EUREF 2010 Symposium

National Report of Austria

by

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Gävle, Sweden

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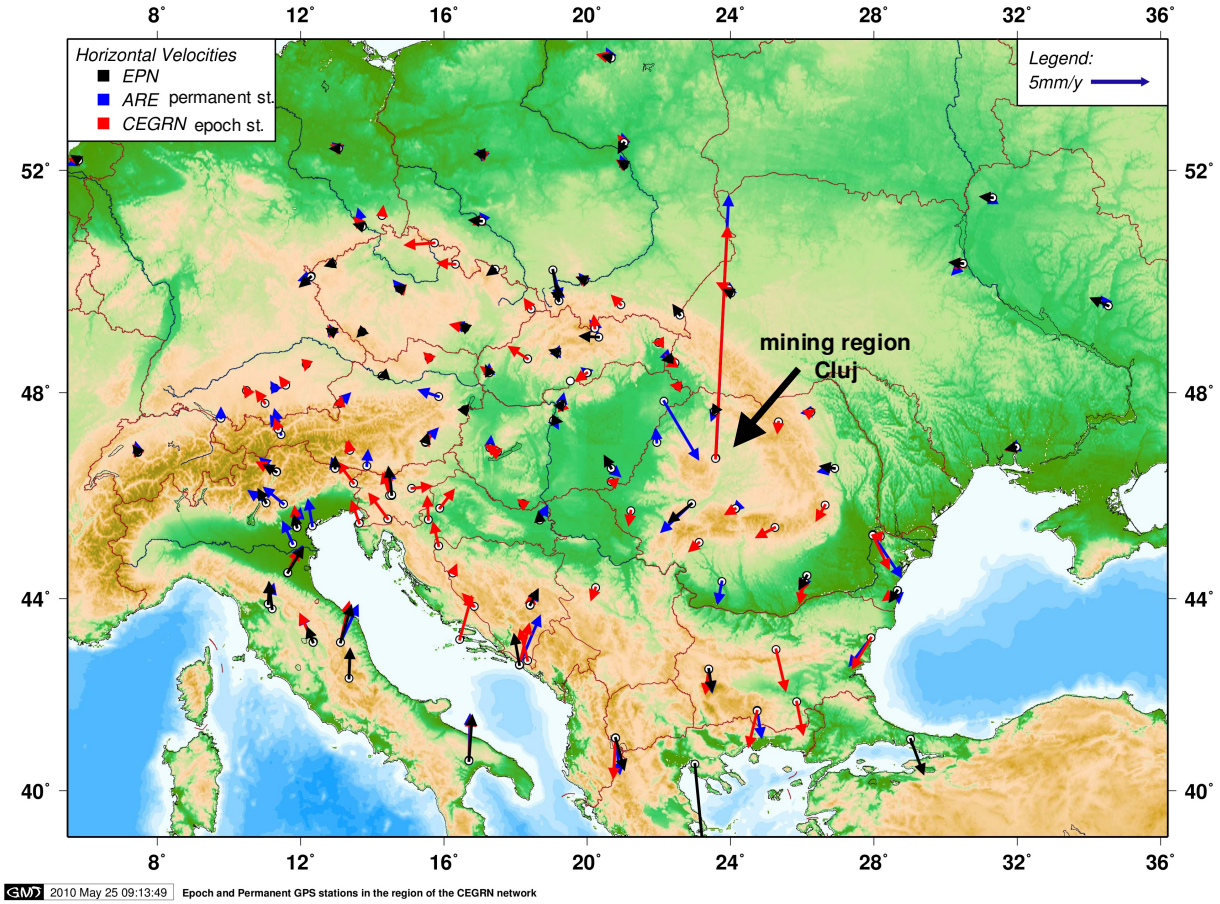
Permanent GNSS-Networks



CERGOP Network: comparation of horizontal Velocities derived from EPN and from CERGOP

Cooperation between BEV and OLG[1)]:

