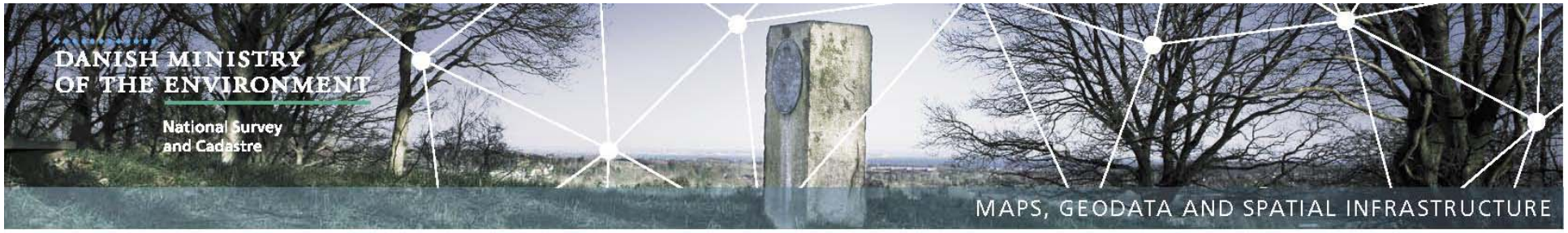

National Report of Denmark

EUREF Symposion 2009, Florence

27th - 30th May, 2009

By

Casper Jepsen

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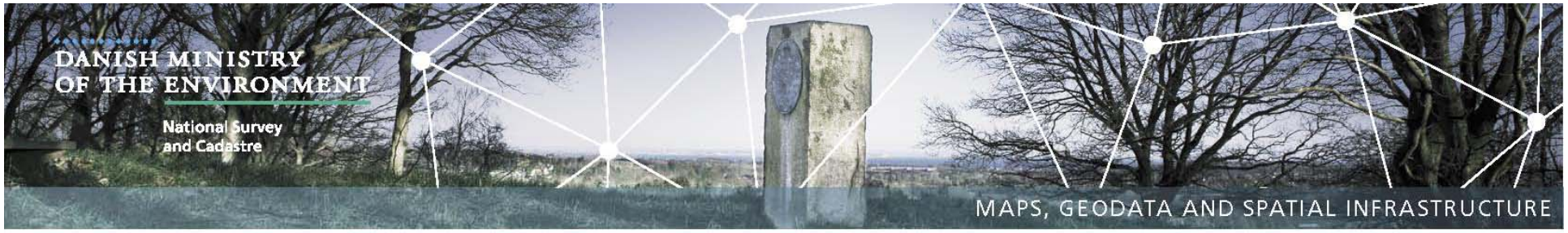


