Implementation and Optimization of a Complete Process of Collection, Classification and Exploitation of LIDAR Data

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SUMMARY

This document is an end-of-studies internship report that took place from February 28 to August 26, 2022.

We are looking to develop the LIDAR component and wants to be competitive with new market requirements and the race towards tool performance.

We have faced challenges in terms of processing time and classification, the precision of the models generated from the data processed and the quality of its services.

The approach followed: analysis of existing LIDAR point processing methods, followed by a phase of comparison of methods and tools for classification and exploitation of these data. To achieve the implementation and optimization of a complete process of collection, classification and exploitation of LIDAR data.

The first step in setting up the process is to optimise the organization of flight missions.

The second step in the process is the standardization and automation of the processing and classification of LIDAR point clouds.

The best use is to find the right sequence of routines for each type of floor for the automation of the tasks to be performed in a macro.

The last step in the process is the exploitation of the data according to the customer's

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requirement.

At this stage a comparative study was carried out of the software and tools used and I selected choices according to specific criteria for each type of processing.