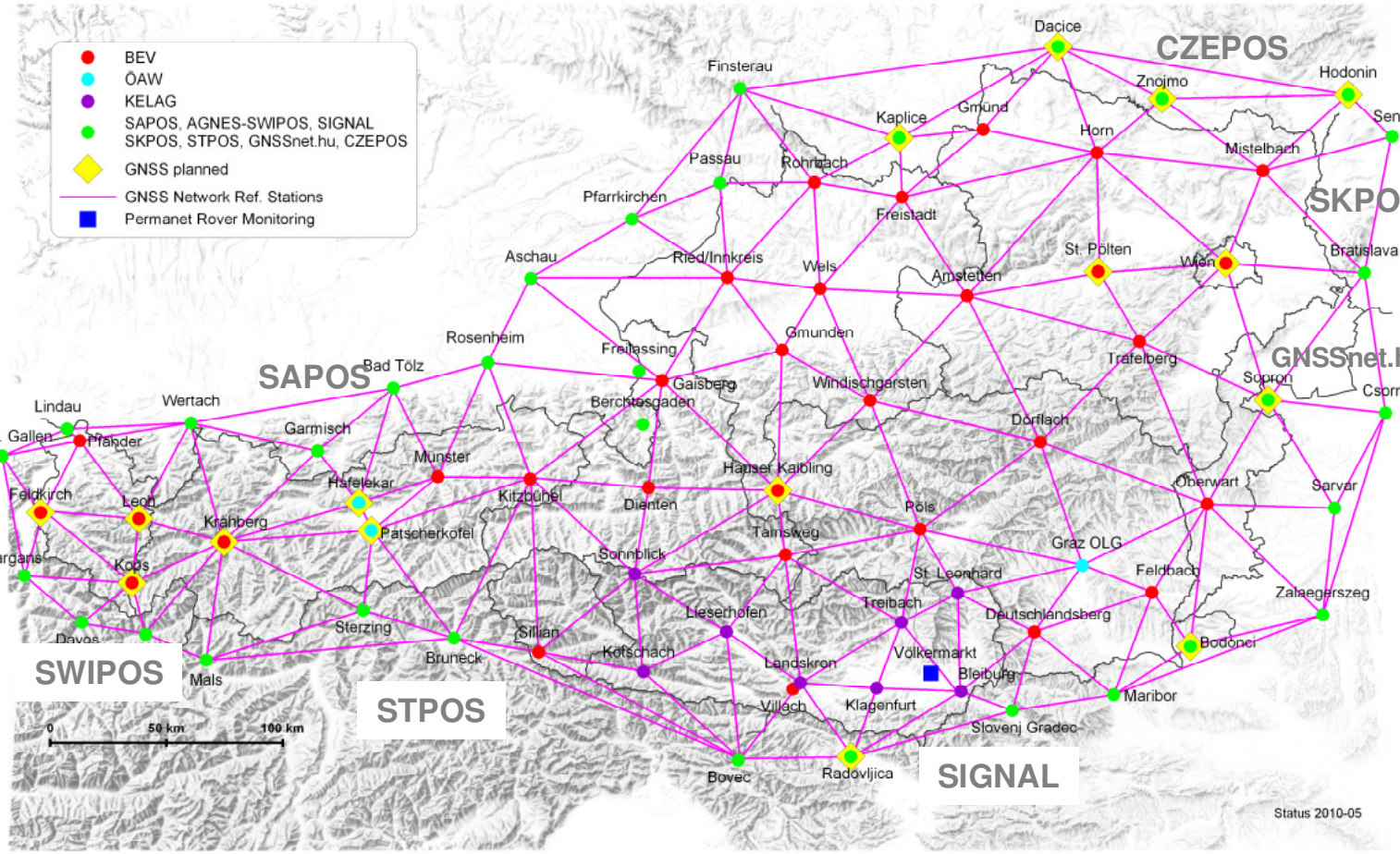
EPN - Subnetwork (75 st.)
MON - Eastern Medit./Arabian Plate (80 st.)
ALBPOS – Albanian RTK network (16 st.)
CERGOP – Central European Geodynamic Network (85 st.)
AMON-Austrian monitoring (90 st.)

AMON08 solution:

Base for the whole national realization of ETRS89 in AUSTRIA

[1)] **OLG: Observatory Lustbühel/Graz**

APOS – Austrian Positioning Service



From GPS to GNSS:

