

Application of 3D Terrestrial Laser Scanning in the Process of Update or Correction of Errors in the Cadastral Map

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SUMMARY

3D terrestrial laser scanning has a number of possible applications in surveying. Another one is proposed in this paper, taking in mind the current trends for augmentation of the coverage of the cadastral maps in Bulgaria.

Currently in the country there are a number of created, approved and put into legal power cadastral maps. The last cover various territories, including those, containing buildings with more than one owner.

Due to various reasons it often happens, that existing cadastral information is created incorrectly or is missing at all on the map. These facts impose conducting of geodetic measurements for creation of the required digital information for update or correction of the cadastral map.

This paper studies the implementation of the specific field procedures, also the processing of the geodetic measurements (obtained by 3D terrestrial laser scanner) for delivery of the necessary data for the existing on the terrain, but missing or incorrectly situated on the map objects of cadastre.

Analysis of the technical difficulties and the advantages of the proposed method for this particular case are given in the paper, based on the requirements of the surveying equipment.

In the paper are also given graphical examples for illustration the specifics of the carried work. Assessment of the accuracy of the conducted geodetic measurements is done in the study.

Conclusions, recommendations and future proposals are given in the paper.