TerraExplorer Fusion

Release Notes

V 8.5

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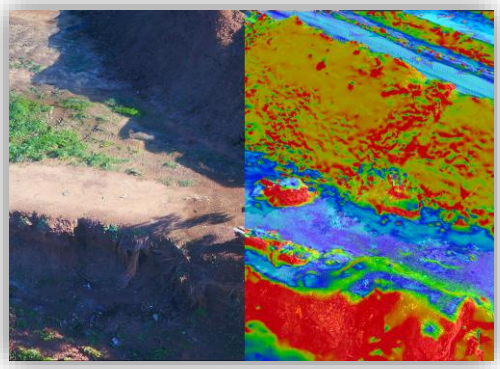
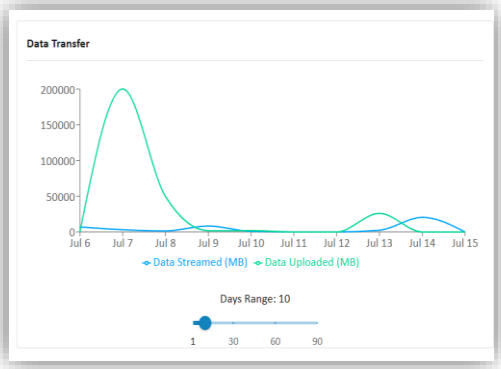




Overview

TerraExplorer Fusion is a powerful 3D geospatial viewer that enables you to view and analyze high-resolution, stunningly realistic 3D content right in your web browser with no download or installation required. TerraExplorer Fusion enables viewing of most online layers and objects published to SkylineGlobe Server, performing powerful measurements and analysis operations, and dynamically exploring the 3D World via presentations which merge a custom flight path with distinct displays of the project.

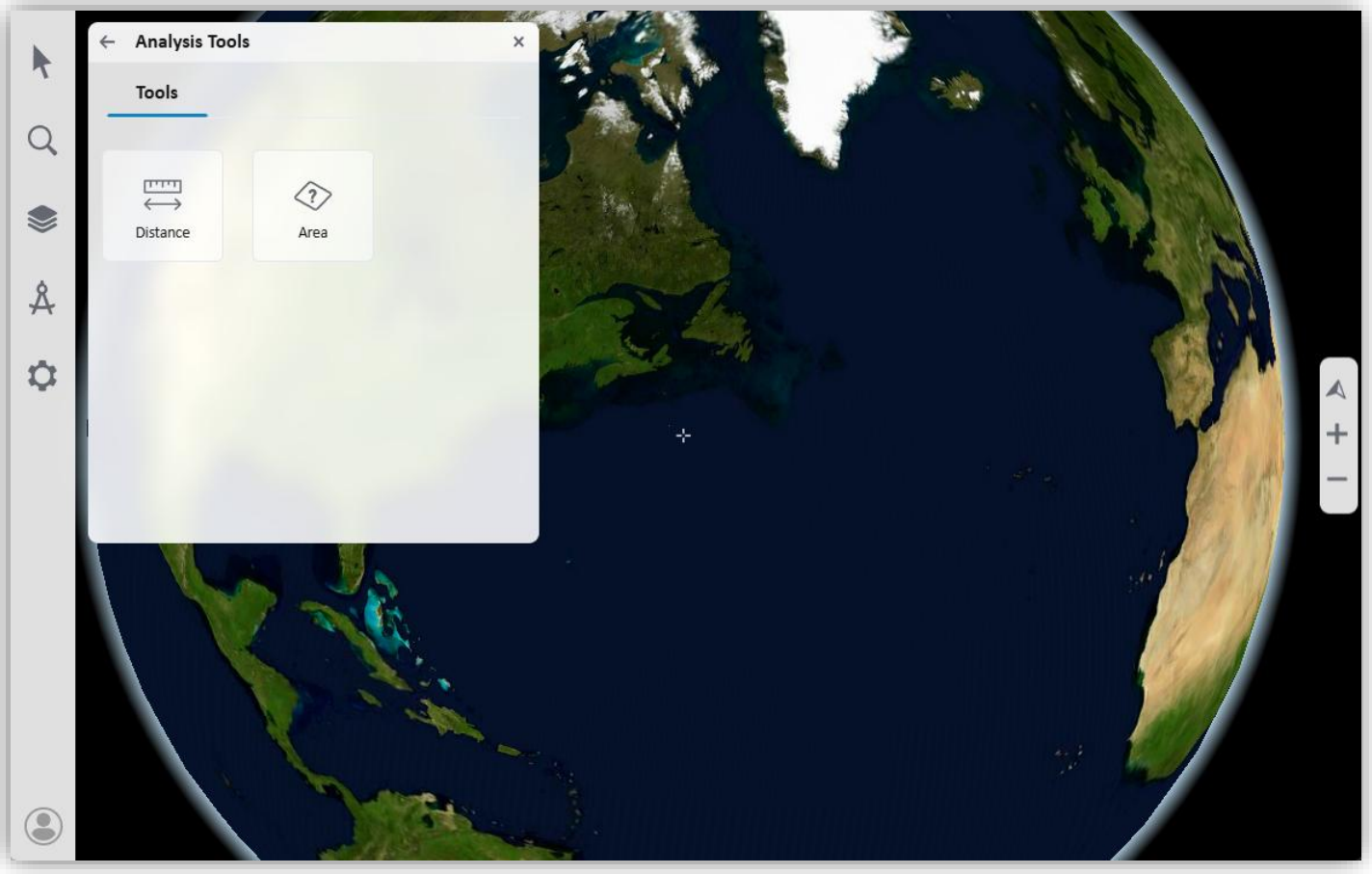
TerraExplorer Fusion is available in three versions, Viewer, Plus, and Lite, to accommodate different user requirements. The Plus edition adds advanced analysis tools, feature-layer editing, and direct project publishing to SkylineGlobe Server. The Lite edition supports viewing of public projects without consuming concurrent-user licenses, offering basic navigation and key measurement tools.