GPS+GLONASS+GALILEO-ready
All stations in Austria during 2010

Central Computing Software:
Trimble GPSnet ➔VRS3net

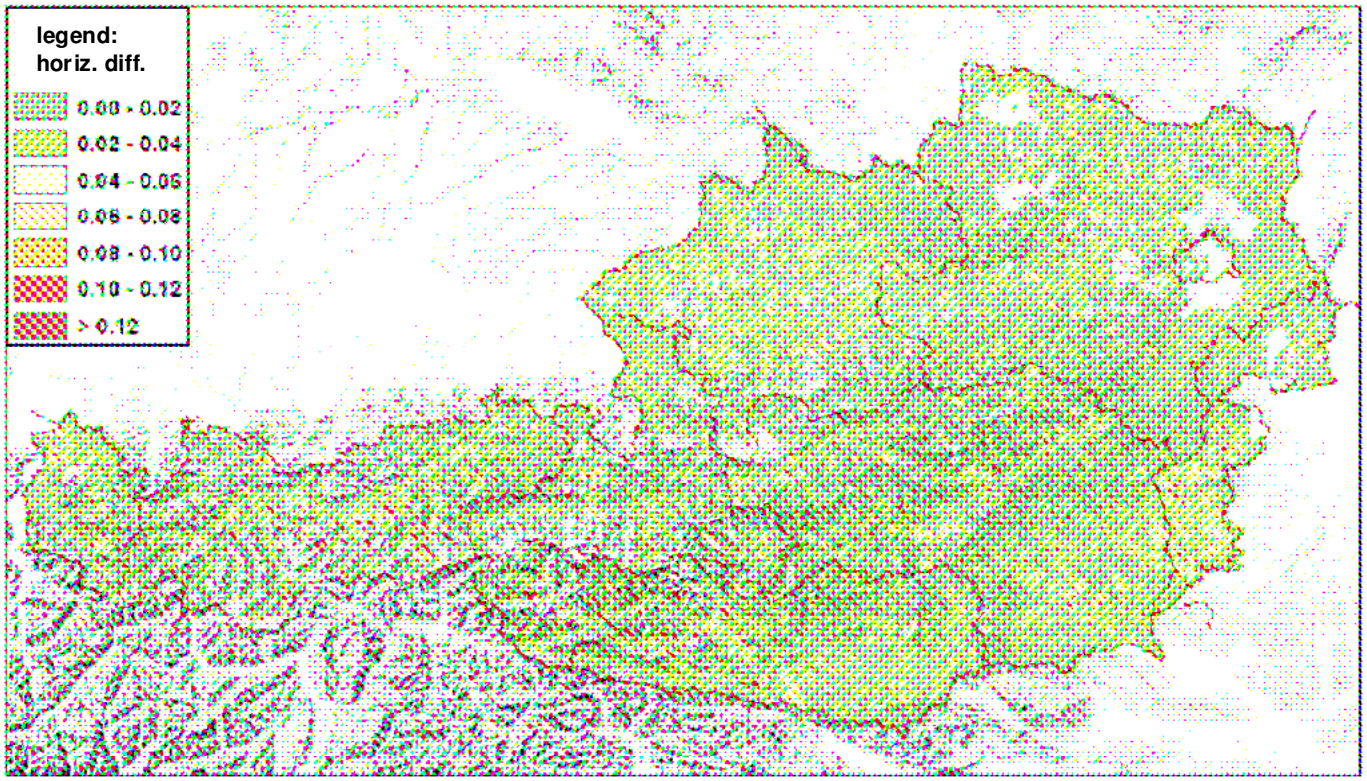
Change of IT hardware:
2 redundant computing centers

Permanent rover monitoring station

GIS Grid (NTv2):

From ETRS89 ➔national MGI
1σ: ± 4cm
Via NTRIP/RTCM 3.1

Transformation ETRS89 – national MGI (1)



Repeatability of the coordinates of initial points for the NTv2 GIS-grid

Homogenization of control points:

Measurement of 28.000 points by GPS (static)

