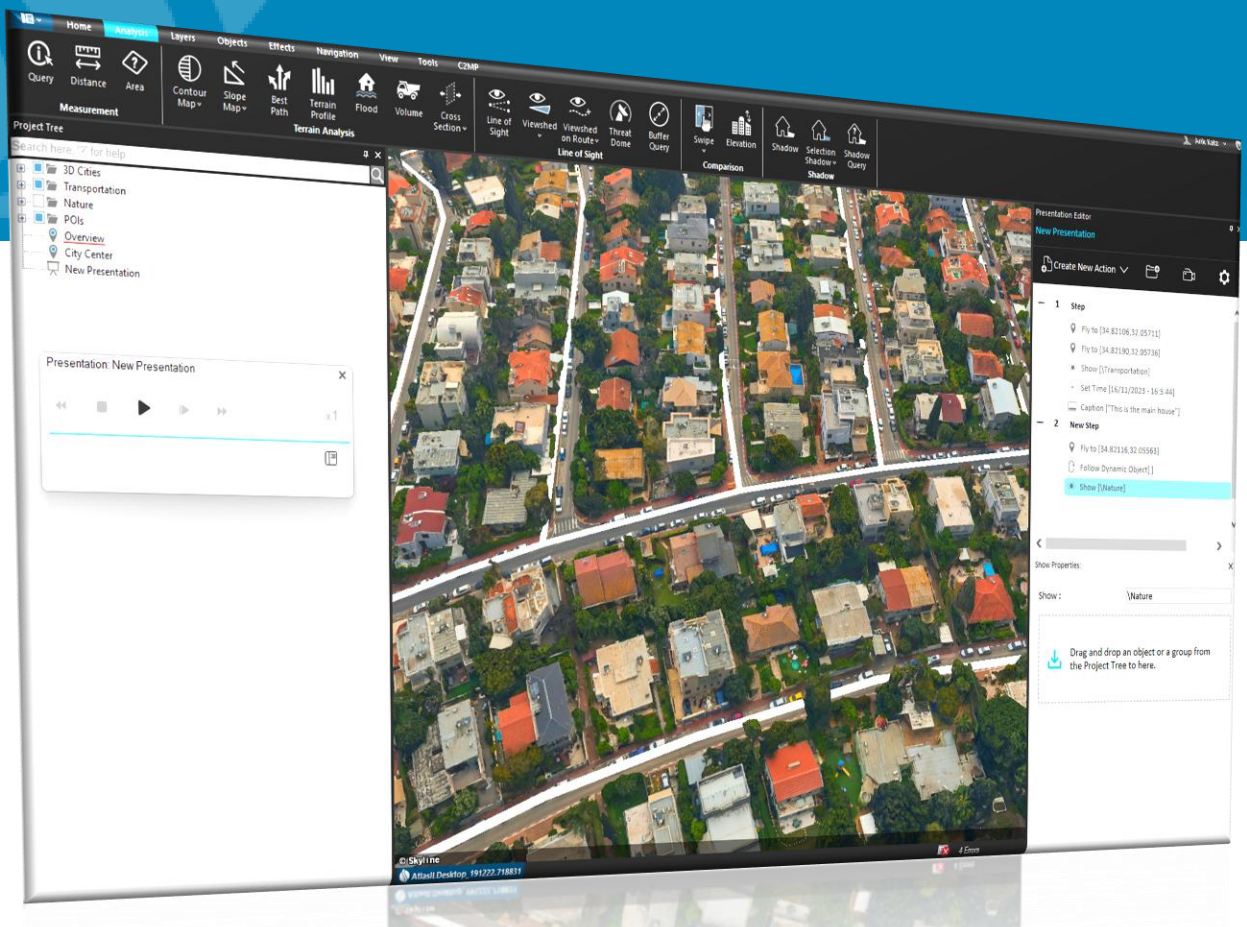
TerraExplorer for Desktop

Release Notes

v8.0.4

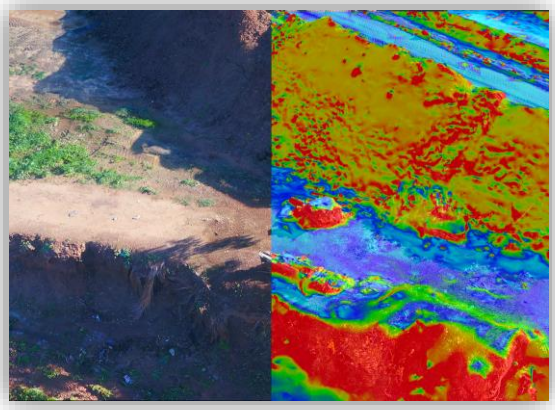


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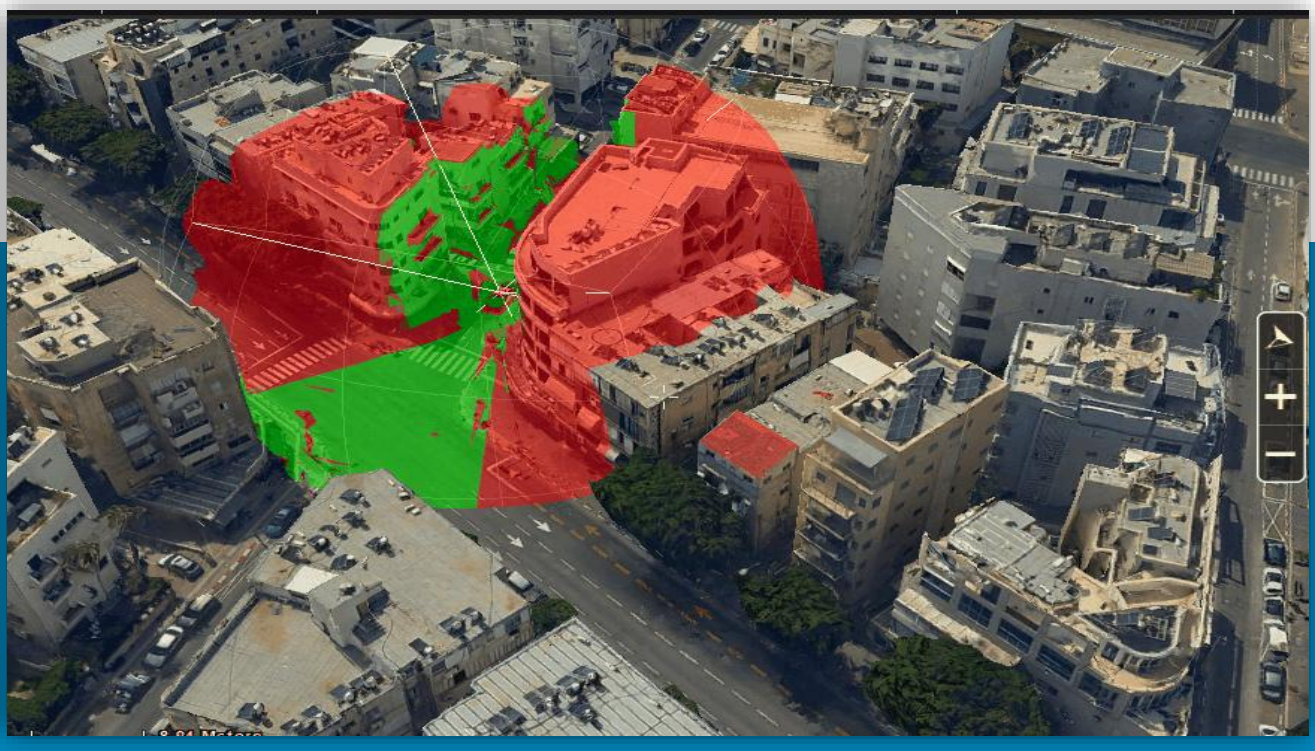


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OVERVIEW

TerraExplorer for Desktop 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.

- TerraExplorer supports a wide range of formats including WFS/WFS-T, DAE, 3DS, X, FLT, WMS/WMTS, FBX, Tiff, JPEG, MrSID, ECW, IMG Shapefile, KML/KMZ, SQLite and more!
- Complete set of powerful tools for all forms of 3D World analysis to increase understanding and improve decision making.
- Versatile and configurable drawing tools and vibrant visual effects bring to life your 3D visualization.
- Robust feature layer editing and powerful capabilities for precise adjustments and editing of objects, Advanced objects for modifying terrain and mesh.
- Rich application programming interface (API) allows you to easily develop powerful, customized 3D desktop, Web, and mobile applications or integrate TerraExplorer capabilities in OEM applications.



