Skyline® it's your world™

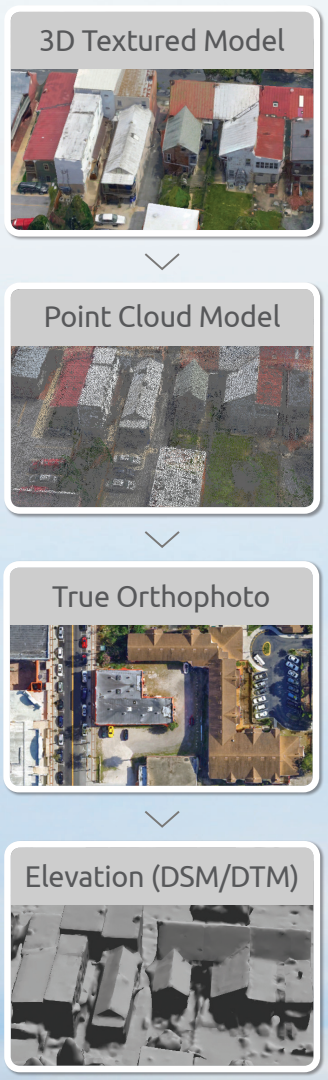
PhotoMesh

Skyline's PhotoMesh fully automates the generation of high-resolution, textured, 3D mesh models from standard photographs and videos, offering a significant reduction in cost and time compared to traditional modeling methods.

PhotoMesh's breakthrough technology is based on the highest-performance photogrammetry, computer vision, and computational geometry algorithms. Combining any number of photographs, in a wide range of formats and resolutions, PhotoMesh generates highly-detailed 3D models that can be viewed and queried using TerraExplorer or other 3D, GIS products.

PhotoMesh employs elaborate tiling mechanisms to efficiently handle projects with even hundreds of thousands of photos. Running on standard hardware, PhotoMesh can also exploit computer clusters and cloud computing to accelerate database creation.

A single project can run simultaneously on hundreds of fuser machines, each processing different build steps and communicating with PhotoMesh Manager.



High Quality

PhotoMesh generates a full-3D mesh model that faithfully reproduces even small-scale details such as cars, trees, fences, and walls - all with advanced color balancing and high-quality texturing.

Cost and Time Efficient

PhotoMesh offers a significant reduction in cost and time when compared with traditional modeling methods. Reconstructions that would generally take weeks using manual modeling methods can be completed in mere hours using PhotoMesh.

Scalability

PhotoMesh efficiently handles even hundreds of thousands of photos using an elaborate tiling mechanism. PhotoMesh exploits multi-computer architecture (fusers) to further accelerate database creation, running a single project simultaneously on hundreds of machines.

Output Formats

PhotoMesh's result can be exported to various multi-resolution 3D model formats (3DML, I3S, Cesium 3D Tiles, OSGB, DAE, OBJ), raster formats (Orthophoto, DSM, DTM) and point clouds (LAS), ensuring full interoperability with 2D/3D GIS solutions.

High Performance

PhotoMesh can run its efficient algorithms fluidly on standard GPUs, or exploit multi-core and multi-computer processing to further accelerate database creation. A single project can run simultaneously on hundreds of fuser machines, processing tens of km2 per day.

Source Image Flexibility

PhotoMesh supports most standard image formats (Jpg, Tiff, hyperspectral, etc.), Lidar and video files, generating complete, true 3D mesh models from professional or drone-captured standard, unordered oblique, nadir, and ground photos.

Efficient Management

PhotoMesh Manager provides comprehensive information on the progress of each build step and the active fusers, highlighting tiles with errors, and allows the viewing of intermediate data while the build is in progress.

Intuitive GUI

PhotoMesh provides powerful visualization capabilities and tools, including photo projection on the terrain and project preview, which facilitate accurate evaluation and adjustment of photo and camera parameters.

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