Land Relations and Cadastre Agency
Institute of Geodesy, Engineering Research and Cadastre

National Report
A New Geodetic Infrastructure in Moldova

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EUREF Symposium, London 2007

Subjects

GPS observations

- Integration with EPN
- CORS network concept

Precise levelling

- First order levelling
- Second order levelling

Absolute and relative gravity measurements

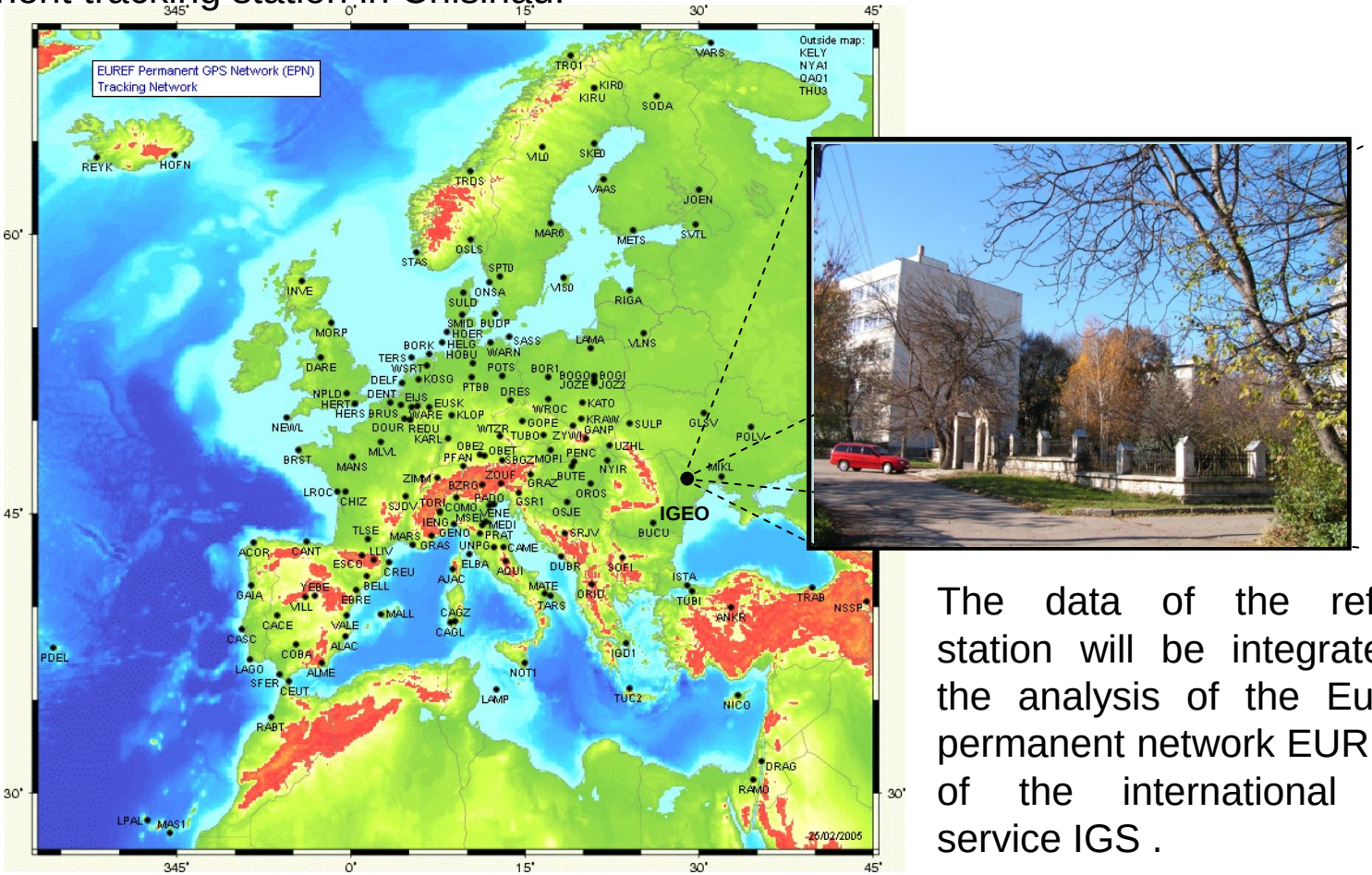
- The first order gravity network
- The second and third order gravity network

Summary, Way ahead

GPS observations

Integration with EPN

Starting from December 2006 the Agency of Land Relations and Cadastre in collaboration with BKG carried on negotiations to install and jointly operate a GNSS permanent tracking station in Chisinau.

