PhotoMesh

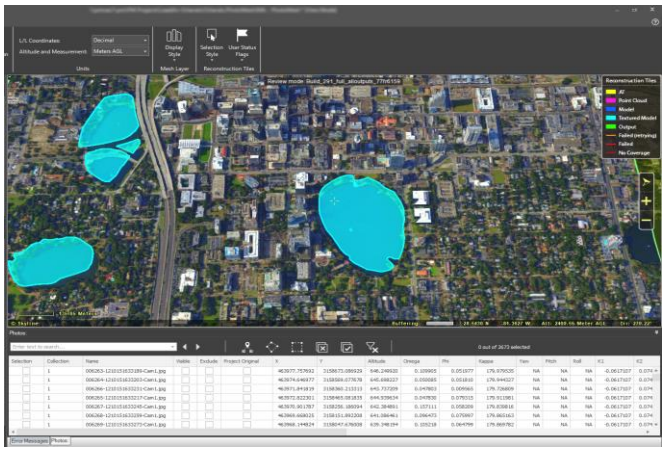
Skyline

Fully automated generation of high-resolution large scale 3D models

Skyline's PhotoMesh fully automates the building of high-resolution, textured, 3D mesh models from oblique and nadir photographs and Lidar captured from street view, drones, UAV and airplanes.

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 provide the real-world context and visualization so critical to decision making in a multitude of industries. These models can be viewed and queried using TerraExplorer or other 3D and 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 run a single project simultaneously on hundreds of fuser machines. Sharing the workload involved in generating PhotoMesh output vastly accelerates all steps of the build.



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.

Cloud Ready

PhotoMesh can exploit computer clusters and cloud computing to run a single project simultaneously on hundreds of fuser machines. Sharing the workload involved in generating PhotoMesh output vastly accelerates the build process.

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 in various multi-resolution 3D models (3DML, OSGB DAE, OBJ), rasters (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 square kilometers per day.

Source Image Flexibility

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

Production Automation

Robust REST APIs allow developers to create, monitor, and manage project queues and to automate PhotoMesh production flows on local machines, remote servers, and the cloud.

Usability

Intuitive GUI and powerful, versatile tools for accurate evaluation and adjustment of your input data and AT, including: a coverage map, photo inter-connection map, Lidar data integration, control points, photo projection on terrain and Lidar and much more.

For additional information, check out our PhotoMesh knowledge base

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