Bug fixes in builds 8.0.1 and 8.0.4

TerraExplorer 8.0.4

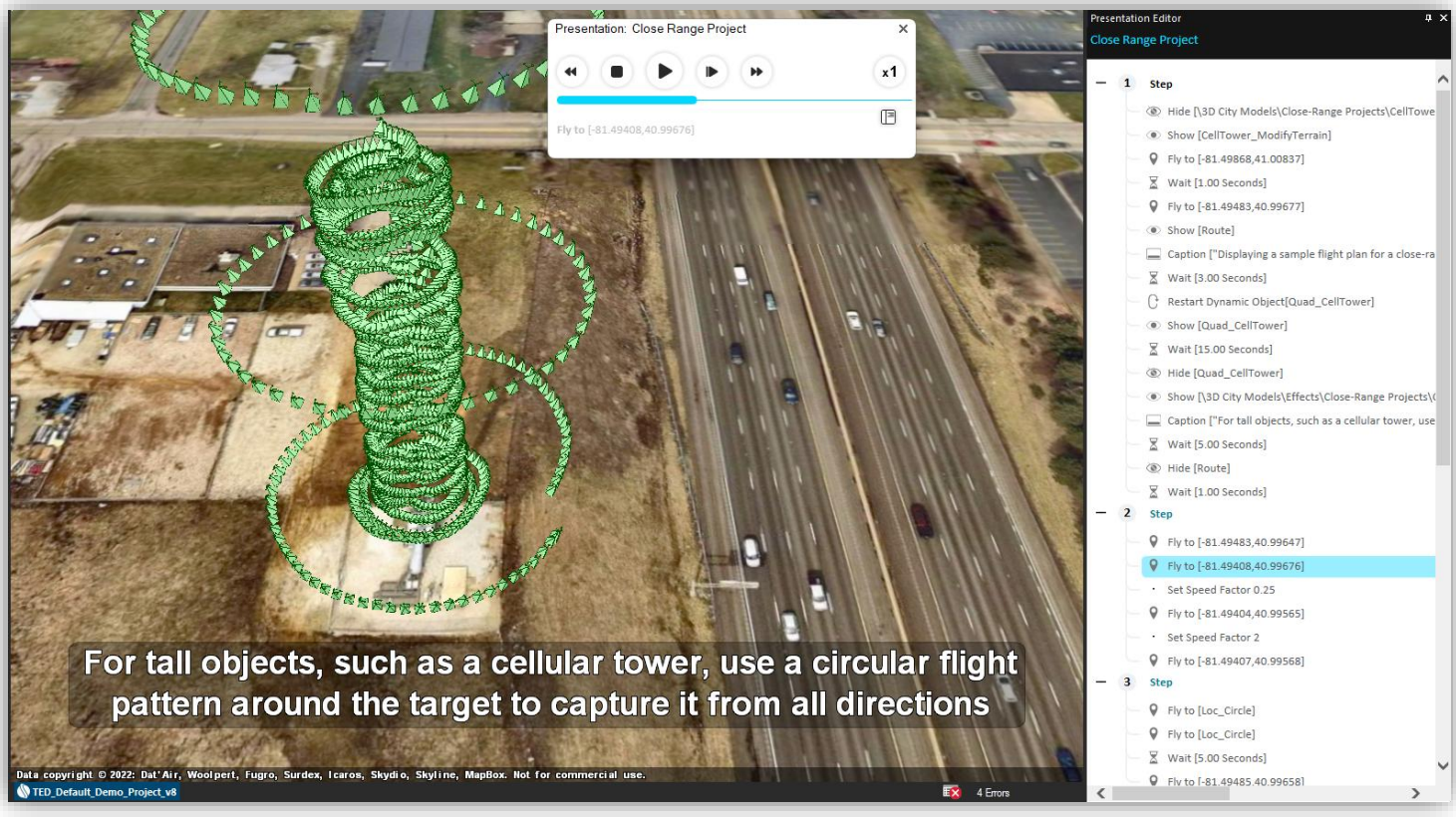
- Fixed an issue where some 3D Tiles failed to render when the root transform matrix was present.
- Google Photorealistic 3D Tiles now load and display correctly in TerraExplorer.
- Eliminated intermittent blinking and gray placeholder polygons when converting ESRI 3D Tiles to 3DML.

