RELEASE NOTES FOR TERRAEXPLORER 7.0.1

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 layers 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 advance tags
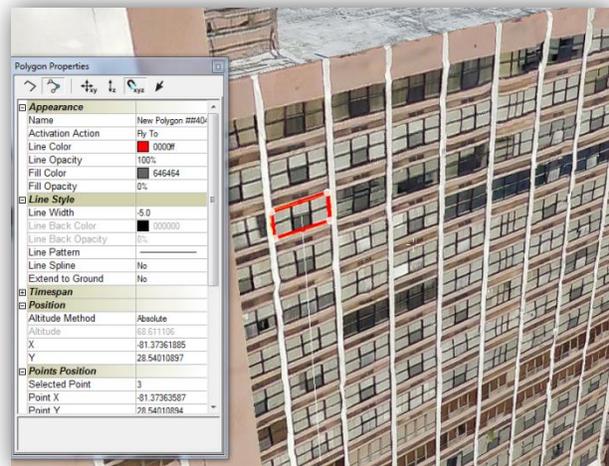
Improved publishing tools

- **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

New Features in Release 7.0

Native 64-bit Application

TerraExplorer 7.0 has been redesigned as a native 64-bit application, enabling TerraExplorer to take advantage of available memory for resource-intensive processes. A special mode is available to support 32 bit applications.
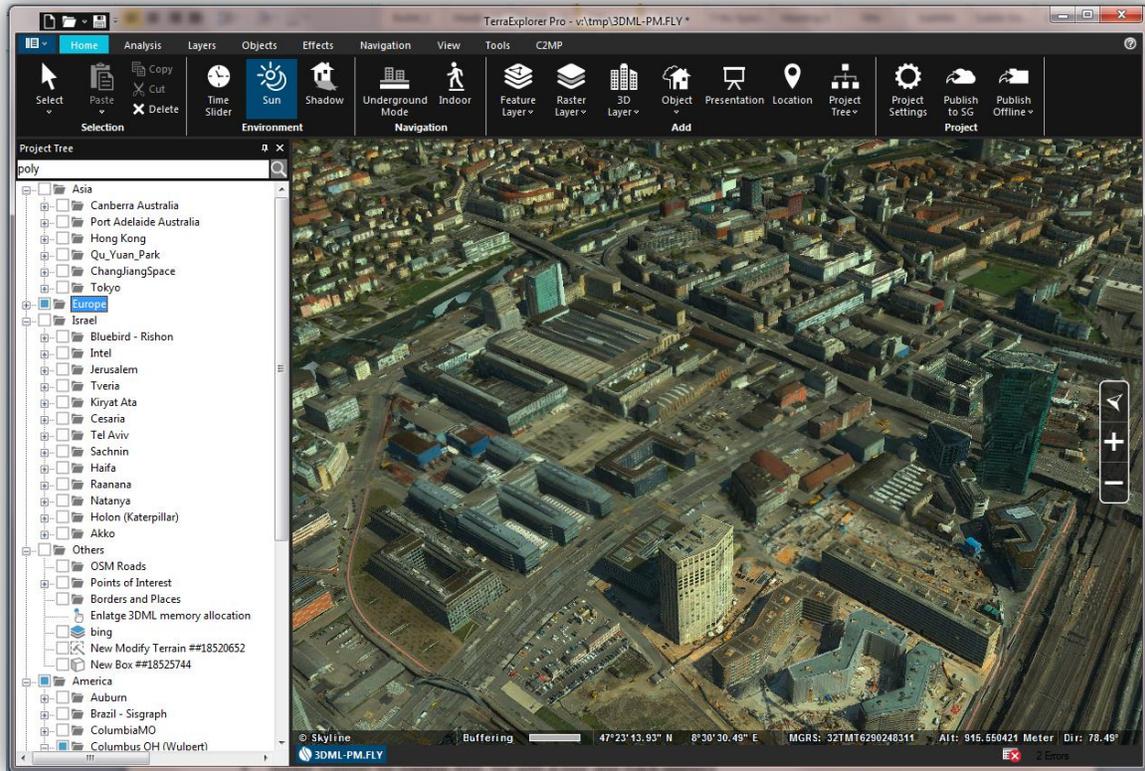
### New Feature Layer Formats

TerraExplorer 7.0 extends feature layer support to include the following additional formats:

- WFS 2.0 (in addition to 1.0.0 and 1.1.0)

- GeoPackage (read/write)

- Geospatial PDF (read/write)

- Microsoft Excel (.xlsx) (read/write)

- S-57

- Esri REST server (GeoJson)

- GDal Virtual Datasource (VRT)

GUI and Usability

TerraExplorer 7.0's usability improvements include:

- **Omni search tool** – With one click, you can search everything: Project Tree, ribbon commands, SkylineGlobe Server and addresses server for the commands, layers, objects and locations you need.

