying the terrain with unlimited data layers, 3D models, virtual objects and more.

Analysis

In addition to basic measurement and analysis tools for distance, slope, and volume measurements, TerraExplorer features advanced capabilities, including 3D plane area measurement, imagery comparison, and dynamic 3D viewshed.

Display

Imagery and elevation layers of unlimited size and resolution in a wide range of formats can be overlaid on the terrain and seamlessly integrated with feature layers and multi-resolution, stream-optimized 3D mesh model layers for easy visualization, access, and analysis of 3D geospatial data. If a new layer is based on a source that uses a different coordinate system, the layer can be reprojected to the project's coordinate system.

Point, line and polygon features can be displayed and used to display advanced layer information based on their attribute data. TerraExplorer also includes an extensive set of objects: 2D and 3D, dynamic, buildings, models, point cloud models and video, that can be displayed on the terrain, as well as advanced terrain objects that allow terrain modification within TerraExplorer Pro. A flexible clipboard mechanism and sophisticated duplication tools make it easy to copy, paste, and position objects on the terrain.

Realism is enhanced with environment settings that include lighting effects, horizon distance, fog color, sky texture, cloud display, and shadow color.

Spatial Queries

TerraExplorer provides advanced capabilities for manipulating feature and 3DML data and analyzing spatial relationships. Various spatial operations can be performed on a layer's features, including merging features into a single feature, clipping one polygon from another, exploding a multi-part feature into its individual component features, and exporting selected features to a new file.

Complex spatial and attribute queries are supported. Features can be filtered based on attribute value or based on their spatial relationship with a specified polygon, line point or object. A buffer zone can be defined to include features within a certain radius of the selection.

Publishing Data

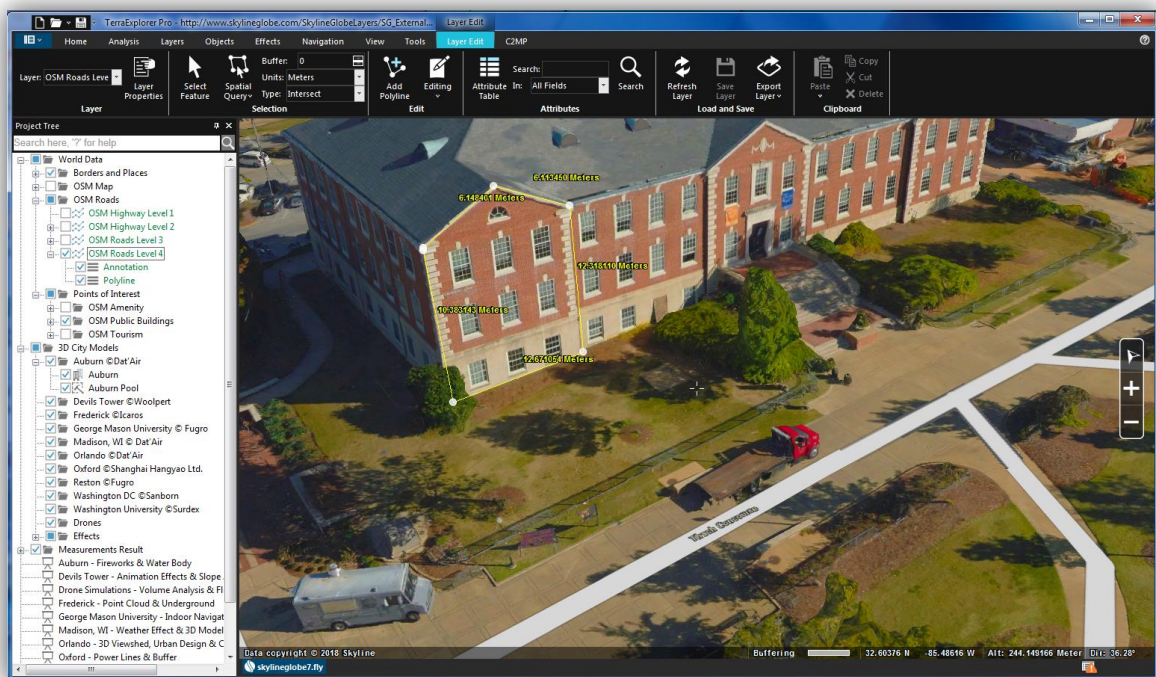
SkylineGlobe Server streamlines the TerraExplorer workflow, enabling complete projects and layers to be optimized and published directly from TerraExplorer Pro to the cloud server. Through a single publishing operation, the data is made available to all TerraExplorer clients: Desktop, Mobile, and TE for Web, as well as standard geospatial clients such as WFS/WFS-T/WMS/WMTS/3D Tiles (Cesium).

Creating and Sharing 3D Presentations

TerraExplorer's presentation tools enable you to create a presentation, in which you communicate a specific view of the 3D World, by combining a customized flight route with a particular display of the project. Your presentation consists of one or more steps, in each of which you control the display of the 3D World, including current camera position, layer and object visibility, system time, and popup messages and captions. Presentations can be easily converted to standard video files.

Optimization

Advanced tools allow conversion of model files and of point cloud data from various formats to a stream-optimized Skyline-proprietary format for improved display performance as well as download rate. The Extract Terrain tool extracts and creates a subset of a local or remote terrain database for easy distribution.



New Features in Release 7.0.2

Support for Cesium 3D Tiles (B3DM)

TerraExplorer 7.0.2 expands 3DML support to include the loading of mesh layers in Cesium 3D Tiles (B3DM) format.