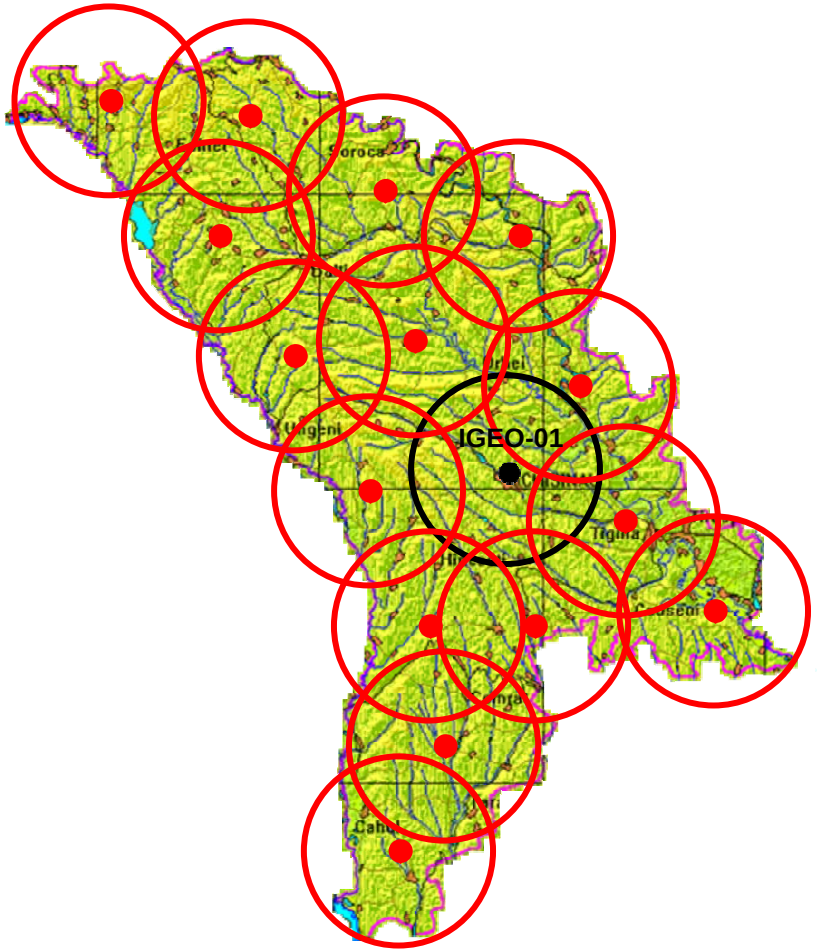


The data of the reference station will be integrated into the analysis of the European permanent network EUREF and of the international GNSS service IGS .

GPS observations

CORS network design

- Installation of the GPS reference station in Institute INGEOCAD is the first step toward the realization of MOLDPOS
- The densification with the 30-40 km requires that at least 15 GNSS CORS will be established in Territorial Cadastre Offices
- Such network will form the basis of and act as focal points for the establishment of the MOLDPOS Network



GPS observations

MOLDPOS Concept

- For the beginning, Moldova needs 15 CORS with ~ 30-40 km spacing in order to organize the differential GPS for navigation and real time kinematics by means of RTK/VRS

- We suppose the MOLDPOS network will be used by a large spectrum of users (geodetic works, cadastral surveying, GIS applications, mapping and boundary marking, etc.)

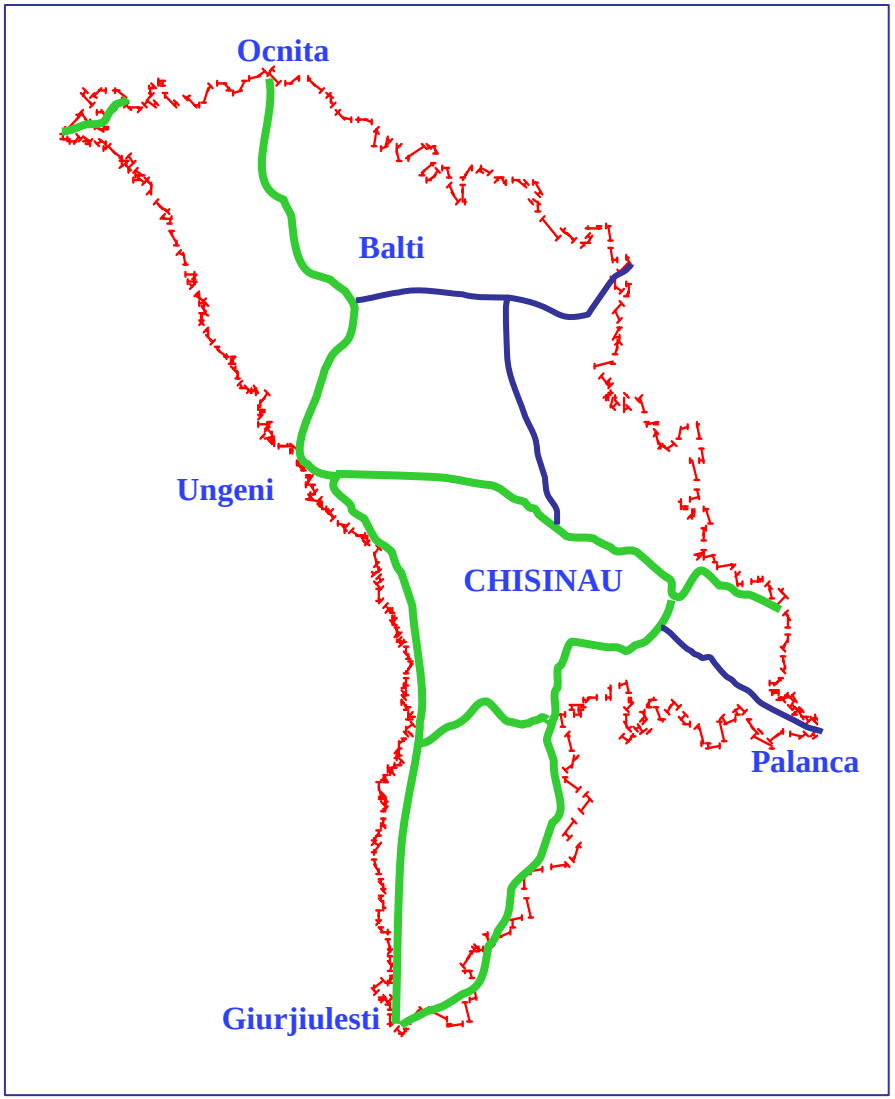
- MOLDPOS will be the basis of support of scientific applications (landslide monitoring, environmental research, geohazard prediction, meteorology, etc.)