TerraExplorer 8.0.1

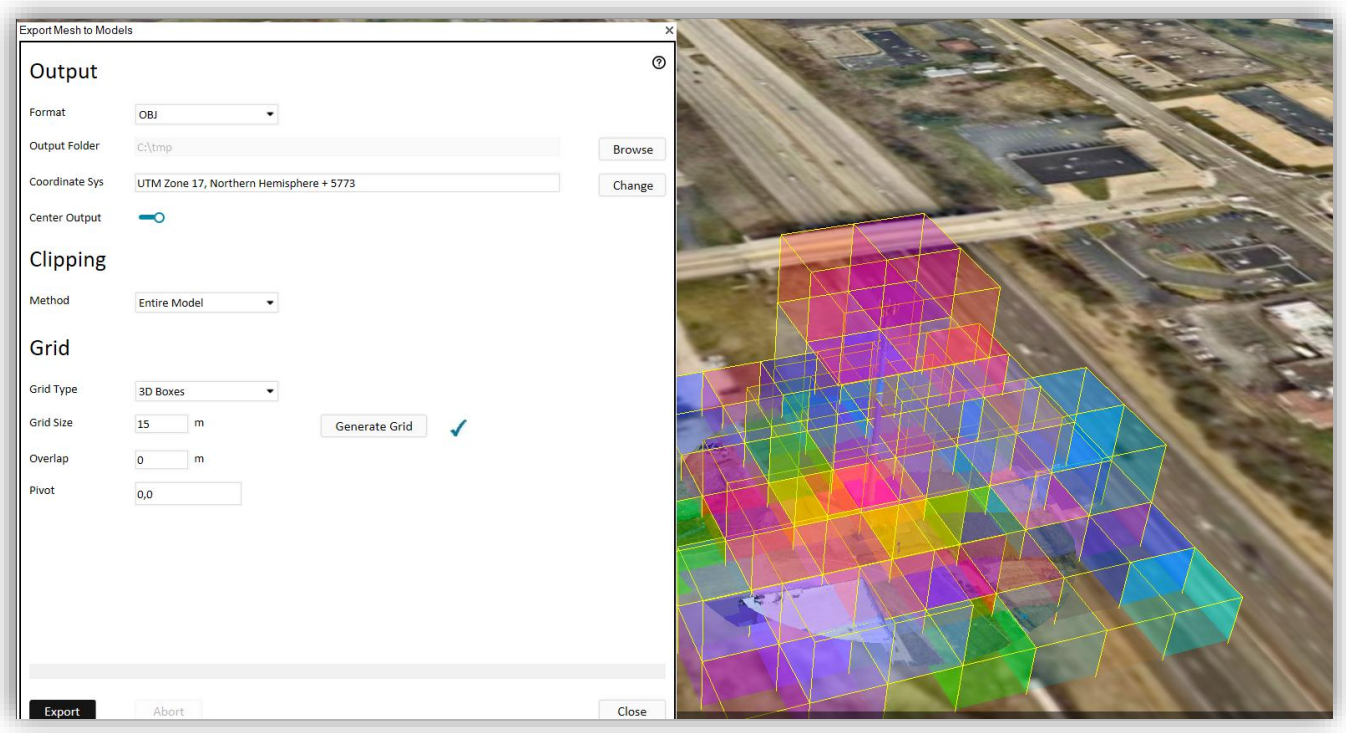
- Fixed Export to ATAK — exports now generate OBJ files (previously exported incorrectly as 3DML).
- Fixed an error in SLMeshConverter where the LimitResolution parameter was not applied correctly, leading to unintended level-of-detail results.
- Addressed an issue where SLMeshConverter converted certain 3DMLs into defective SLPKs that could not be used reliably.
- Fixed API issue where SetProperty did not apply property changes (e.g., color) to feature groups.
- Solved KMZ publishing issue where exported models were referenced with incorrect relative paths in the KML file that caused Google Earth to fail to locate and display the exported models.
- Corrected Buffer Query error — clicking a query point with a breached buffer zone now correctly highlights the associated 3D element.
- Resolved issue where the Publish Complete dialog broke URLs for case-sensitive proxies (e.g., YARP). URLs are now preserved correctly while still maintaining compatibility with Mono TEF deployments.
- Tools now work correctly in Viewer when using local terrain.
- Photo Inspector inspection reports now correctly include images.

Presentation Tool Overhaul

Our completely redesigned presentation tool GUI is more intuitively organized to simplify your workflow, streamlining the process of creating and customizing your settings like captions and speed for each action. The revamped Presentation Tool features 'steps', which function as chapter-like headings that organize your presentation actions and offer increased flexibility in displaying your presentation. With the new presentation tool, you can easily add locations to your route or display objects simply by dragging them from the Project Tree into the Presentation Editor. New presentation operations have been added as well, including the option to enable contour and slope maps, as well as display shadows.



3D Mesh Layer Export Options



TerraExplorer 8.0 introduces significant improvements to 3D Mesh Layer Export functionalities. Users can now export entire mesh layers or specific sections to a range of data types, including 3D models, LAS point cloud layers, and ATAK files. The updated Export tool offers robust control over multiple aspects of the export process, such as grid type, grid size, area selection methods, and coordinate system adjustments. Importantly, the tool supports both 2D grids and 3D boxes, enabling you to manage complex three-dimensional data and allowing features like tall buildings or utility poles to be vertically segmented into multiple files.

Hololens Mixed Reality Mode

Uncover the potential of augmented reality (AR) visualization for collaborative decision making in the battlefield and headquarters. Our new HoloLens plug-in allows you to view the TerraExplorer 3D view as a lifelike 3D hologram through HoloLens 2 immersive headsets. This mode offers a virtual table whose dimensions can be customized and whose location is determined simply by the placement of a QR code, simplifying the setup process. With support for head tracking and intuitive controls as well as multi-user support, users can effortlessly navigate and analyze their 3D environment, for more informed tactical planning and strategic execution.







