



Kartverket

NATIONAL REPORT FROM NORWAY

EUREF 2019



Fundamental station

Ny Ålesund in Spitsbergen



Ny-Ålesund. Photo: Roger Hougen

- Multi technique station: VLBI, SLR, DORIS and GNSS
- Officially opened on June 6th 2018
- Some technical issues left to be solved, planned operational late 2019
- NMA is an associated IVS analysis center, processing VLBI-data with Where
- So far, the correlation centers are not able to process data from VGOS antennas
- NMA try to establish a consortium to solve the correlation and processing issues

CPOS positioning service

- More than 200 stations
- 50 new stations will be established in cooperation with the National Railway Administration
- More than 5000 users, numbers are increasing
- Other positioning services like TopNet Live are based on the NMA station network



Re-computation of control points in Euref89

- The national control point network in Euref89 was established before the CORS network
- Extensive GNSS campaigns have been conducted since 2009
- All control points were re-computed based on the CORS-network in 2018
 - Coordinate differences 0 – 3 cm
- Control points are now fully aligned with the positioning service CPOS

Coordinate transformations

- New solution based on PROJ is prepared
- ITRFxx, Euref89, NGO1948, ED50
- Components for NGO1948 and ED50 will be developed and included in PROJ

Future reference frame strategy

- Investigations in progress:
 - Global reference frames and national GIS data sets
 - Reference frame requirements connected to GNSS services and technology
 - Future height accuracy requirements
- How to approach the ITS industry

Some other activities

- Independent monitoring and assessment of the performance of EGNOS (SPMS) and Galileo (GRC-MS)
- Testing methods for connecting InSAR data to the reference frame
- Combined seismic and GNSS stations are being established in the EPOS Norway project

Thank you for your attention!



Photo: Eivind Leren