Precise leveling

National leveling network

First order leveling lines

Second order leveling lines

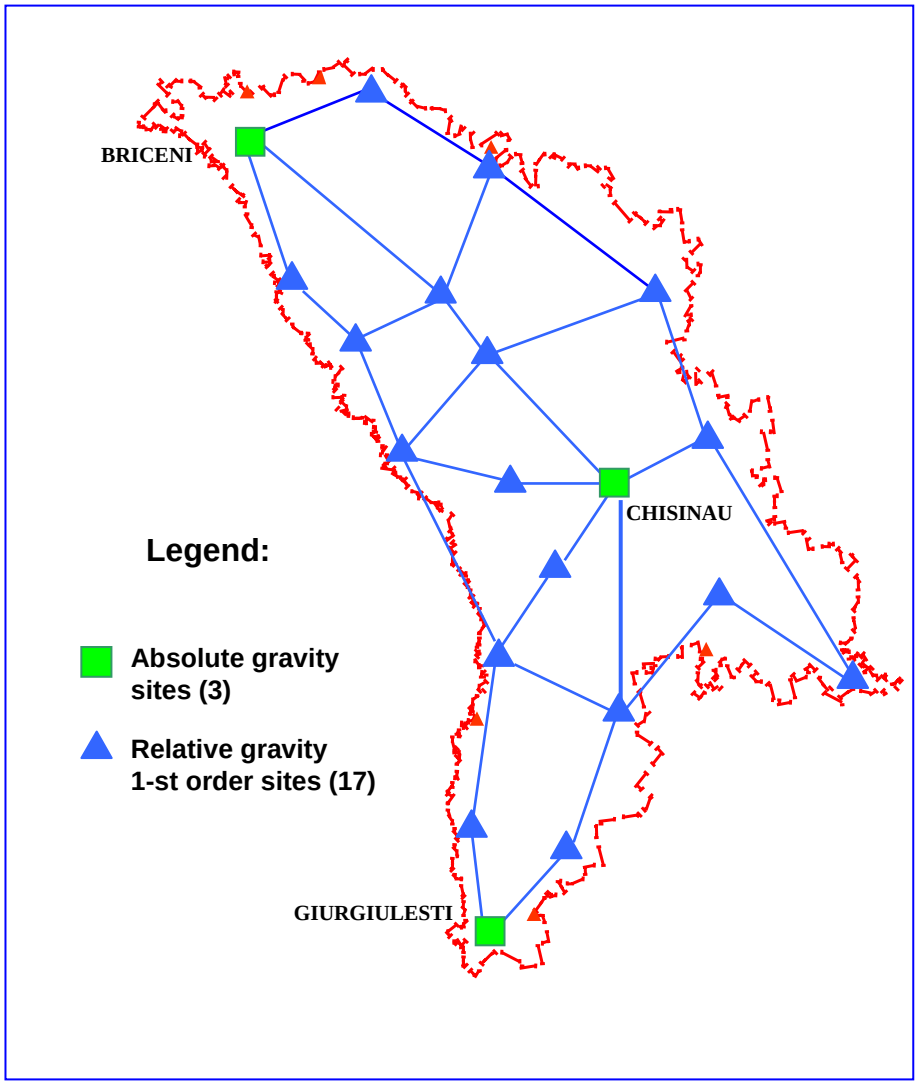


Absolute and relative gravity measurements

The first order gravity network (2006)

The second order gravity network, 112 relative base stations (2007)

The third order gravity network, 1700 relative base stations (2008-2009)



Way ahead

- **MOLDPOS development and Integration in the EPN, IGS and participation in international projects**

- **The future steps are gravity network densification about 1 point per 15-20 square kilometres for geophysical applications, precise levelling and the high resolution local quasigeoid modelling**

- **The reconstruction of national levelling network in order to integrate data into UELN and to introduce the national height system, which should be the realization of European Vertical Reference System**

- **Improvement of normal height determination accuracy from GPS measurements and organizing the MOLDPOS service of the height anomalies calculation so the user will have the real time normal heights**

Thanks for your attention

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