Google Earth 3D Tiles

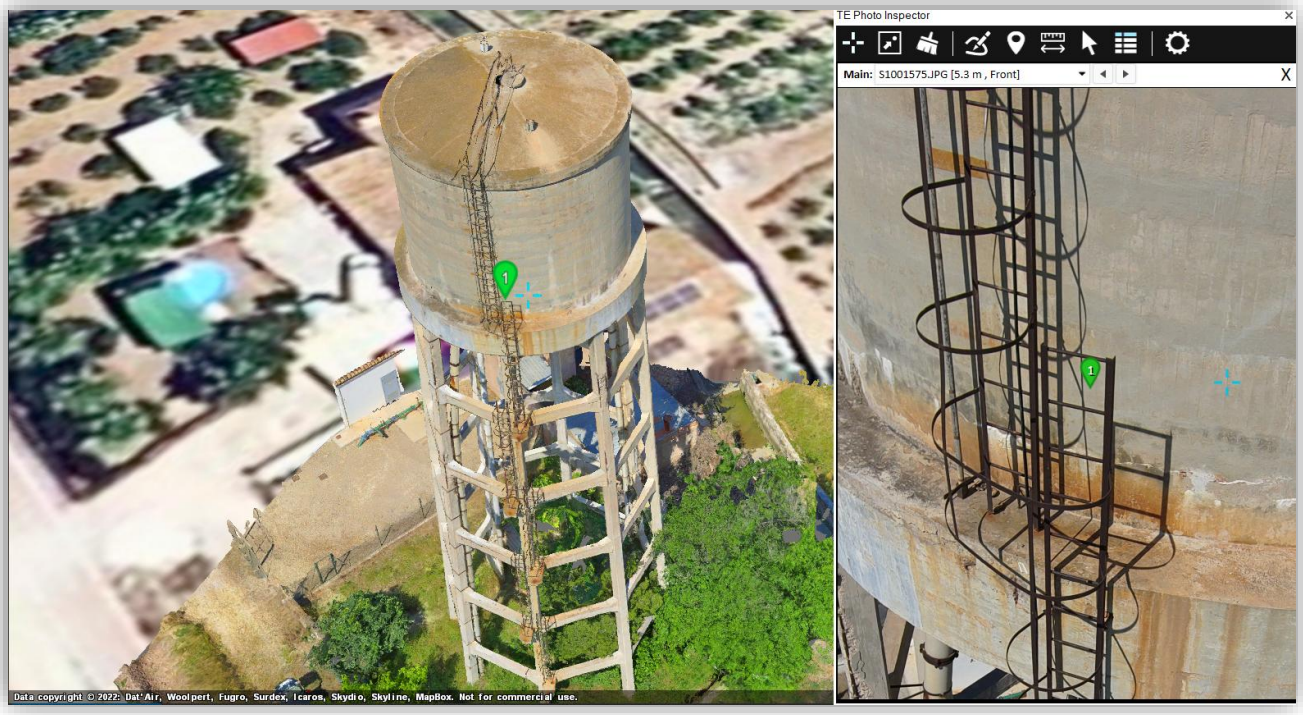
TerraExplorer 8.0 now provides enhanced support for the new Google Earth Photorealistic 3D Tiles service, covering more than 2,500 cities across the globe. You can seamlessly combine your high-resolution PhotoMesh 3D mesh models with the Google Earth background for a comprehensive 3D viewing and analysis experience. Utilize the TerraExplorer 'Load 3D Tiles' option, along with your Google API key, to integrate Google Earth models



Photo Inspector

Photo Inspector's latest updates enhance inspection workflows. Key improvements include:

- **Performance Boost**: While Photo Inspector continues to support various photo formats, a significant enhancement is the newly added option to stream the multi-resolution, tiled SMPT format generated by PhotoMesh. These optimized files are published to SkylineGlobe Server, facilitating faster online photo viewing by minimizing the necessity to load the entire photo.
- **Flexible Inspection Layers**: Photo Inspector now supports enterprise-level inspection layers not initially created within the tool, while also freeing you from the constraints of its predefined attribute fields.
- **Offline Kit Publishing**: The 'Extract and Publish Area as Offline Kit' option now enables you to publish your 3D models alongside the source photos, allowing Photo Inspector to function with offline kits.
- **BIM Attribute Information**: Easily include information on a mesh model such as material information or geometric data within your inspection reports using new mechanism to copy the relevant attribute information from the associated BIM model.



