

Combination of 3D Terrestrial Laser Scanning and GNSS Technologies for Measurement of hard /Impossible/ to Access Objects of Cadastre in the Process of data Acquisition for the Required Update of the Cadastral plan

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SUMMARY

In this paper is discussed the possible joint application of 3D terrestrial laser scanning and GNSS technologies, which gives the geodesists the opportunity for productive and also precise way for gathering of the required spatial cadastral information in the field. The combination of these technologies for some specific objects in the surveying practice offers the possibility to save time in the field, gain overall efficiency and avoid making errors in the later on created documentation.

The paper explores the implementation of the technological procedures both in the field and in the office, which are necessary for the creation of the required documentation for the update of the cadastral plan. The surveying job consists of: preparation for and conducting of geodetic measurements /applying the above mentioned technologies/, data processing and analysis of the overall quality of the created 3D digital model. The last was used further on for data extraction of the relevant cadastral information as: contour points, inaccessible edges of the object, control points, etc.

A thorough analysis of the factors, which led to the decision for usage of these contemporary surveying methods was done in the paper. The technical requirements of the applied instruments were also taken into account.

Assessment of the accuracy of the performed geodetic measurements was done. In the paper are included the necessary graphical examples, which show the specifics of the carried work.

Conclusions and recommendations for future work are also given in the paper.

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