

Gexcel Launches Solution for Multi-source 3D Data Processing



Gexcel, an Italian developer and producer of point cloud processing software, [indoor mapping systems](#) and Lidar monitoring solutions ([OPMMS](#)), has announced the new Reconstructor 4.0 release. This expands the opportunities to integrate 3D data collected with tripod, mobile, handheld scanners and UAVs, including imagery datasets.

The new software version allows the users to work more efficiently with multi-source and multi-scale 3D data, especially in BIM, mining and geospatial applications where 3D and 2D sensors often have to be integrated to cover large areas with different resolutions. Among several new and updated tools and using a completely new [rendering engine to display 3D models](#), Reconstructor 4.0 users can benefit from three new key functions.

Automatic registration of CAD and BIM models

The Reconstructor automatic and target-less registration tool has been improved to support CAD/BIM and mesh models. Reconstructor 4.0 imports BIM and CAD models in interchange formats (e.g. dxf, ifc) and allows automatic registration of them with 3D point clouds, speeding up as built/as design comparisons. A "model to cloud" comparison function completes the internal workflow. Export functions for 3D point clouds and models allow the user to access other CAD and analysis platforms (e.g. ReCap, ClearEdge, etc).

Indoor mobile data acquisition

A new dedicated set of tools are provided to integrate, constrain and georeference Gexcel indoor mobile systems with static scans, handheld scans, traditional mobile systems and even UAV surveys. This innovative capability realizes a multi-scale approach for fast survey of large areas. Large indoor environments can be rapidly mapped and connected with outdoor surveys. With the [blueprint navigator](#), spherical images are overlapped with the Lidar 3D and the user can have immersive navigation in a complex environment and collect measurements and other information. The HERON add-on is open to other analysis and inventory platforms (e.g. Orbit GS also in the 3D mapping cloud) thanks to an export function that provides Lidar clouds, trajectories and synchronized 360° images in open formats.

X-ray orthophotos

In terms of easily accessing the surveyed data and to provide free measuring functions, Reconstructor 4.0 offers a completely new way to extract X-ray orthophotos and blueprints enhancing the relevant geometric features of a 3D scanned object. With the innovative [GoBlueprint free tool](#) it is easy to share X-ray orthophotos among the users' community.

For additional information visit the [Gexcel website](#).