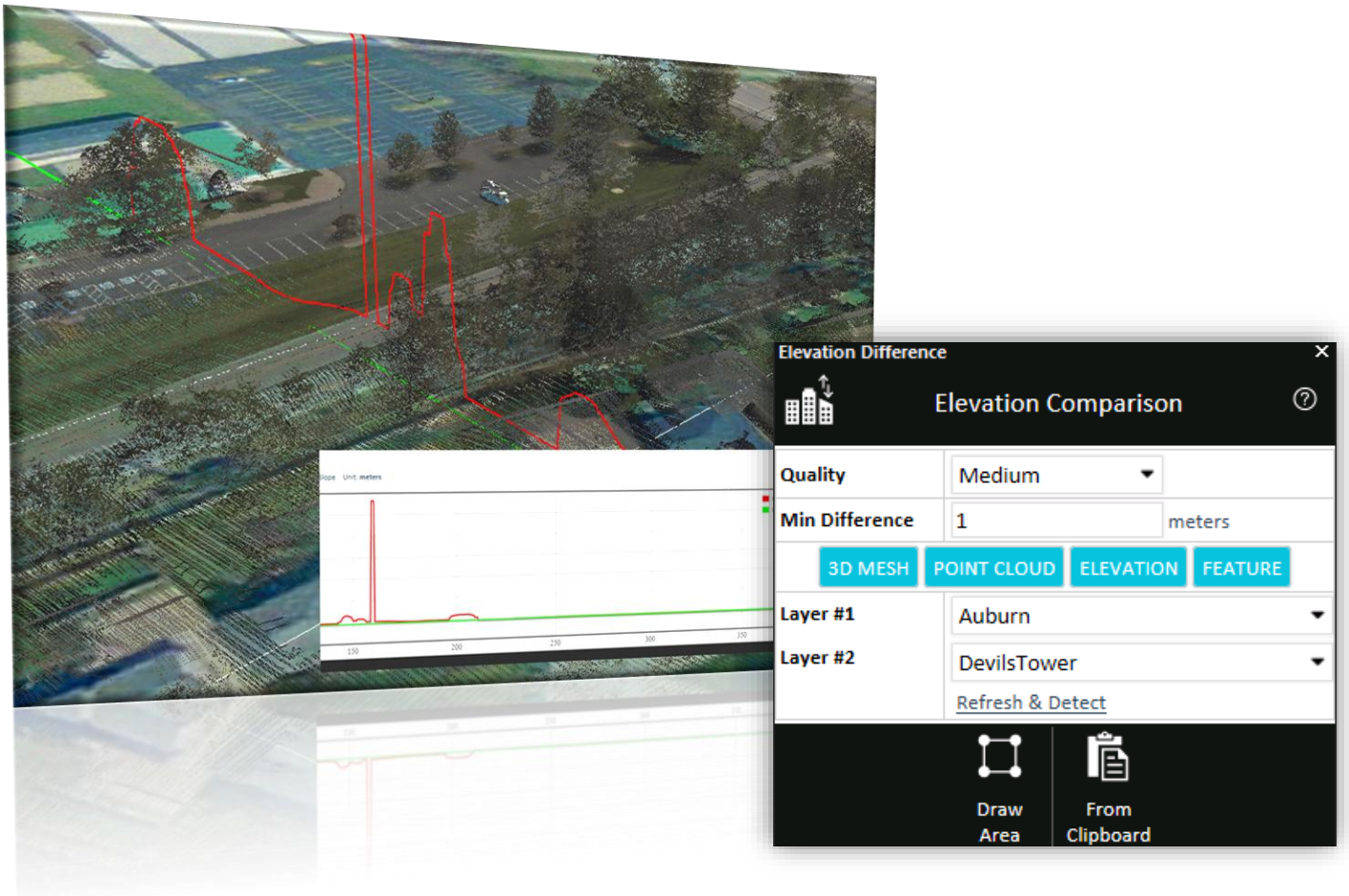
Analysis Tools

Terrain Profile Tool

We've enhanced the Terrain Profile tool by improving the Compare Mode, which now enables side-by-side terrain profile analysis of two different data layer types, including feature layers and CAD design. Another enhancement links the profile graph to the 3D Window. When hovering over any point in the terrain profile, a corresponding symbol is displayed in the 3D Window, pinpointing the exact location on the graph line.

Elevation Comparison Tool

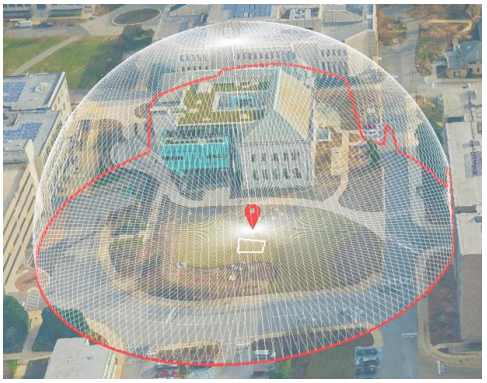
The Elevation Comparison tool has been updated to consolidate and extend its layer comparison functionalities. You can now evaluate elevation differences between two layers of various types: elevation, feature, point cloud, or 3D mesh.