- **Drag and drop** –Enhanced drag and drop capability now supports all raster and feature layer image label, 3D model, 3DML, and CPT formats, in addition to, FLY, KML, KMZ, TBP, and MPT files. Files can be dragged anywhere on the 3D Window or Project Tree or to specific Project Tree groups. TerraExplorer 7.0 also supports drag and drop of multiple files.

- Integration of **MGRS** coordinate system in application UI - The Show MGRS field has been added to all layers and objects, as well as analysis and line of sight tools, enabling display of coordinates in Military Grid Reference System (MGRS) system.

- **GUI facelift** – TerraExplorer 7.0 sports a fresher, cleaner look.

- **Walk Mode** – Indoor Navigation tool has been renamed to Walk Mode and redesigned for easier navigation indoors and outdoors.

- **Bug fixes and stability** – This release improves overall stability and performance.
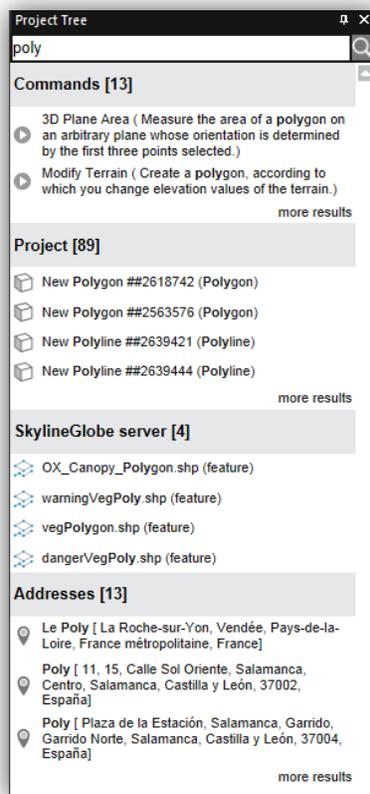
*Omni Search Result*

Improved KML Support

TerraExplorer 7.0 features improved KML support including:

- Added support for loading KML file with a tour and track element

- Better handling of popup messages

- Support for Photo Overlay tag

- Skyline extension tags (SX)

- Improved performance of model (DAE) streaming

Working with 3DML

TerraExplorer 7.0 provides powerful new capabilities for working with 3DML layers, including:

- Updating of the terrain surface to match the 3DML ground surface.

- Drawing of "On terrain" objects on the 3DML ground surface.

