

State Border Line Measurement with GPS – Measuring and Processing Experiences

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ABSTRACT

From surveying point of view the state border points are the first order detail points on the large-scale maps and data basis. Their re-measurement and maintenance is necessary regularly. The problem in Hungary is that the first determination of these important points was made nearly 80 years ago, in old fashion co-ordinate systems and map projections, which are not in use now. Also the accuracy of co-ordinates does not meet the requirements and the traditional surveying methods are not sufficient.

That is why in the last years we are using GPS technology for control and detail survey in co-operation with neighbouring Central European countries. We have experiences with static, kinematic methods under poor satellite visibility and lack field circumstances.

The 3D GPS co-ordinates are now transformed to official old co-ordinate systems resulting in decreased accuracy. We suggest that in the future the ETRS system (as the European implementation of WGS 84) should be the common reference for state border registry in all Central European countries.

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