3D Terrestrial Laser Scanning for Cadastral and Design Activities &#8211 Performing, Data Processing and Analysis Storage and Backup in the Light of the Nowadays Cloud Possibilities.

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SUMMARY

3D terrestrial laser scanning and IT nowadays deliver a number of new possibilities for the geodesists. This paper is focused on the process of performing geodetic measurements using 3D terrestrial laser scanning, quality analysis of the results and safe data storage. The contactless way of measurement gives a lot of advantages as: enormous field productivity, elimination of the possible human-based errors and delivers significant 3D accuracy of the created geodetic product.

The paper studies the implementation of the relevant activities, which are required for the delivery of the necessary spatial information, its processing, analysis and last but not least the safe and encrypted cloud storage of the gathered in the field digital data.

Currently, there are several cloud-storage providers, which deliver online service with various parameters, like: size of the space, transfer quota, security, support, etc. Since the volume of the measured data from 3D terrestrial laser scanning depends on several settings in the scanner's firmware, details on its processing and online storage are further discussed in the paper.

Analysis of the factors for the decision to use the mentioned surveying equipment and IT possibilities for project and cadastral activities are given in the paper.

The necessary assessment of the accuracy of the performed geodetic measurements was done. Graphical examples, which illustrate the performed work are also included in the study.

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