Outline

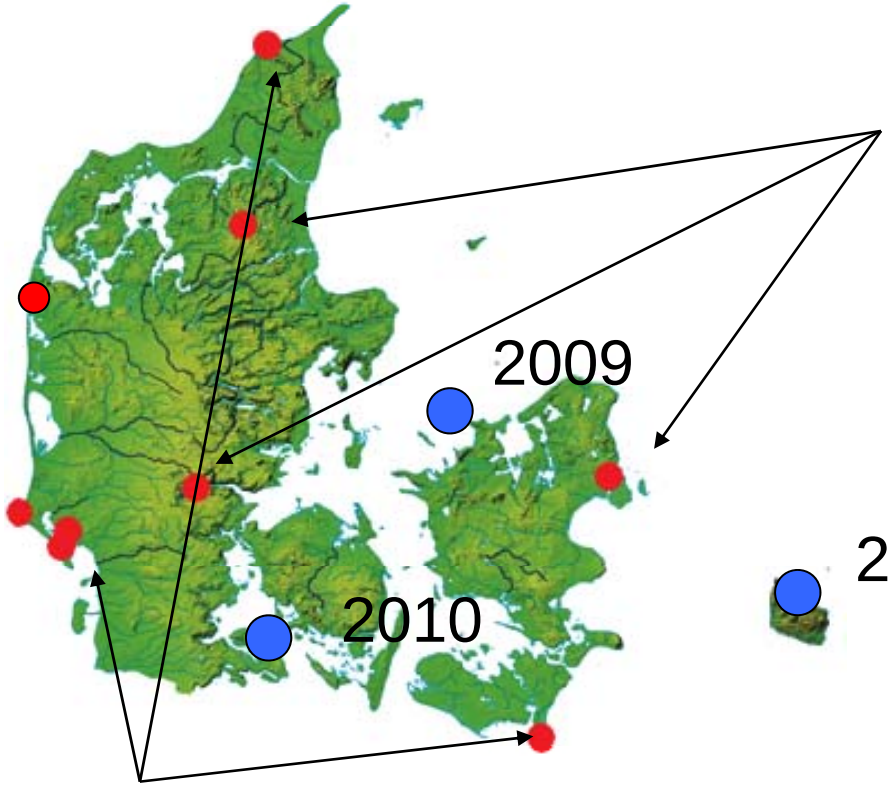
- Maintaining the ETRS89 in Denmark.
- Plans for 3 new permanent GNSS station.
- Shift to Absolute antenna/radome.
- ETRS89 on Faroe Islands.
- DKTM - New map projection.
- Norm for RTK-services.

Maintaining the ETRS89 in Denmark

- ETRS89 is defined in Denmark by 6 Benchmarks surveyed in 1994.
- The 6 defined point are densified into 94 Benchmarks

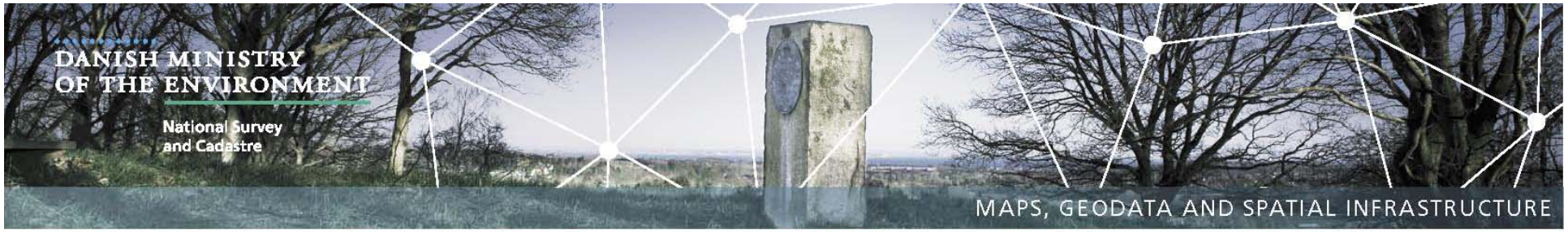
- GPS survey campaign (control) is carried out every 4 year. (in corporation with NKG)

Plans for 3 new permanent GNSS station



EPN stations (since 2003)

ESEAS stations



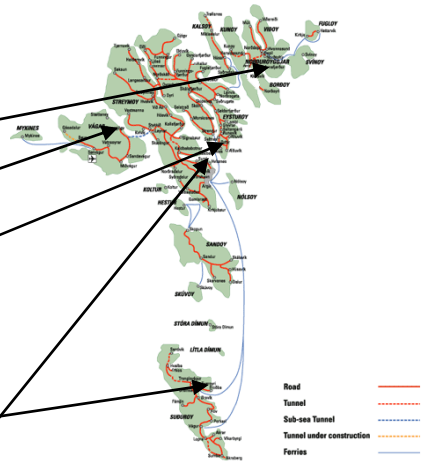
Shift to Absolute antenna/radome calibrations

- The 3 Danish EPN stations Antennas do not have Absolute values.
- We have plans for a shift of antenna on the Stations in 2010. (maybe not on the EPN stations)
- Plans for making the 10 permanent stations as the defining ETRS89 points.
- The Permanent Stations are “maintained” by terrestrial survey and GPS campaigns every 2 year.