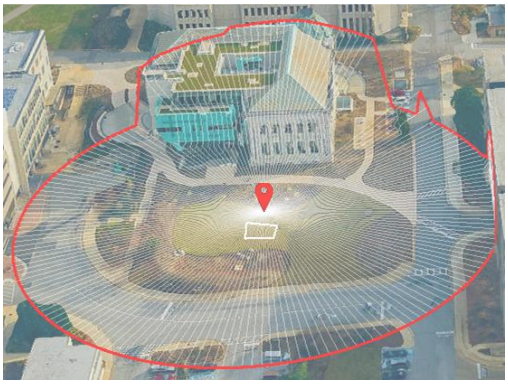
Analysis Tools

Threat Dome

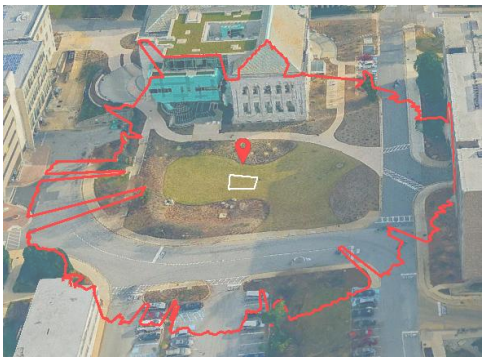
A new "Skyline Base" output type has been introduced as a variant of the existing "Skyline" output type. This enhancement adds lines that radiate from the viewer's position to the perimeter of the ring, which is formed by the outline of the visible terrain and objects.



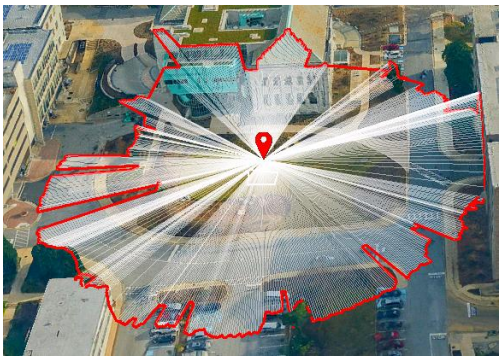
Dome



Dome Base



Skyline



Skyline Base

Working with SkylineGlobe Server

- **Integrated SSO Authentication**: TerraExplorer users can now enjoy a simplified login process when accessing SkylineGlobe Server 8.0, thanks to the newly integrated Single Sign-On (SSO) authentication. This feature is compatible with commercial Identity Providers like Google, Microsoft and Facebook, as well as enterprise identity provider servers, all supported by the OpenID protocol. This enhancement not only eases the login process but also adds an extra layer of security.

- **Republish and Update Project**: When publishing a project that was opened from SkylineGlobe Server, you now have the option to either publish it as a completely new project or update the existing one. When choosing to update, a new version is created on the server, ensuring that users always have access to the most up-to-date information. Administrators can manage which version to serve to TerraExplorer clients via the SGS Manager.

- **Dynamically load elevation grid files from SGS:** TerraExplorer 8.0 introduces a more dynamic approach to managing TIFF, GSB, and GTX grid shift files, enhancing the transformation between coordinate systems with different datums. When your project or layer's Well-Known Text (WKT) references a grid shift file that's missing locally, TerraExplorer now automatically downloads the required file from the connected SkylineGlobe Server. For users without a server connection, the default source is https://cdn.proj.org.

