



OxTS Georeferencer Software Infosheet

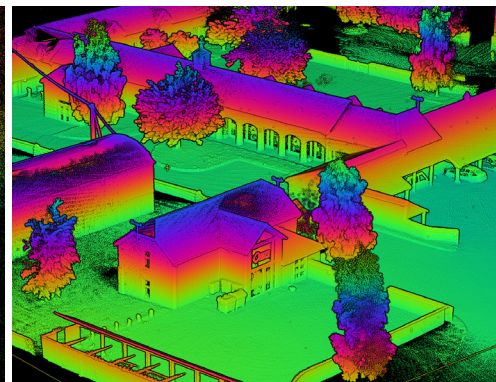
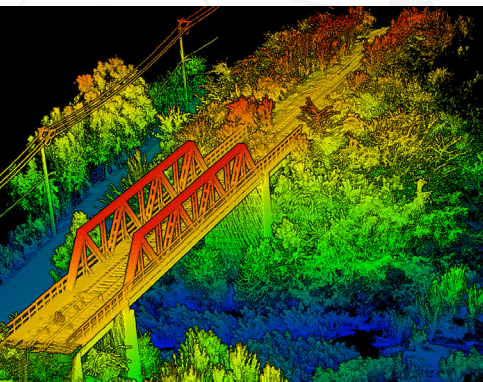
OxTS Georeferencer is OxTS' internally developed LiDAR georeferencing software tool. It can be used alongside any OxTS Inertial Navigation System (INS) and a wide range of LiDAR sensors to help users **quickly and easily create highly accurate 3D pointclouds**.

The software takes the inertial measurement data (.NCOM) created by an OxTS INS and combines it with raw LiDAR data (.PCAP). The resultant .LAS file can then be viewed and analysed in many pointcloud viewer software applications.

The software natively includes a number of features to help LiDAR surveyors intuitively create the pointcloud most ideal for their application.

OxTS Georeferencer can be used to create 3D pointclouds for an almost limitless number of applications.

- / Asset Management
- / Building Information Modelling (BIM)
- / Coastal Monitoring
- / Geographical Surveying
- / Infrastructure Monitoring
- / Land Surveying
- / Mining
- / Pipeline Exploration
- / Road Monitoring



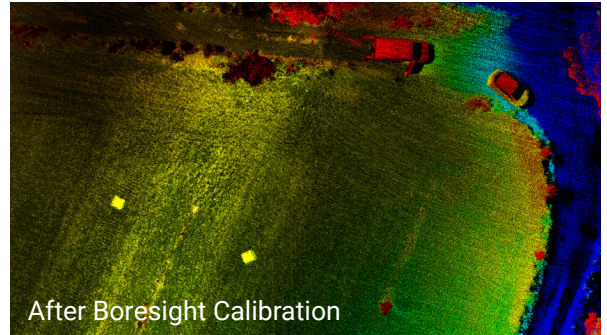
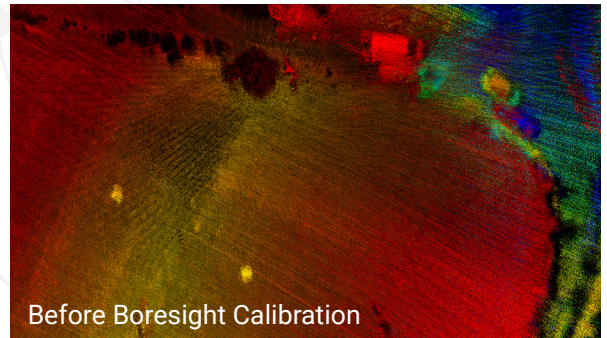
The pointclouds above were created by georeferencing the raw data from a LiDAR sensor with the inertial measurements from an OxTS INS. The bridge survey was conducted using a drone and the road and building survey data was collected on a mobile mapping vehicle (car).

Boresight Calibration

OxTS Georeferencer includes an optional boresight calibration feature. This allows users of OxTS Georeferencer to take advantage of a unique data-driven technique to calibrate the coordinate frames of their navigation (INS) and survey (LiDAR) devices.

Creating a finely calibrated set-up is quick and simple to achieve, and will produce more precise pointclouds. The Boresight Calibration process will help users:

- / Eliminate double-vision
- / Minimise blurring and maximise precision
- / Collect calibration data in minutes



LiDAR Integration

OxTS Georeferencer includes integrations with many commercial grade LiDAR sensor, raw data formats. These include sensors from Hesai, Ouster, Velodyne and Livox - giving users a wide variety of sensor performance and application.



Key Features

Accuracy estimation - OxTS Georeferencer includes a formula for estimating the uncertainty in point positions based on INS and LiDAR accuracy at each moment of the survey. This can be seen clearly in the pointcloud, allowing editing and analysis based on accuracy.

Global coordinates - The user has the option to process in a range of coordinate systems including local coordinates, ECEF and LLA (latitude, longitude and altitude).

Processing options - OxTS Georeferencer includes a large range of processing options based on accuracy, range, speed, and angle. It also gives users the ability to add into the pointcloud point normal and trajectory data.



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