ETRS89 on Faroe Islands

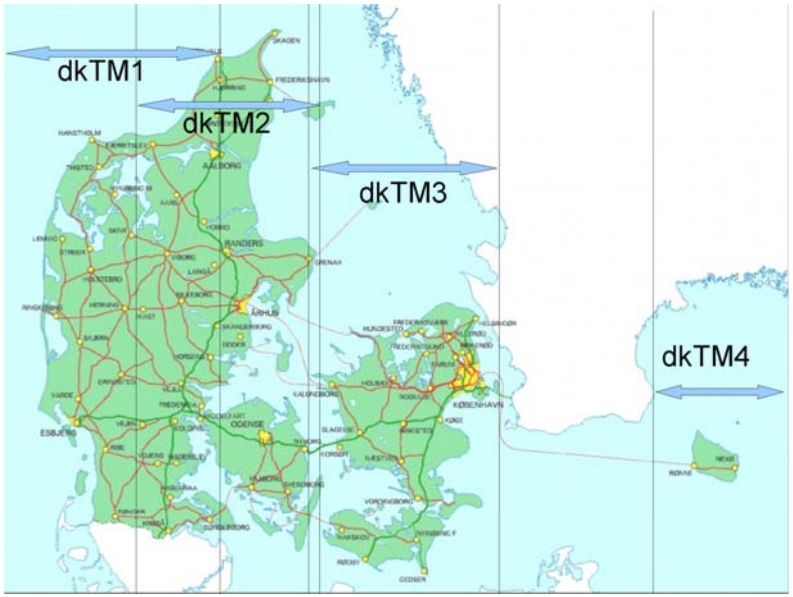
- A GPS campaigned was carried out in 2008
- 4 Benchmarks was observed for 7 days
- 1 Permanent station was established in corporation with the NLS on Faroe Islands (Umhvørvisstovan).

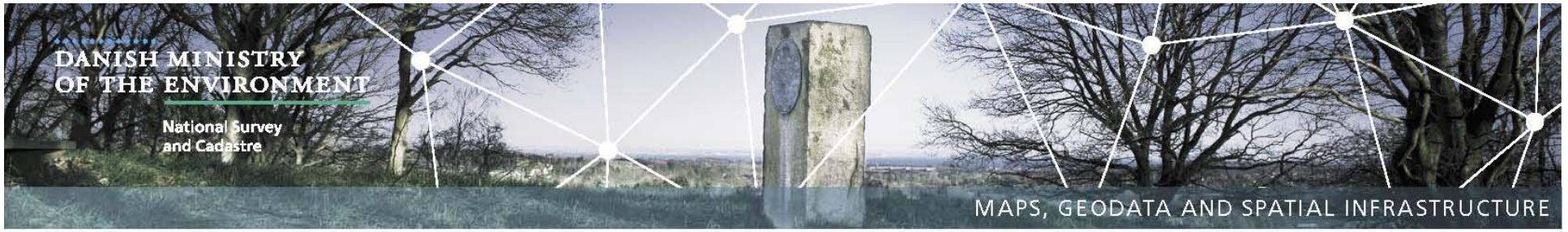
- Klaksvig
- Sørvagur
- Tinganes
- Suduroy
- Permanent GNSS



DKTM - New map projection

- For the construction business
- 4 zones with TM projections
- Maximal distance correction 20 ppm





Norm for RTK-services

- In 2008 KMS introduced a Norm for RTK-services
- Why ?
  - To ensure quality of performance for *public* survey activities
  - Because the quality of surveying is of vital importance for the society (infrastructure, mapping, construction works etc.)
  - In DK, two competing compagnies are providing nationwide network RTK services.