



3Dflow s.r.l.

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3DF ZEPHYR 5.0 – FEATURE HIGHLIGHTS

Out of Core processing: allows for a significantly lower memory footprint as well as faster processing. This feature prevents the system from infinite loops as well as not to working properly and lets big datasets to be processed even though users are not running 3DF Zephyr on a powerful enough computer.

Meshing improvements: in the wake of out of core processing, Photoconsistency can now be processed in chunks to minimize the impact on RAM. Each area of a certain 3D model is treated independently and requires much less memory than solving the whole problem in one step. That approach reduces processing time as well.

3DF Scarlet: is the brand new standalone application dealing with large laser scans. 3DF Scarlet allows for an easy and smart Lidar data registration experience and comes with 3DF Zephyr at no additional cost.

The laser scan module is still available in 3DF Zephyr. Nevertheless, the need to handle ever-increasing volume per single element/scan required a new software environment specifically focused on facing that kind of data. So here is 3DF Scarlet.

Both 3DF Scarlet and 3DF Zephyr can load the most common laser scanner formats (e57, pts, ptx, ply, etc.) as well as native formats: our plugins have been updated and improved adding support to many more laser scanner devices from Faro, Z+F and RIEGL

Structure from Motion improvements: Big datasets (from 1000 photos and above) are significantly faster to process, with no drawbacks on the accuracy and robustness of the algorithm.

Photoconsistent sharp edges filter: is a Photoconsistency filter that reduces noise of the mesh while emphasizing angular parts.

WIC Imaging Engine integration: WIC (Windows Imaging Component) is now the default imaging engine making 3DF Zephyr much faster when loading TIFF files and raw images as well. WIC also generally has a better color handling compared to the previous engine.

Merge workspace improvements: When merging workspaces, the new wizard allows import of selected elements only.

Drawing elements Improvements: Drawing elements now support splines' generation. A preview mode is now available, and the selection tool can be performed using drawing elements.

Texture subdivision in chunks: The texture computation of big meshes (over 10Millions points) is now splitting in chunks to minimize the RAM usage.

Mesh wrapping with a mesh template (experimental feature): Imported mesh can be wrapped with control points or spatial constraints to another mesh.

Texturing improvements: Texturing has been improved to embed Photoconsistency and blurriness checks, as well as a better blending.



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3DF ZEPHYR 5.0 - MINOR FEATURES

Utility bar: A new (optional) widget can be shown in the top or bottom part of the 3D viewport. Point picking and quick measurements are currently featured.

Compressed cache: Zephyr cache is now compressed to minimize the disk usage.

Control points edit combobox: Added a combobox in the edit control points dialog to quickly change current control point.

Additional autosave folder: User can now specify an additional autosave folder to keep the autosaved files.

Improved fls, z+f and Riegl support: Faro, Zf and Riegl plugin have been updated to support the latest formats.

Revit plugin updated: The Revit BIM plugin has been updated.

Orthophoto scr file improvement: The scr files for Autocad now works with georeferencing.

Faster rendering: Stereo mesh, stereo point clouds, and stereo textured meshes rendering speeded up.

Zep file size: Zep files size has been reduced.

Faster Zep loading / saving: Large zep files are now loaded and saved faster.

Point inspection tool improved: Fixed scaling and added an option to visualize linked cameras.

Improved laser scan raw format support: Fls files now support colors, and Faro, Riegl, and ZF plugins have been updated to support the latest formats.

Masquerade mask inversion: Added a button in 3DF Masquerade to invert masks.

Masquerade automagic button improvement: It now starts from the previous computation.

Orthophoto scr file improvement: Scr files for Autocad now work with georeferencing.

Orthophoto pdf improved resolution: Improved resolution when exporting an orthophoto to pdf.

Improved level curves extraction: Level curves are now correctly clamped and linked.

Full resolution photo camera view: When you move on a workspace camera in the 3D space, it will be loaded on demand at full resolution.

Many other minor fixes and quality of life improvements.