TerraExplorer Fusion's styling and functionality can easily be customized to match a company's branding and provide the required tools and capabilities. Using TerraExplorer Fusion (TEF) as a foundation, you can leverage the application framework and functionality, thus reducing the amount of programming required for your customized solution.

Lite Mode for Public Projects

TerraExplorer Fusion now supports a Lite mode, designed for accessing public projects without consuming a site's concurrent user license. When a user opens a public TerraExplorer project, SkylineGlobe Server automatically switches Fusion into Lite mode. In Lite mode, users can access:

- Basic navigation and viewing functionality
- Distance and Area tools
- The Query tool

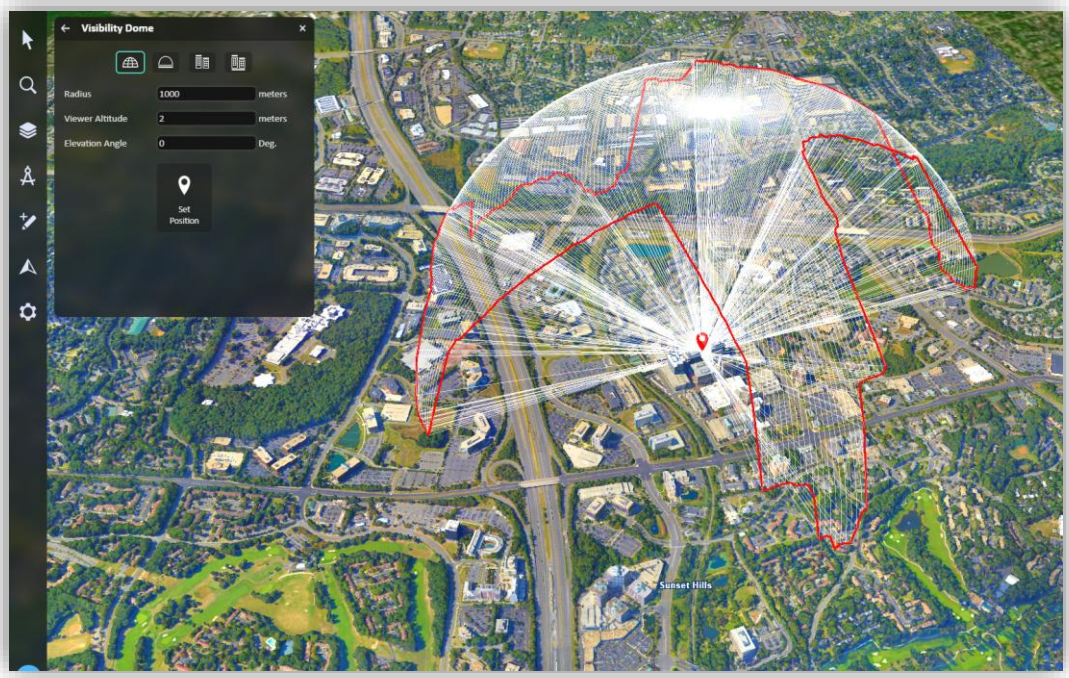


Visibility Dome

The powerful Visibility Dome analysis tool has been added to TerraExplorer Fusion Plus. This tool allows users to analyze and visualize line-of-sight coverage from a specified viewpoint, with multiple visualization modes:

