

ABSTRACT

This project aims to show all the involved and needed to obtain a 3D model of a metro station in Barcelona. This has been done with collaboration from “Transports Metropolitans de Barcelona”, which has enabled us to carry out any tasks required within the station.

The main objective is to create a 3D model of Collblanc station using a terrestrial laser scanner (TLS). This project specifically focuses on the lobby area and the stairs down to the station's platform.

In order to develop this project, first of all we have established a survey reference network, to georeferenced the clouds of points obtained from TLS. Then, we obtain the clouds of points from several stations with terrestrial laser scanner.

To process the clouds of points two different software packages have been used. The house Faro software, SCENE, was used to orientate and refine the various clouds of points and the POINTTOOLS software to obtain products derived from the model.

Thus, our final result showed plans and sections of the area of the station which we worked on as well as elevations and orthophotos.