

Using Modern Mobile Technology to Update Geodetic Network Points

Anna Przewiezlikowska, Małgorzata Busko, Klaudia Wójcik and Wioletta Ślusarczyk (Poland)

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SUMMARY

Many mobile applications allow users to collect various types of information together, which then feeds into a database. Undoubtedly, this way of operation would also work well in geodesy. When carrying out orders, surveyors spend a lot of time processing data received from the geodetic and cartographic documentation center and verifying its correctness and timeliness, often directly in the field. Therefore, any form of assistance that would speed up this process should be welcomed. The answer to this need is the Metrica application enabling verification of the warp points.

In order to justify the need to create such an application, first of all an analysis of the actual state of the matrix points database was conducted. As it could be expected, it showed large discrepancies in comparison with the actual state. Such and other discrepancies can be efficiently eliminated by using a mobile application and sharing information about the actual location of the matrix points.

The easy-to-use application is dedicated for mobile devices, e.g. with Android or other operating systems. The designed application allows to:

- displaying points on a map,
- navigation to a point,
- browsing information about a point,
- adding photos and topographic descriptions,
- deleting of

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photos,

- adding an existing point not included in the current application database,
- editing point information.

Access to the listed options depends on whether you use the application as a "Guest" or as a "Customer". "Client" is a registered person who receives access to all functions. The "Guest" can only browse the information about points collected in the application.

The entire database of points can be easily searched by object numbers, and also displayed on a map, for which tiles taken from Google Maps were used.

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