JRC 3D Reconstructor® 2.9.1  What is new?

The new release of Gexcel's JRC 3D Reconstructor® 2.9.1 offers important improvements for images usage in combination with 3D point clouds and meshes, keeping in step with the latest technologies in 3D laser scanning and photogrammetry.

- Special and very strong focus on UAV and Drone platforms

GeoTIFF images mosaics and 3D point clouds delivered by UAVs and Drones can be easily imported to produce 3D HR coloured digital terrain models. The Mining and Full packages additionally offer volume calculations, cross sections, cut & fill, crests & toes and isoline extractions.
• **Improvements for calibration and orientation of any type of external camera**

1. Perspective camera image calibration is improved by the Point Guessing System (PGS). When at least eleven common points are selected, the PGS will perform a background calibration and automatically estimate the image position of the additional points that were placed on the grid.

2. **Scan colouring** tool is improved with dialog that allows to create a colour layer for a structured point cloud by blending the images from the selected projectors. You can load all the projectors available in a project. The colour layer is computed by blending all the images coming from the projectors and projecting them on the point cloud. Different blending algorithms are applied depending on the selected options.
3. **Orientation of spherical image** - orientation over points and meshes is now easily supported for internal laser cameras and external panoramic cameras.
• **Improvement of the Point Rendering functionality**

Now the possibility to see the maximum number of points you want to render in order to easily navigate and handle large point clouds. This new feature is implemented to better use the capabilities of your graphic card and PC.

• **New filter for scan data**

The new *fill holes* filter is capable of filling the small gaps in the scans where missed points are present. The new filter can be used to increase the mesh quality from filtered scans.

• **High improvement of Inspection tools and procedure**

To compare two different shapes and to measure their differences, now four types of inspection are available:

1. Distances in **absolute value** to the reference model
2. Distances as **signed values**, with plus sign towards the origin: points that lie between the reference surface and the cloud’s origin will have positive sign, regardless of the orientation of the surface
3. Signed distances along the **direction**: cloud’s origin → point
4. Signed distances along an **axis**: you can choose one of the three axes of the current UCS and compute the distance to the reference model along a specific axis

• **Point rendering functionality**

New possibility to see the **maximum number of points** you want to render in order to easily navigate and handle large point clouds. This new feature is implemented to use better the capabilities of your graphic card and PC.

• **Hyperlink to the item menu folder**

This new functionality helps the user to organize his own data in the entire project folder.

These many improvements make the Gexcel software family unprecedented in advanced **functionality**, **flexibility** and **ease of use**. Inquire about the regular **webinars** and activities Gexcel organizes for clients and users worldwide: sales@gexcel.it