- Movement of dynamic objects on the 3DML ground surface.
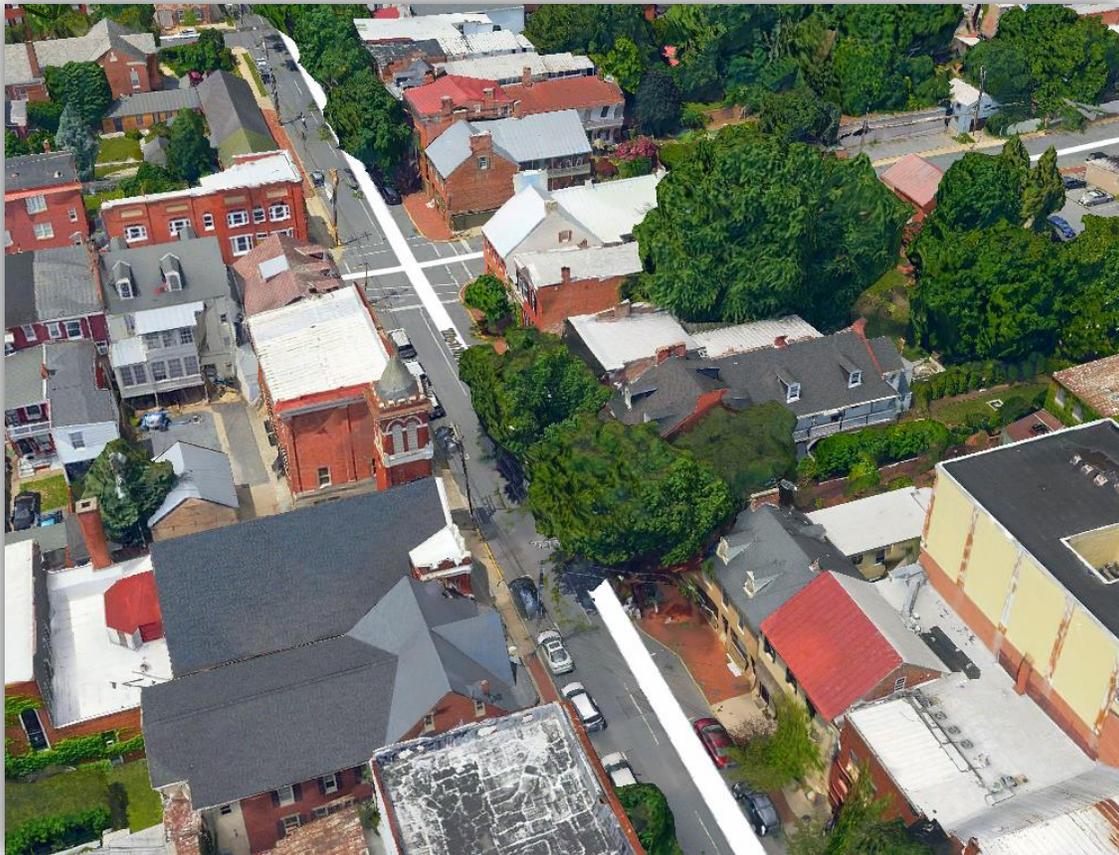
Feature Layers on 3DML Ground Surface

Analysis Tools

- New Cross Section tool makes horizontal or vertical straight cuts to expose obscured sections of the 3D View.

- New Volume Analysis tool enables calculation of the volume of both terrain and mesh removed or added by Modify Terrain/Modify 3DML objects. The tool can also calculate the volume difference between a designated section of an elevation layer and the base terrain.

- Global contour map improvements include the drawing of the map also over 3DML layers as well as the drawing of sharper, more visible contour lines on terrain textures.

- Drawing of slope map on 3DML
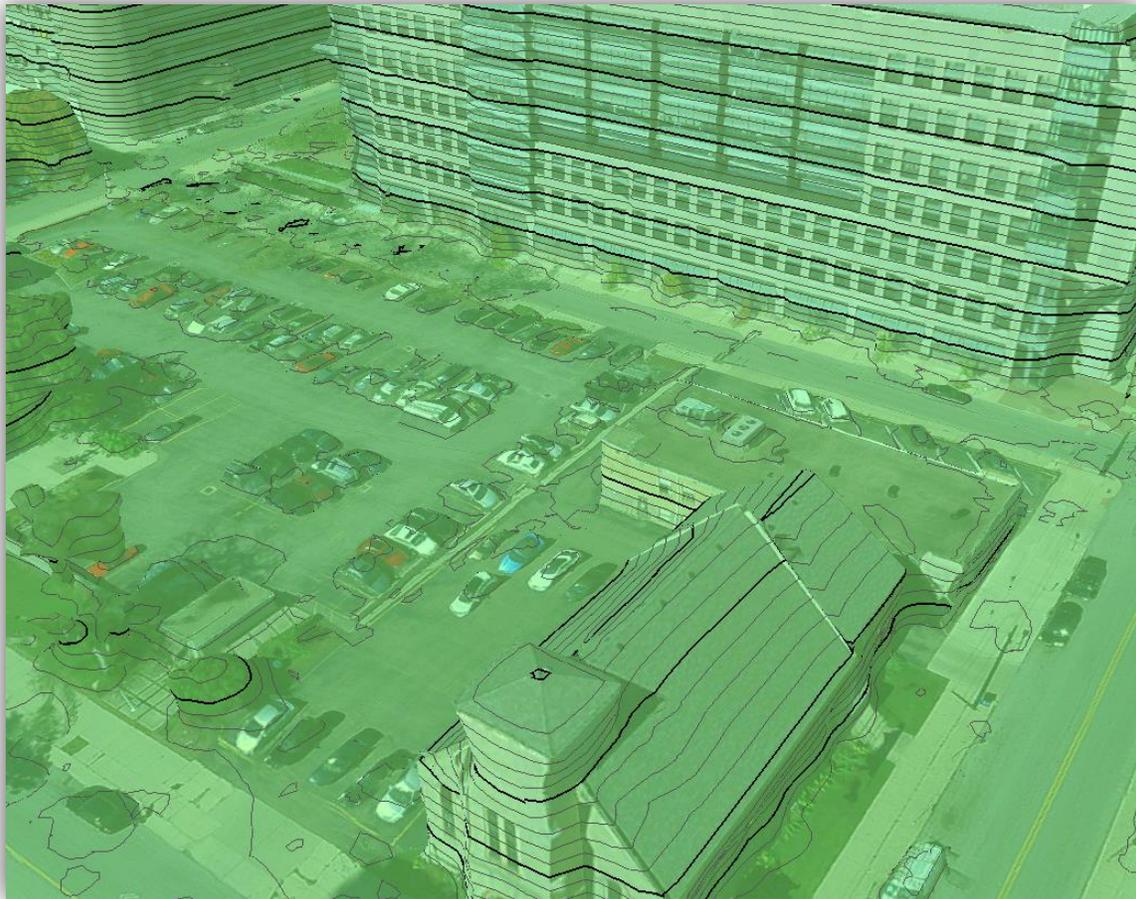
Contour Map on 3DML