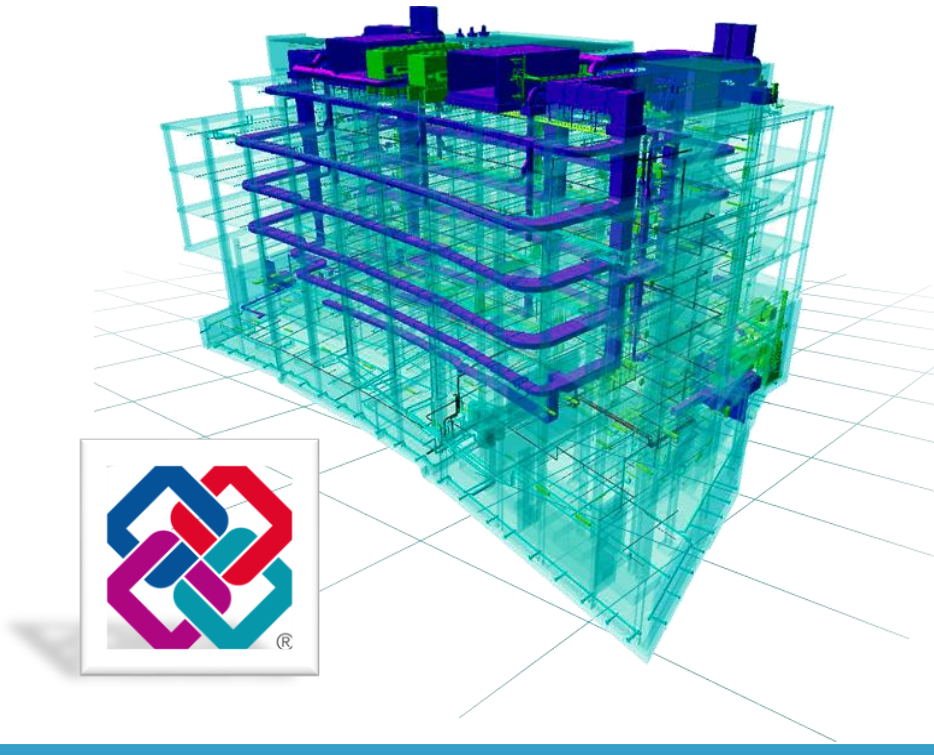


Microsoft Edge popup windows

Skyline now offers the option to utilize Microsoft Edge browser control for rendering advanced HTML and JavaScript within containers and popup windows. This feature gives users the option to load web pages that incorporate new technologies not supported by the IE browser control. Users now have the flexibility to choose between this newer Edge browser and IE (legacy) for displaying content.

Expanded BIM Model Support

TerraExplorer 8.0 has bolstered its support for Building Information Modeling (BIM) by introducing compatibility with a broader range of IFC formats. These now include IFC 2x3, IFC 4, IFC 4x1, IFC 4x2, and IFC 4x3 (specifically IFC 4x3_rc1 and IFC 4x3_rc2). The coordinate system for BIM models is automatically read from the data, but users have the flexibility to change it as needed. The new release also extends support for planar projections. For data lacking built-in coordinates, users can now manually define the position for enhanced control and customization.



Stability Improvements and Bug Fixes

3D Tiles and Other Mesh Layers

Resolved various issues related to loading, import, and export:

- Fixed crash of TerraExplorer when loading or converting certain 3D Tiles.
- Corrected display issues affecting some 3D Tiles imported and converted to 3DML.
- Addressed problem causing generation of incorrect bounding boxes when exporting to 3D Tiles.

Loading of Different Input Formats

Provided fixes for various input formats including DXF, GLB, and OBJ that did not load properly or caused TerraExplorer to crash.

API Improvements

Addressed multiple API issues including the following:

- IWindow.PixelToObjects did not return on terrain lines.
- IRouteWaypoints.GetWaypoint returned incorrect orientation information.
- ITerrain.GetGroundHeightInfo returned inaccurate elevation values.
- IAnalysis.QueryElevationBuffer sometimes returned inexact elevation values.
- INavigate.SetPosition and INavigate.ZoomIn did not work properly in 2D and 2D North modes.

Publishing to SkylineGlobe Server and Offline/Local Kits

Resolved bugs related to projects published to SkylineGlobe Server and to offline/local kits:

- Fixed incorrect application of feature layers' geometry Z value.
- Corrected issue causing exclusion of imagery layers from published kit.
- Corrected the display of feature layer textures.

Stability Improvements and Bug Fixes

Importing BIM:

- Fixed incorrect application of coordinate system information.
- Resolved bug that prevented editing of coordinate system information.
- Fixed issue affecting correct positioning of some IFC models.
- Resolved issue causing incorrect generation of bounding boxes of some imported IFC.
- Corrected issue causing TerraExplorer to crash when editing BIM attributes from Attribute Table.

Point Cloud Conversions

- Fixed bugs affecting conversion of LAS and e57 point clouds to CPT.

Photo Inspector

- Resolved Photo Inspector bug that prevented moving and dragging photos inside the Photo Inspector window when working in Windows Server 2019 environment.

WMS Layers

- Resolved issues causing incorrect or failed display of loaded WMS layers.

Scale and Rotate Tool

- Scale and Rotate tool now works properly even for large mesh layers.

REQUIREMENTS

Operating System	Windows® 10 / 11 – 64-bit required.
System Memory	4 GB RAM (8 GB or more recommended) For 4K render mode - 8 GB of RAM.
Video Card	1GB of video memory (2GB or more recommended). Pixel and vertex shader v3.0. For 4K render mode - 2 GB of video memory (4 GB or more recommended).
Processor	4 cores (8 cores recommended).
Additional Software	Microsoft Internet Explorer 11 or higher installed on the machine. .Net Framework 4.8 required.

For additional information, check out our TerraExplorer knowledge base

www.skylinesoft.com

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