

TerraExplorer for Web

Release Notes

V7.3



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OVERVIEW

TerraExplorer for Web (TE4W) is a lightweight 3D GIS viewer that enables you to view and analyze high-resolution, stunningly realistic SkylineGlobe 3D content in a web browser, without any plug-ins. This latest addition to Skyline's TerraExplorer product line complements Skyline's powerful 3D GIS desktop and mobile applications, offering a simple, no-download, no-installation solution for online viewing and analysis of 3D environments.

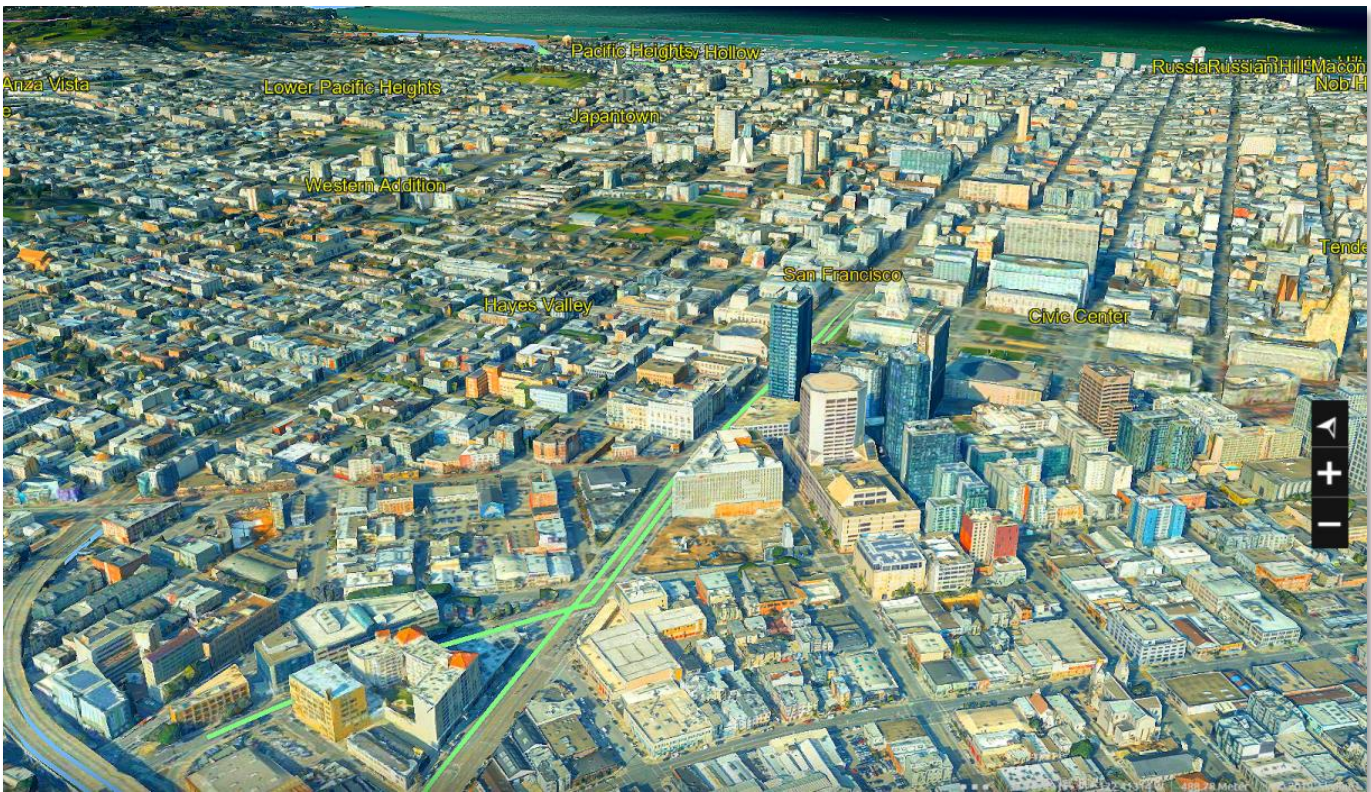
Building on standard Cesium support for imagery, elevation and KML layers, TerraExplorer for Web can also display most of your spatial databases including 3D city layers and feature layers. TerraExplorer for Web integrates smoothly with the entire Skyline product line for easy access to all your data – from photo-realistic, geographically accurate terrain databases created in TerraBuilder to PhotoMesh's high-resolution, textured, 3D mesh models.