TerraExplorer 7.0 revamps the publishing process, replacing TerraGate and SFS with the reinvented SkylineGlobe Server:

▪ **Searching and streaming** - SkylineGlobe Server replaces the discontinued TG/SFS server, maintaining detailed information about uploaded layers and projects so that you can easily query and search all published data layers to find the standard geographical data you require for a project. SkylineGlobe Server supports the main services provided by the retired/previous TerraGate components including terrain (MPT/TBP), map (raster-WMS/WMTS), feature (WFS/WFS-T), 3D Mesh (3DML). In addition, a new point cloud service is introduces, and the 3D mesh service exposes 3D Tiles output of TE4W and Cesium based clients.

▪ **User permissions** – The SkylineGlobe Server permissions mechanism allows you to set viewing/editing access rights to your published layers and projects.

▪ **Publishing** – The new SkylineGlobe Server streamlines the TerraExplorer workflow. All publishing and uploading of layers and projects to the server can be done directly from TerraExplorer eliminating the need to copy project kit folders to a web server or upload MPT, raster, and feature layers to TerraGate server. Through a single publishing operation, 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).

Loading Layers from SkylineGlobe Server

6

Object Improvements

- Graphic card "**shader**" technology utilized for enhanced performance and graphic capabilities.

- New mechanism **de-clutters** the user interface (i.e. labels and icons).

- New option to display dynamic object's track.

Improved API Support

- Attribute table API

- Script messages – supports JavaScript

Additional Functionality for TerraExplorer Viewer and TerraExplorer Plus

Many of the features that were previously only available in the TerraExplorer Pro level products have been added to the TerraExplorer Plus and TerraExplorer Viewer products.

Expanded **Viewer** capabilities include:

- API – When running an online project (from a SkylineGlobe Server), the API will be automatically upgraded to Plus level

- Ability to load all online layers (from SG Server or other OGC compatible servers)
    - Imagery layers
    - Elevation layers
    - 3D mesh layers (3DML)
    - Feature layers (all formats) – read-only mode.
    - Point cloud

- Ability to load selected local feature layers
    - Shape
    - Fly
    - KML/KMZ

New **Plus** capabilities include:

- Querying and editing of feature layers

- Ability to create new feature layer

- Make CPT

- Load BIM

- Addition/editing of advanced objects (dynamic, modify, hole, building, video on terrain)

- Draw tools (duplicate objects, power lines, pipe lines, fences and walls)

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 (1024 MB or more recommended). Pixel and vertex shader v3.0.

- **Processor** - Multi-Core (4 or 8 cores recommended).

- **Browser** - Microsoft Internet Explorer 9 or higher.