
GeoPose & WebVMT
Testbed-19
OGC Code Sprint
30 Oct 2023

Road Network Use Cases

Wrong way vehicles

- Autonomous identification – rapid response
- Multi-sensor aggregation – vehicle tracking
- Feedback – future risk mitigation

Litter monitoring

- Fleet dash-cam capture – low cost
- Multi-sensor aggregation – accretion rates
- Threat prediction – timely intervention

GeoPose video capture in April 2023

Ordnance Survey
StreetDrone Vehicle

Data Synchronisation

Identify camera GeoPose

- Location & orientation

Track vehicles

- GeoPose sight lines – detection zones
- Sync video with WebVMT – vehicle paths

Synchronise data sources

- Two observations of same event
- Closest approach to common location

Accurate to 100ms with 95% confidence

Synchronised Paths

Open Geospatial Consortium

Wrong Way Traffic Analysis

Identify vehicle in sight line

- Location & time

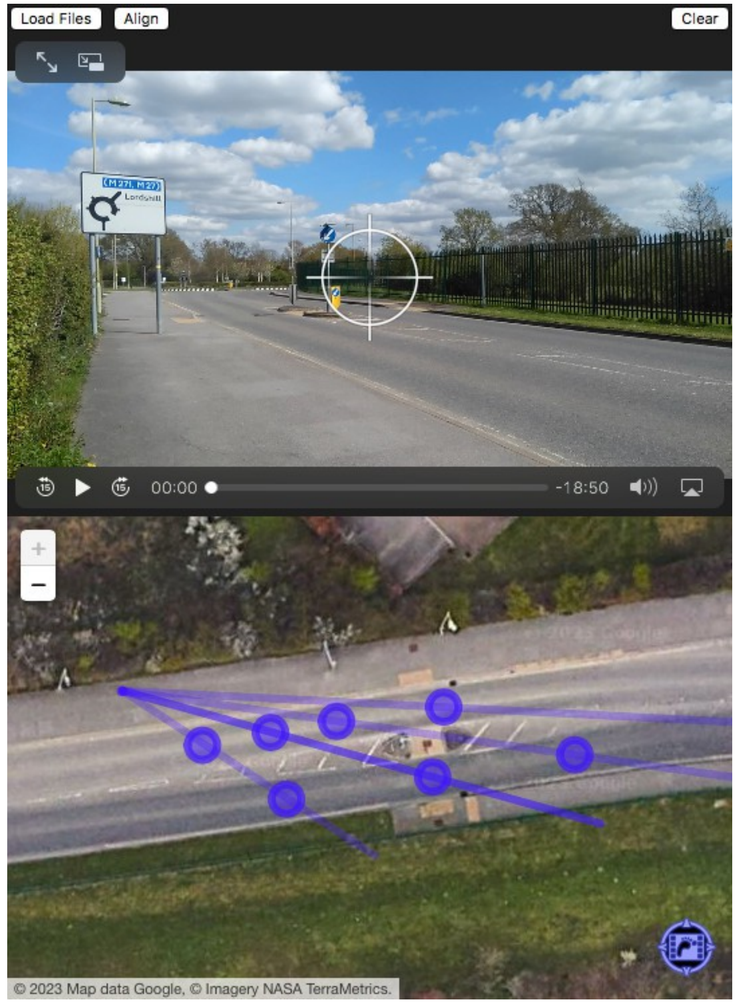
Check detection zone order

- Wrong way – raise alert
- Unexpected – raise error

Robust to small changes in GeoPose

- Sight lines remain valid
- Supports pan, tilt & zoom – PTZ cameras

Suitable for pilot study



Detection Zones

Additional Resources

Testbed-16 Full Motion Video

- Exporting MISB metadata for the web (D021 ER: 20-036)
- YouTube video: https://youtu.be/j9ayV2_gskY

Testbed-17 Moving Features

- Autonomous vehicle analysis (D020 ER: 21-036)
- YouTube video: https://youtu.be/-BjeAp_hgQc

Testbed-18 Moving Features & Sensor Integration

- GeoPose video analysis (D020 ER: 22-016)
- 3D Compass app: https://awayteam.co.uk/products/3dcompass/about

WebVMT W3C Note: https://www.w3.org/TR/webvmt/

- Web demos: https://webvmt.org/demos