- **Dome** –3D dome volume representing visible areas within a specified radius & angle.
- **Dome Base** – Circular ground projection separating visible and non-visible zones.
- **Skyline** – Silhouette of terrain and 3D obstructions defining the horizon from the viewpoint.
- **Skyline Base** – Radial lines from the observer to the skyline, visualizing visibility limits.

A profile graph can be displayed to show the height of the dome or the Skyline ring. It includes tools for identifying waypoints, elevation extremes, and slope changes.



Improved Layer Loading from SGS – Spatial Search

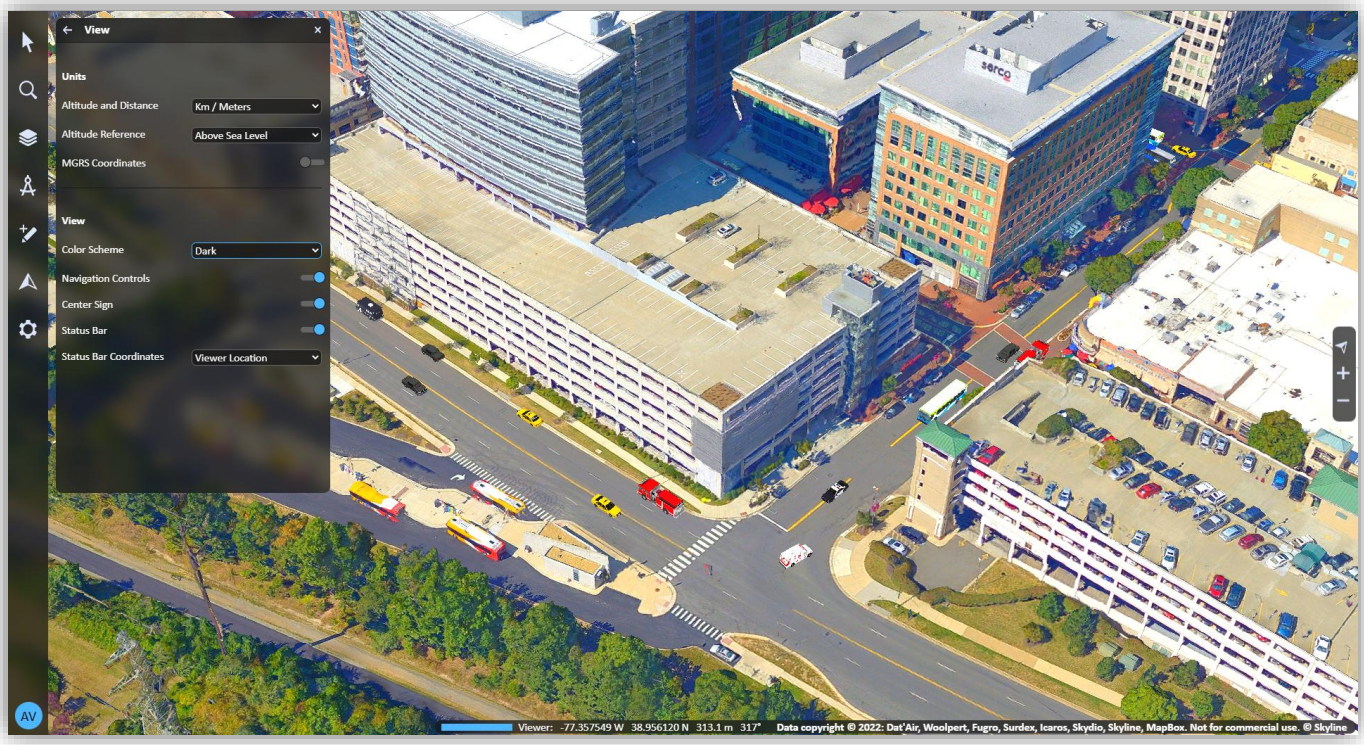
TerraExplorer Fusion users can now search for layers more efficiently when loading content from SkylineGlobe Server's spatial catalog. By clicking Search on Map, users can select a specific geographic region to limit the search area. The Layers list is then filtered based on the selected region and any additional criteria, making it easier to locate relevant data.

