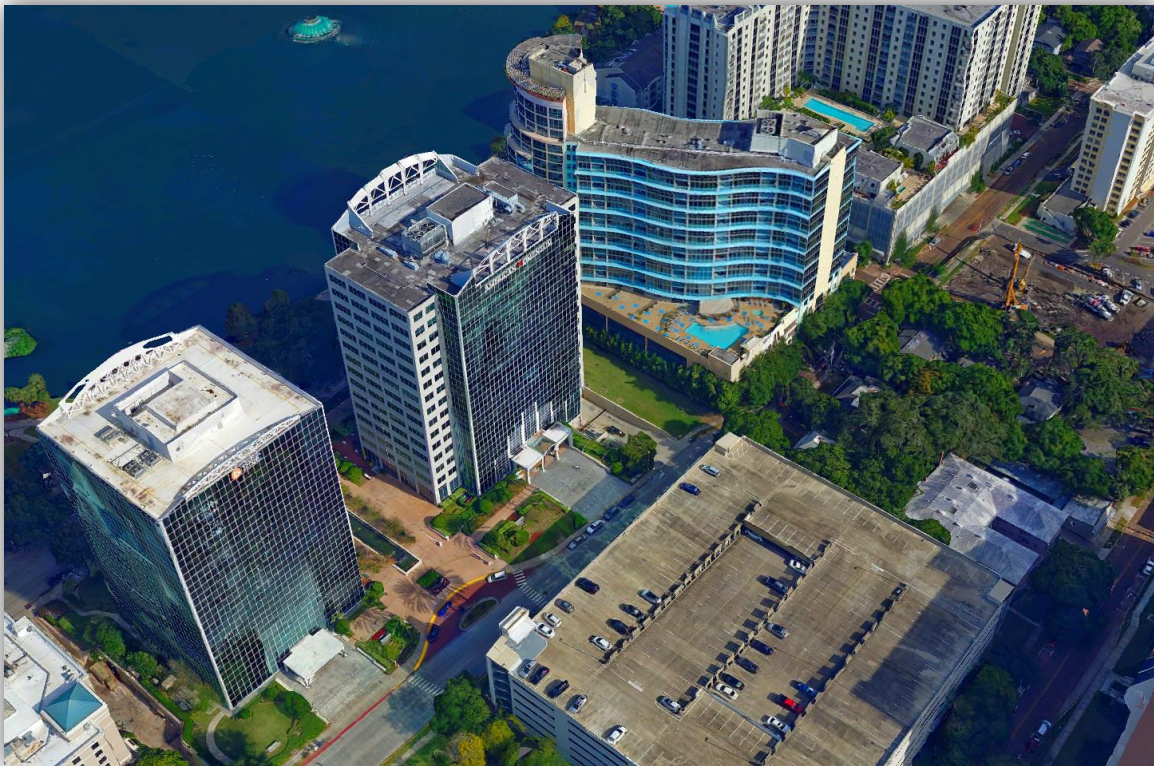# NEW FEATURES IN PHOTOMESH RELEASE 7.1

Improved Model and Texture Quality

- High quality 3D edge mechanism

- Enhanced reconstruction of small scale objects like poles, fences and thin walls

- Improved texturing algorithm for a crisper, cleaner look

Orland, FL © Dat'Air

Additional Output Formats

PhotoMesh extends its output format support to including the following formats:

- ESRI I3S

- Cesium 3D tiles

- High quality point cloud model (LAS)
  - User defined point cloud sample resolution

- Ground surface/DTM
  - Also used by TerraExplorer to overlay on-ground feature layers

Feature layers on 3DML ground surface

Processing of Photos without Positioning Information

PhotoMesh 7.1 supports processing of photos with no positioning (GPS) information (e.g. from FMV - full motion video). The output can be geo-referenced manually or using ground control points.

Use of External AT

PhotoMesh 7.1 offers the option to use aerotriangulation results from professional systems. This accelerates processing time by skipping the aerotriangulation step as well as improves geographic positioning and quality. Most standard systems, including Bingo, VisionMap, Stellacore are supported.

Improved Support for Very Large Photo Collections without Orientation (OPK)

PhotoMesh 7.1 features an improved AT tile splitting mechanism and the ability to handle a larger number of photos per AT tile.

Improved Ground Control Points (GCP) Mechanism

PhotoMesh 7.1 provides a more robust ground control point mechanism that enables insertion/editing of ground control points even after aerotriangulation. It also supports check-points for quality assurance. Furthermore, enhanced GCP editing tools increase productivity and prevent user-errors.

