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Business Domain
Geospatial Sector

Project Type
LiDAR Data Processing Solution,
Feature Extraction Solution,
Dedicated Team, Tech Partnership

Streamlining Road Infrastructure Mapping: Up to 66% Reduction in LiDAR Processing Time

Client

A global company specializing in the large-scale and systematic visualization of environments based on 360° panoramic photographs and LiDAR data.

Project

Processing 7,000 kilometers of LiDAR data to generate 3D features related to road infrastructure.

Objective

The Client aimed to process a vast amount of geospatial data in a limited time frame. They required a comprehensive quality control process, as well as a reliable system for managing and delivering the processed data to their stakeholders.

Team Reinforcement

The Client needed to process a large quantity of geospatial data but lacked in-house expertise. They looked for a team with the necessary skills and experience to handle the project efficiently and to develop a custom solution meeting their unique needs and timeline. The task was delegated to an Offshore Dedicated Team® (ODT).

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Challenge

The Client's customers may have diverse requirements for the format, resolution, and delivery of the data. Meeting them, as well as ensuring that the data is delivered efficiently and on time, can be a significant challenge.

The Client needed a skilled team with expertise in geospatial data processing to urgently process a large amount of data, implement rigorous quality control processes, and develop robust data management and delivery systems.

Quick Facts

- 7,000 km of extracted features
- 66% time reduction in some processes thanks to automation
- Designed delivery system from scratch
- QA score over 98% across all deliveries

Technologies

Proprietary Client's Software

Solution

★ 01

Full inventory of the roads for one state was performed in the span of four months, providing the Client's customers with timely, efficiently delivered, and accurate data.

★ 02

The quality of LiDAR data can significantly impact the accuracy of generated 3D features. To ensure high-quality data, data cleaning and filtering were applied to remove noise and artifacts, while data validation and quality control checks were used to identify errors or inconsistencies.

★ 03

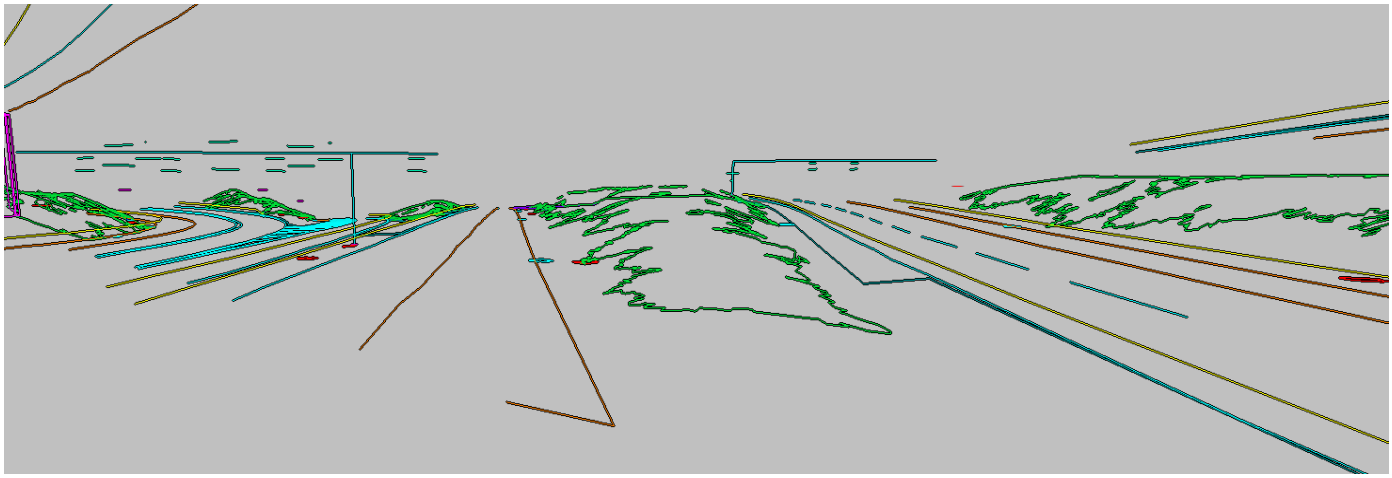
Since processing and analyzing large volumes of LiDAR data can be time-consuming and resource-intensive, the team used parallel processing techniques to distribute the workload across multiple computing nodes to leverage cloud computing scalability and flexibility.

★ 04

To ensure high-quality data and accurate 3D feature generation, a series of quality assurance (QA) checks and data validation processes were conducted. This included the manual spot-checking of features against ground truth data for accuracy and statistical analysis to ensure data consistency and completeness.

★ 05

The Intetics Offshore Dedicated Team® with vast LiDAR data processing experience, extracted data on over 7,000 km of roads.



Client Reference

“The Intetics team did an outstanding job of managing the project and delivering high-quality results on time and within budget. They demonstrated a deep understanding of geospatial data processing and leveraged their expertise and advanced tools to optimize the process and improve efficiency. They were also proactive in identifying and addressing potential issues and maintained excellent communication with us at all times.

Benefits and Results

- Fully extracted 3D features from 7,000 km of roads.
- 27% reduction in project time thanks to automation and the team’s expertise.
- QA score over 98% across all deliveries.
- The scalable ODT® is ready to tackle new transportation projects with a maximum roll-out time of 2 weeks.

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Techstack:

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Team: 150

Project Manager,
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