



**YellowScan**

Reliable LiDAR for UAV.

USE CASE

# Civil Engineering



UAV USED  
IDS iA3 Colibri



SOLUTION  
Mapper

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*Before we had YellowScan, it was very different... Now we have a new organization and we are able to get precise data fast and easily.*

Andrejs Veliks, CEO, A-Geo

## Business need.

Latvia wants to create a road running along the 160km border with Bielorrussia : the project is due to start in 5 months time. In order to organize the roadworks, a precise topographic map is needed.

Most of the border is heavily wooded, with difficult-to-access areas including swamps covered in grass, ditches, bushes...

A traditional survey on-foot would imply many safety issues, and would be time consuming with around 2 km covered per day and a point density lesser than 10 points/km. Timing, precision, point density and safety are key to the project.

## Solution.

YellowScan lightweight UAV LiDAR solution enable the quick and easy collection of detailed data about topography of the surveyed area, even in dense forest conditions.

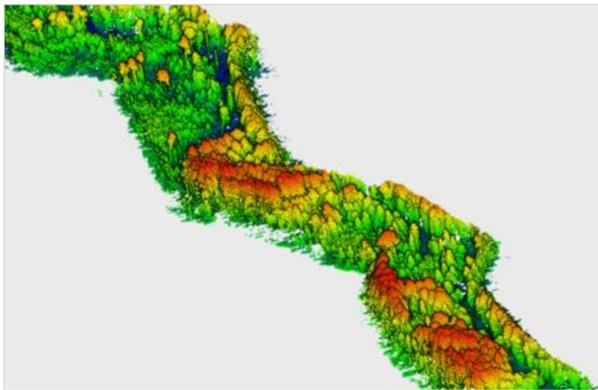


Company: A-GEO  
Website: a-geo.lv  
Country: Latvia



## USE CASE Results

With a point density of 60 to 100 pts/m<sup>2</sup> (5.4 to 9 pts/ft<sup>2</sup>) even in dense vegetation thanks to the YellowScan Mapper's 3 echoes, and no problem with GNSS signal thanks to the UAV LiDAR receiving good GNSS network coverage, the job was done in less than 3 weeks, with high accuracy, precision, and low human risk.



*Forest point cloud*

### Mission parameters.

- Number of flights : 50
- Survey size : 160 km (525 000 ft)
- Flight speed : 5 m/s
- Flight altitude : 50-70 m

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### Acquisition.

Prior to the LiDAR flight, a flight with the Phantom UAV from DJI and a camera enabled the team to visualize the area they were covering. For example, they could identify water bodies covered in grass.

A-Geo was able to follow the drone riding alongside with a quad : this enabled them to cover up to 13km in one flight. They did 2 flight lines along the border for a wider and denser point cloud.

### Benefits.

- High density data
- Good GNSS coverage
- Access to difficult areas
- Ground data
- Rapid deployment
- Low human risk



*YellowScan Mapper I on IDS iA3 Colibri*