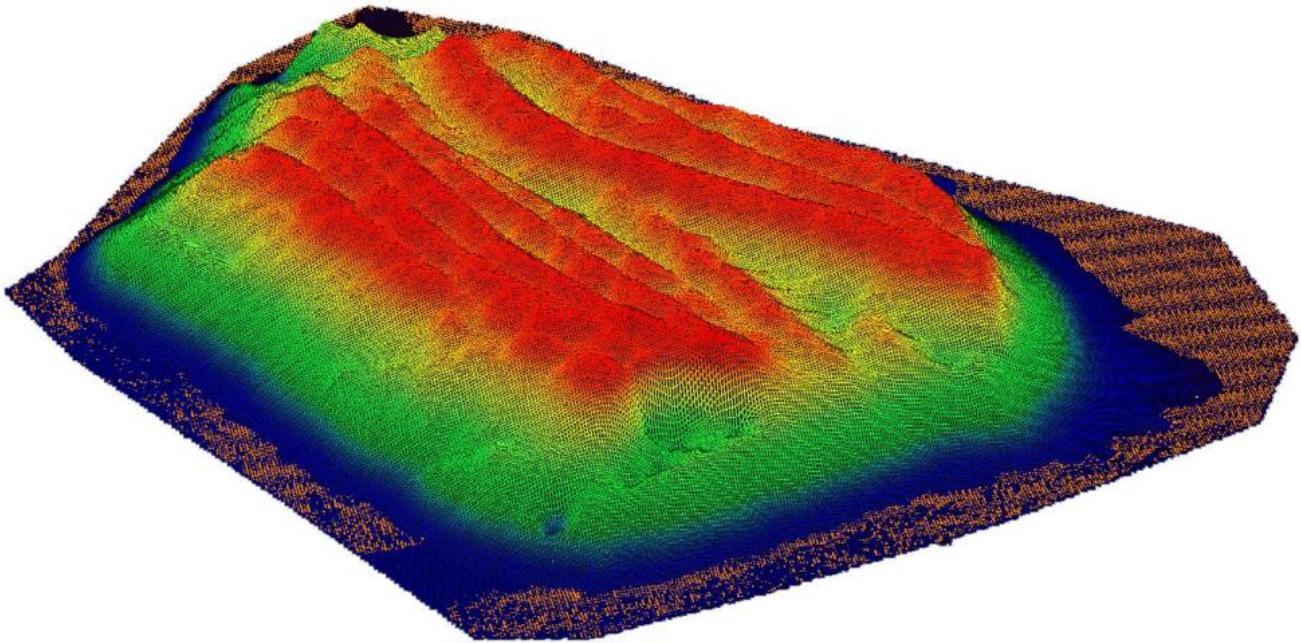# ENSOMOSAIC 3D

*Software for elevation models and contours*



## WHAT IS ENSOMOSAIC 3D?

EnsoMOSAIC 3D is a software for stereoscopic 3D data acquisition from aerial images and for processing large XYZ point clouds collected e.g. with airborne LiDARs.

EnsoMOSAIC 3D is used for stereoscopic 3D mapping of spatial objects like buildings, roads and terrain forms from digital aerial imagery. It classifies automatically and interactively geo-referenced point data, and by stereoscopic viewing checks and edits existing point data and measures new 3D points. Points are computed into elevation models, which can be visualized with image data. It automatically transfers 3D objects into the user's GIS database classifying the objects by the settings of the receiving system. The database connections are available for all major GIS products.
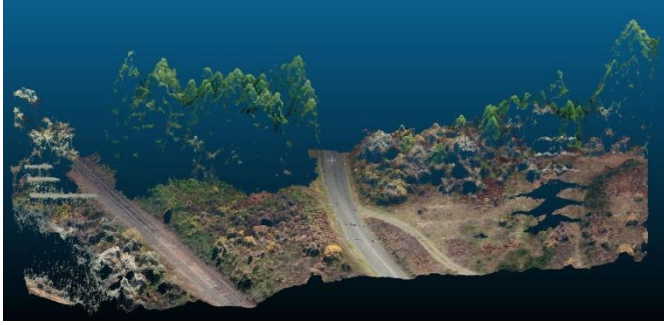
## WORKING PHASES
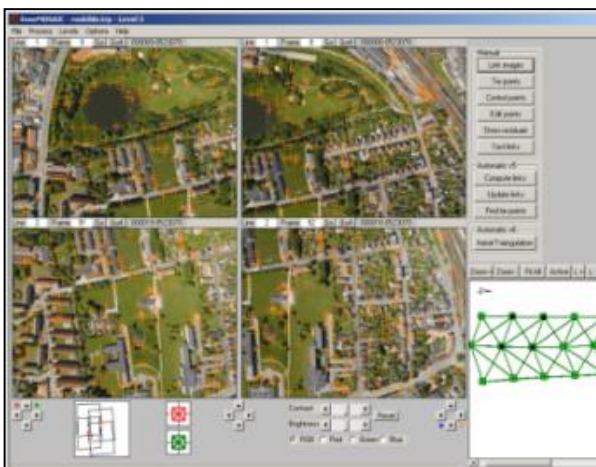


### 1. Image orientation

Orientation of aerial digital images is automatically triangulated in EnsoMOSAIC image rectification software.

EnsoMOSAIC also calculates the oriented images into large orthomosaics which is used as index map during 3D processing.

## 2. 3D point clouds

EnsoMOSAIC 3D reads image orientations and block definitions for stereoscopic 3D data collection. The software automatically calculates a dense XYZ point cloud, which is similar to that measured by LiDAR. There are typically 50 – 100 points / m2.
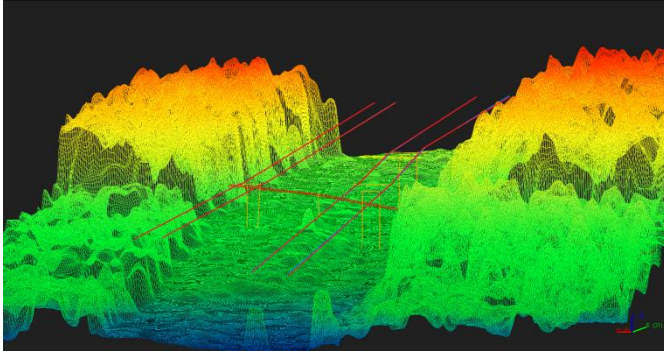
## 3. Elevation models

DSM (Digital Surface Models) and DTM (Digital Terrain Models) are calculated from the point cloud for further analysis. True-ortho mosaics can be created by joining mosaics and the DSM in EnsoMOSAIC.

## 4. Contours, volume calculations

DTM is then converted into contours for topographic maps.

DSM is applied for volume calculations, e.g. in wood yard inventories and for mining stock piles.

## 5. Stereo mapping, visualization

3D data collection is directly linked with your GIS environment (e.g. ArcGIS, AutoCAD or MicroStation) to create 3D vectors and visualize those with or without aerial images.

## HARDWARE AND SOFTWARE FOR 3D PROCESSING

A standard PC with Windows is suitable for processing, with a stereo-ready graphics card. A 3D monitor or projector is needed for quality control and visualization. Both active and passive display systems are supported.

## WORK WITH MOSAICMILL!

Please contact us for further information and for complete technical specifications and commercial details of EnsoMOSAIC imaging and mapping systems.

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