Moreover, TerraExplorer for Web seamlessly accesses online data from Skyline's SkylineGlobe server and other OGC-compliant servers, and quickly loads online TerraExplorer projects. Based on HTML5/WebGL standards, TerraExplorer for Web provides support for multiple platforms and browsers (Windows, Mac, Linux, and selected mobile devices, Chrome, Firefox, Edge, Internet Explorer and more).

Improved Performance

Improved navigation performance (frame rate) especially with medium/low-end machines, when loading a complex project with a significant number of feature layers or heavy 3D mesh layers. Modified feature point caching methods significantly improve navigation performance when flying over massive feature labels.

The new Auto performance/quality mode allows the system to ensure an optimal balance between performance and quality. Adjustments to quality are dynamically performed based on the complexity of the area in view in order to maintain a reasonable frame rate, e.g., when viewing a 3D model, the system may lower the quality slightly to ensure a smooth flight experience.



Volume Classification

New dynamic classification method allows you to associate areas of 3D layers and objects, e.g., mesh layers, with polygonal volume features and their attribute values so you can perform spatial and attribute queries on the mesh layer. The classified sections of the 3D mesh is colored according to the 3D polygon styling. No pre-processing of the classification and mesh layers is required, so multiple feature layers can classify a single mesh and multiple meshes can be classified by any particular classification feature layer. This feature supports all the new volume classification options, including 3D classification of floors and windows and a 2D polygon buffer area to automatically enlarge the colored area.



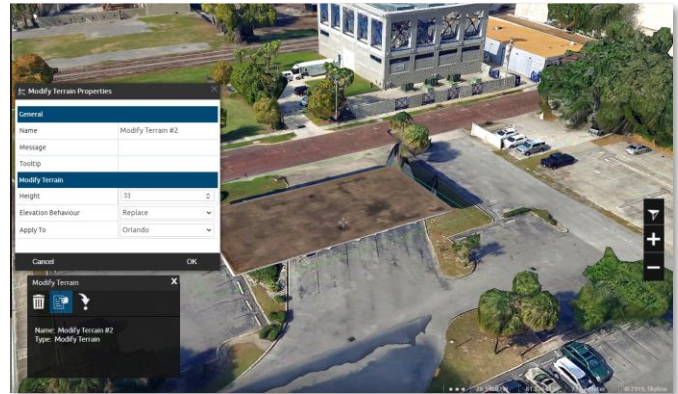
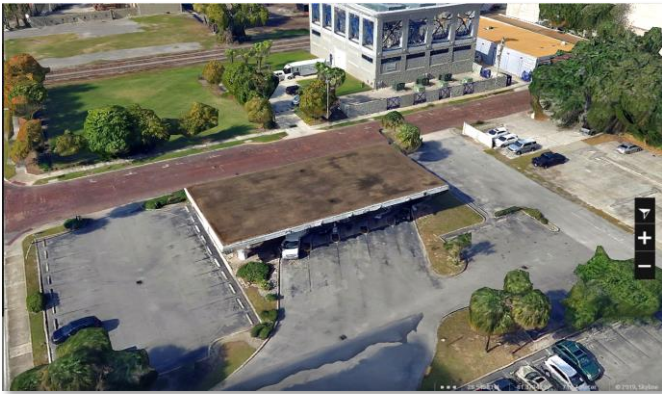
Feature Layer Improvements

