CASE STUDY

Panpro Team

Panpro builds a successful new road safety business based on powerful integration of LiDAR and accurate georeferencing tools from OXTS.

PROJECT AIM

Panpro Team had spotted a golden opportunity to improve road safety by providing traffic authorities with data about sight distance (the distance a driver can see ahead or behind them) on their road networks. Using that data, authorities could use signage to improve road safety on existing roads, and plan new roads with these distances in mind.

CHALLENGES

+ Find a way to accurately georeference point cloud data gathered during surveys.
+ Ensure that the workflow was quick so that Panpro could deliver on time for clients.
+ Build a solution as cost-effectively as possible, so that services could be priced competitively.

SUMMARY

Company:
Panpro Team

Industry:
Infrastructure Survey

Country:
Serbia

Website:
www.panpro.rs

OXTS Hardware:
xNAV650 GNSS/INS

OXTS Software:
OXTS Georeferencer
Boresight Calibration

Other Technology:
Ouster OS2 LiDAR

THE SOLUTION

Working with our channel partner DTC, Panpro chose an OXTS xNAV650 GNSS/INS for its georeferencing solution, coupled with an Ouster OS2 LiDAR, and the OXTS Georeferencer application.

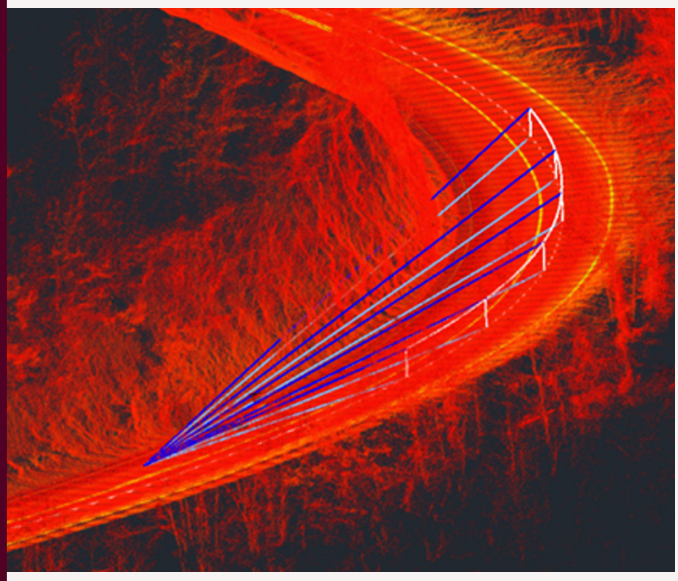
Panpro was impressed with the xNAV650's combination of centimetre-level accuracy and small form factor (130g weigh, and 77 x 63 x 24mm in size). Unique gx/ix tight-coupling technology in the xNAV650 preserves RTK accuracy in areas where signal is poor, and speeds up RTK reacquisition after a loss of signal – for instance, after going through a tunnel.

OXTS Georeferencer was particularly instrumental for Panpro. Before a survey, the boresight calibration tool allows Panpro to precisely align its LiDAR and GNSS/INS in just a few minutes, vastly reducing blurring and 'double vision' in the final point cloud. After the survey, OXTS Georeferencer's integration with Ouster LiDAR scanners means Panpro can georeference its survey data in just a few clicks.

PAYLOAD SPEC

Panpro's payload had the following specification:

- Position accuracy: 0.02 m (RTK/PPK)
- Roll/pitch accuracy: 0.05°
- Heading accuracy: 0.01°
- LiDAR range accuracy: up to ±3 cm (typical)



RESULTS

Fuelled by OXTS technology, Panpro's new business arm has been highly successful. In less than a year, Panpro has already gained clients in two EU countries and surveyed more than 200km of state road networks. Prospects in Switzerland, Slovenia, and Austria are also interested in Panpro's innovative services.

"OXTS has allowed us to enter the world of point clouds. Its hardware and software is the heart of our point cloud creation and georeferencing process – delivered at a reasonable price that is attractive to small and medium enterprises worldwide"

Mišel Sabo,
Director and Owner,
Panpro Team