Enhanced Support for BIM Layers

TerraExplorer Fusion 8.5 introduces advanced capabilities for working with Building Information Modeling (BIM) layers, enabling users to query and edit individual features within a BIM dataset. This enhancement allows for more dynamic interaction with complex 3D building models, including retrieving attribute data, updating properties, and integrating BIM elements into broader geospatial workflows.

GUI Improvements

- New display options:
  - Bright – A light interface with semi-transparent windows, similar to previous versions but updated for clarity and depth.
  - Dark – A dark-themed interface optimized for low-light environments, with high-contrast text and inverted background colors. Dark mode is applied dynamically via a new UI setting and is supported across integrated tools.
- Resizable Side Panel: Users can now manually resize the side toolbar panel to better fit their screen or workflow.



Gaussian Splatting Model Support

TerraExplorer Fusion 8.5 introduces initial support for Gaussian Splatting models, enabling users to visualize this emerging 3D representation technique within their projects. This feature allows integration of highly detailed point-based models for improved realism and flexibility in rendering.

Current Limitations

- Performance and capabilities are still limited in this version.
- Not all analysis tools are compatible with Gaussian Splatting models. For example, Shadow and Viewshed analysis are currently not supported.

These limitations will be addressed in future releases, with planned improvements to performance, broader tool compatibility, and enhanced visualization options.

Performance Improvements

This release focuses on optimizing speed and responsiveness to deliver a smoother user experience. Key improvements include faster application startup and enhanced project loading efficiency.

- Improved application loading time for faster startup.
- Improved loading time of projects with a high number of point cloud layers .
- Resolved project load issues with large Project Trees.
- Accelerate feature layer loading process

Stability and Bug Fixes

This release includes numerous under-the-hood optimizations, addressing reported issues and improving overall system responsiveness:

Rendering & Visualization

- Resolved flickering behavior in TEF 8.2.1 when displaying certain 3DML layers.
- Corrected tooltip display issue for feature layers embedded in a 3DML.

Layer Loading, Streaming & Requests

- Resolved issue where the Query tool and spatial and attribute failed on specific BIM datasets.
- Prevented redundant feature-layer requests.

Tools and Editing

- Fixed display and functionality of cross section tool.
- Corrected inaccuracies in volume analysis calculations on terrain layers.
- Standardized mobile editing UI to ensure consistent menu behavior when adding features to existing layers.
- Fixed EditItem API so each mode value now triggers the correct edit mode

Hardware and Software Requirements

Desktop

Supported Browsers	Google Chrome, Microsoft Edge, Mozilla Firefox, Apple Safari
System Memory	8 GB RAM (16 GB recommended for 4K render mode)
Video Card	4 GB (8 GB recommended for 4K render mode)

Mobile

Operating System	Android and iOS
Supported Browsers	Google Chrome, Apple Safari
System Memory	8 GB RAM

For additional information, check out our **knowledge base**