- Support for Complex Geometries – TE4W now supports feature layers comprised of complex geometries such as multi-polygons, multi-lines and multi-points, ensuring that all of a loaded layer's sub-features are displayed.
- Support for Query Filters – TE4W now supports feature layer query filters. This enables you to load only the parts of a layer that you require, e.g., only roads with attribute type = highway.
- Enhanced Support for Feature Layer Styling
 - Additional styling options
 - Field expressions are supported enabling layers to be styled based on attribute field values.
 - "Extend to Ground" property supported now for both polylines and polygons (to create a partition such as a wall or fence).
 - Property sheet style settings allow TerraExplorer for Web users to modify base properties. Changes are saved between sessions.



Modify Terrain and Mesh

The powerful capabilities of the modify terrain have been extended to the 3D mesh layer, enabling the surface of the base terrain or a 3D mesh layer to be raised or lowered according to the elevation values of a modify mesh polygon's points. Among other things, this object allows users to integrate one 3D mesh layer inside a larger layer.



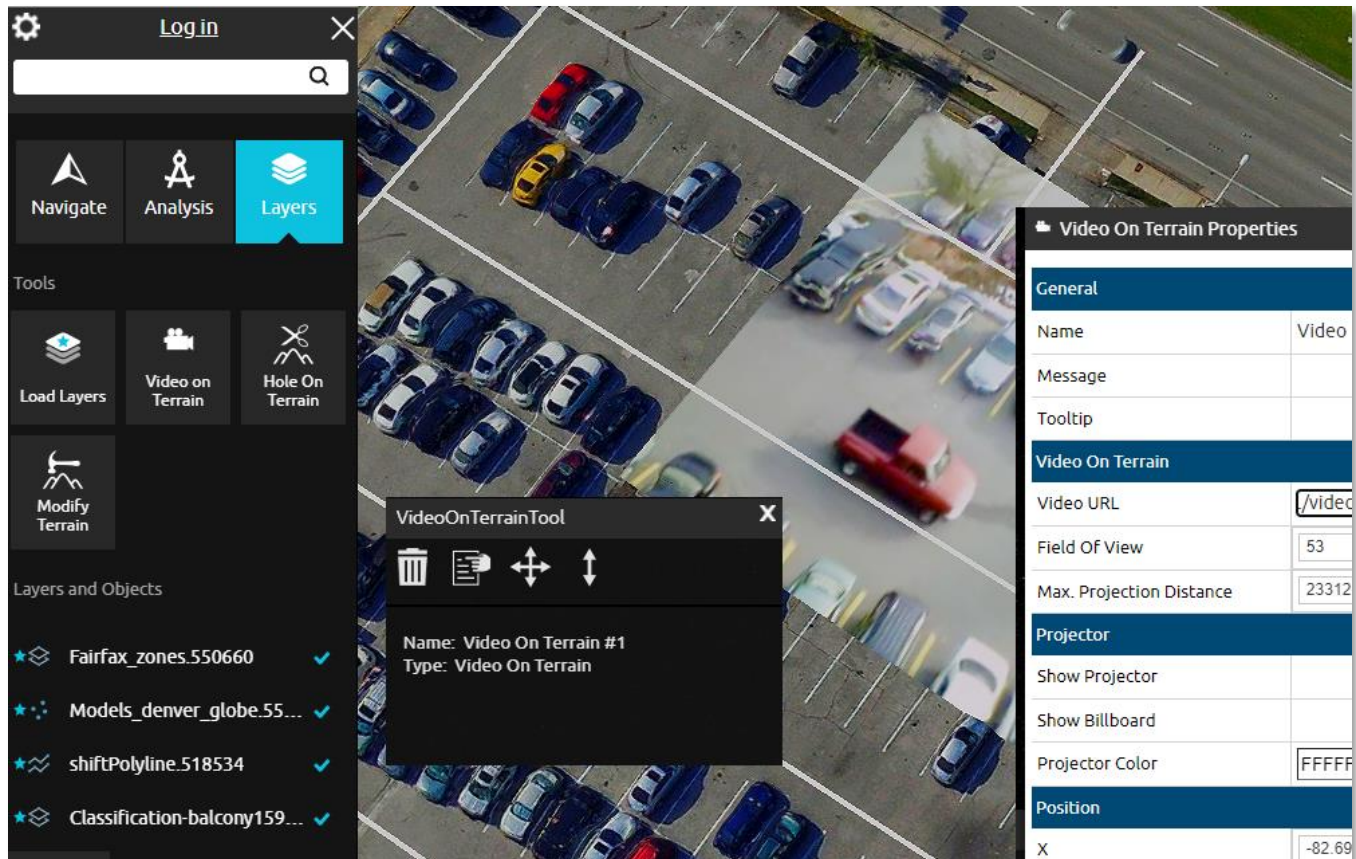
Hole on Terrain

TE4W expands its advanced objects' support to include creation of hole on terrain objects. Cutting a hole on the terrain removes the terrain texture while maintaining the original contours of the terrain. The objects or feature layers created on the terrain in the area of the hole are drawn on the original contours of the terrain.



Video on Terrain / Billboard

TE4W expands its advanced objects' support to include creation of video on terrain objects. The Video on Terrain commands play a video file either on a selected area of the terrain (Video on Terrain), or on a floating billboard (Video Billboard).