New features in PhotoMesh release 7.1
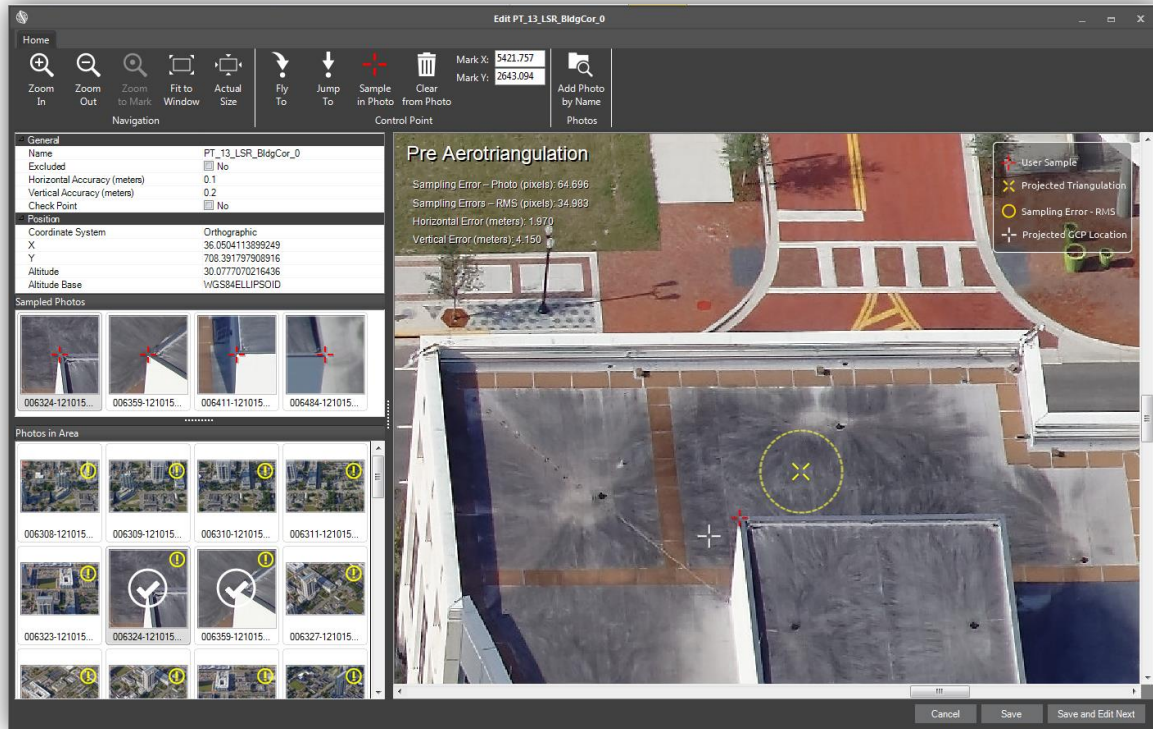
Ground control point editor

Improved Performance

- Speed improvements across all steps of the build process

- Designed and built to handle very large scale projects utilizing even hundreds of fuser/build computers in parallel

- Better utilization of high end computers

- Optimized I/O

Water Bodies

You can define water body polygons and set the water altitude level. PhotoMesh generates a flat surface over the water area with correct texturing and automatically reconstructs any above-water elements – boats, piers, small islands without a need for special user markings.

Project Output Area

Subset areas of a project can be defined using output polygons. A project can be rebuilt with different output polygons.

Usability Enhancements

PhotoMesh 7.1 usability enhancements include:

- Duplicate AT - You can create a new build version with a copy of the AT information from the current

build. This makes it easy to create a similar build with the same project steps but with different build parameters (e.g. build tile size).

- New build wizard simplifies the selection of project steps and build parameters

- Improved build report provides enhanced AT and GCP sections

- Improved stability and bug fixes

Aerotriangulation and GCP report

Software and Hardware Requirements

Operating System   Windows® 7 / 8 / 10 / Server 2012 R2 – 64 bit required.

System Memory   16 GB RAM (32 GB recommended).

Note: RAM requirements are mostly affected by the reconstruction tile size.

Video Card   1GB of video memory (2GB or more recommended). Pixel and vertex shader v3.0.

Processor   4 cores (8 cores recommended). PhotoMesh works best in a multi-core environment and can utilize multiple CPU's and hyper-threaded processors.