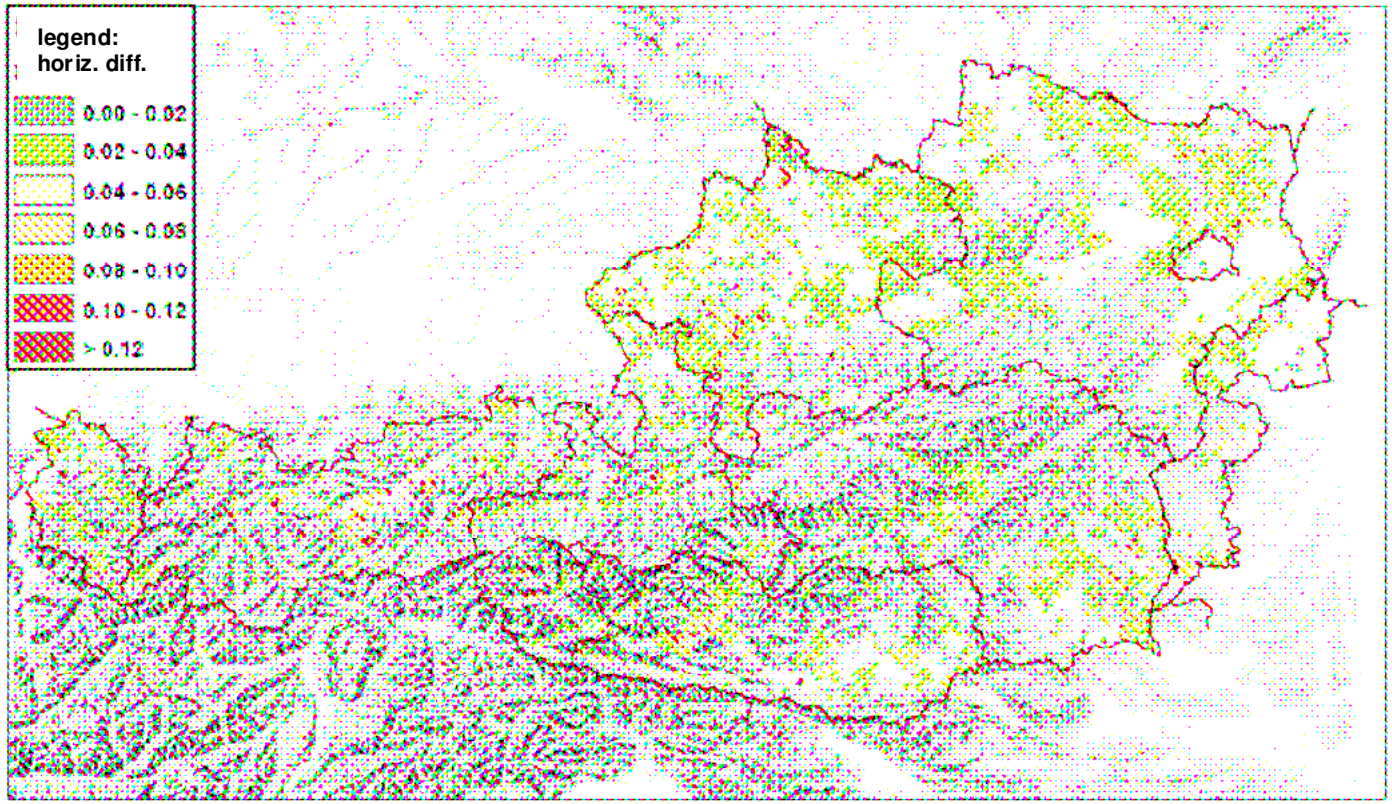
Computation in national ETRS89 frame EUREF Austria 2002

Horizontal differences ETRS89-national MGI modelled by NTv2: mesh ~ 1x1 km

Repeatability:

Horizontal: 2 cm
Vertical: 2 cm

Transformation ETRS89 – national MGI (2)



Verificaton of the NTv2 GIS-grid

Homogenization of control points:

Measurement of 18.000 points (control points 6th order) by RTK/APOS

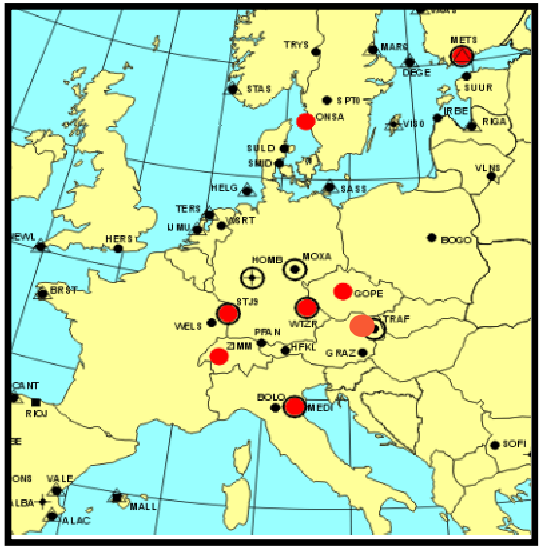
Comparision of measured and and interpolated values

Mean differences (absolute):
Horizontal: 4 ± 3 cm
Vertical: 4 ± 4 cm

Objective:
Use of additional points to get better accuracy: KAT-Grid

KAT-Grid: base for the trans-formation of the cadastre

ECGN Stations in Austria



Progress 2009

Absolute Gravity Measurements:
Graz, Pfänder Trafelberg

Paris/BMPI: Participation of BEV in the Absolute
Gravity Comparison Campaign (ICAG)

ECGN – 3 Stations in AUSTRIA

Graz/OLG
Pfänder
Trafelberg