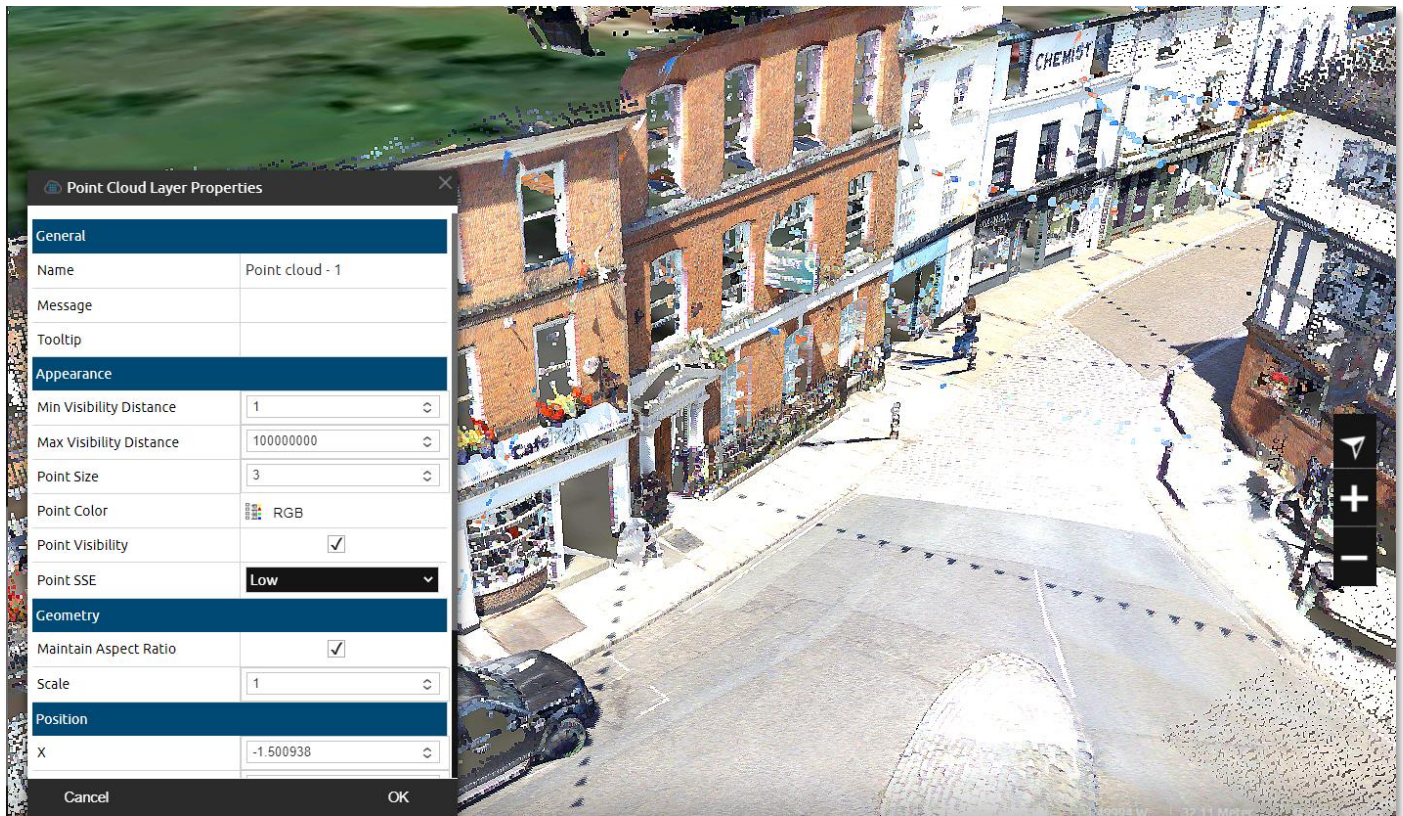


The screenshot displays the Skyline software interface. On the left is a dark sidebar with a 'Log in' button at the top, a search bar, and navigation icons for 'Navigate', 'Analysis', and 'Layers'. Below these are tool icons for 'Load Layers', 'Video on Terrain', 'Hole On Terrain', and 'Modify Terrain'. At the bottom of the sidebar is a 'Layers and Objects' list containing items like 'Fairfax_zones.550660', 'Models_denver_globe.55...', 'shiftPolyline.518534', and 'Classification-balcony159...'. The main view shows an aerial 3D model of a parking lot with several cars. A 'VideoOnTerrainTool' window is open over the model, showing icons for delete, select, pan, and zoom, along with the text 'Name: Video On Terrain #1' and 'Type: Video On Terrain'. On the right, a 'Video On Terrain Properties' panel is visible, containing the following settings:

General	
Name	Video
Message	
Tooltip	
Video On Terrain	
Video URL	/video
Field Of View	53
Max. Projection Distance	23312
Projector	
Show Projector	
Show Billboard	
Projector Color	FFFFFF
Position	
X	-82.69

Point Cloud Styling