Reproject 3DML Elevation Values

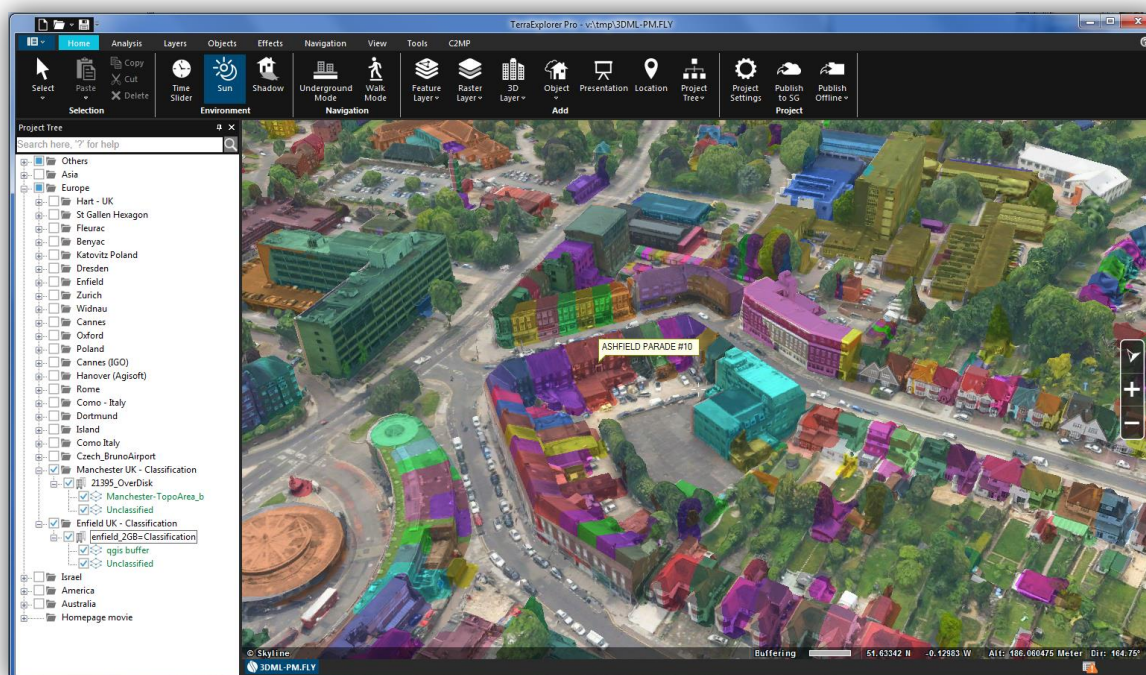
New option to reproject the elevation values of 3DML layers.

New Supported Formats

- **Load feature layers from Open Street Map** - TerraExplorer 7.0.2 extends feature layer support to include Open Street Map (OSM) datasets.
- **User interface for WCS** - TerraExplorer 7.0.2 provides a user interface for loading elevation layers from Web Coverage Servers.

3DML Style by Attribute

3DML's loaded with classification layers with attribute fields can be styled based on the attribute field values of the classification polygons.



New Low Resolution, Local MPT Option

New option to open a new project with a low resolution, local MPT that was included in the installation folder.

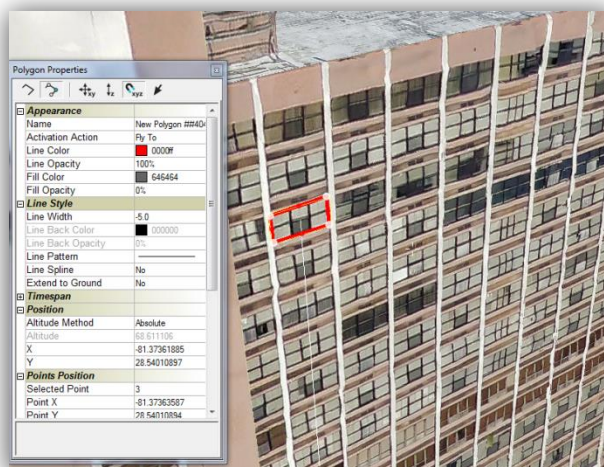
New Features in Release 7.0.1

Raster Layer Enhancements

- **Load raster layers from Google Earth Enterprise Server** - TerraExplorer 7.0.1 extends imagery and elevation layer support to include Google Earth Enterprise (GEE) Server. GEE Server provides a way of hosting private versions of Google Earth and Google Maps.
- Load Geospatial PDF as raster layers

Feature Layer Improvements

- **Create object on surface** - New XYZ magnet mode simplifies creation and positioning of objects in the 3D Window by enabling you to place an object based on where the mouse is pointing in the 3D Window. This new capability is particularly critical for positioning of objects on a vertical plane or above a 3DML layer or other 3D object.
- Additional support for KML/KMZ advanced tags.



Improved Publishing Tools

- **Publish local feature layers as GeoPackage databases** – This format allows read/write access to published feature layers on the SkylineGlobe Server via the WFS transactional protocol.
- Stability and bug fixes

API

- Plus level API is now automatically extended to all TerraExplorer clients opening terrain from SkylineGlobe Server.
- Additional API methods and properties

SOFTWARE AND HARDWARE REQUIREMENTS

Operating System	Windows® 7/ 8 /10 – 64-bit.
System Memory	2GB of RAM (4 GB or more recommended).
Video Card	512MB of video memory (1 GB or more recommended). Pixel and vertex shader v3.0.
Processor	4 cores (8 cores recommended).
Browser	Microsoft Internet Explorer 9 or higher.

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