

Automatic Production of Topographic Maps

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SUMMARY

One of the crucial goals of the Head Office of Geodesy and Cartography (GUGIK) - National Mapping Agency of Poland is to automate the processes of creating topographic maps. Given the limitation of available budget of the NMCA's and nowadays' much too expensive and time-consuming manual mapping by cartographers, automatic map generation has become a necessity and a "golden mean" between rational spending of public funds and manual map development. What also needs to be emphasized is that the users need up-to-date maps, in great majority in a digital form, that, if necessary, can be modified to meet their particular needs with printing out possibility.

As part of its own work, GUGIK has started some pilot projects aimed at developing tools for the automatic generation of uniform topographic maps for the area of the whole country of Poland (by now there are the ones in 1:10 000 and 1:25 000 scale). The process of automatic generation of visualizations and maps on a national scale is very complex. To put it briefly and simplified, process includes stages as: the generalization of source data, preparation of map visualization and composition, and then preparation of the process of automatic map saving while maintaining the optimal time for generating a single sheet. The tools are constantly being developed, but pilot products (as a cartographic visualizations) are already available. Cartographic visualizations are being generated automatically with the use of free QGIS software - the ones in 1:10 000 scale - (the contour lines were generated in FME by Safe Software) or using FME software - the maps in 1:25 000 scale.

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