Point clouds are now streamed with the attribute-based styling that was applied in TerraExplorer Pro to point cloud color, size, and visibility. The attribute-based styling also supports more complex formulas, e.g., [TYPE] 1 = red, [TYPE] 2 = yellow OR point size = <[TYPE]*3>. Additional styling options can be performed directly in TerraExplorer for Web.



Shadow Analysis Improvements

- Improved shadow quality
- Set shadow color to blue for better analysis

New API

TE4W 7.3 offers expanded API capabilities, including:

- Set layer properties
- Get features from a layer
- Create base objects (points, lines and polygons)
- New callbacks, e.g., when an analysis object is added, tools are closed, and measurements finish

Cesium Support

- Cesium 3D library upgraded

Bug Fixes and Stability

This release improves overall stability and performance, including better support for accurate positioning in TE4W of mesh and point cloud layers whose positions were manually set in TerraExplorer Pro

REQUIREMENTS

Operating System	Windows / Linux / MacOS / Android / iOS
System Memory	2 GB RAM (4 GB or more recommended)
Processor	4 cores (8 cores recommended).
Browser	<ul style="list-style-type: none">• Windows: Chrome, Firefox• MacOS: Chrome, Safari• Linux: Chrome• Android: Chrome• iOS: Safari

[For additional information, check out our TerraExplorer for Web knowledge base](#)



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