

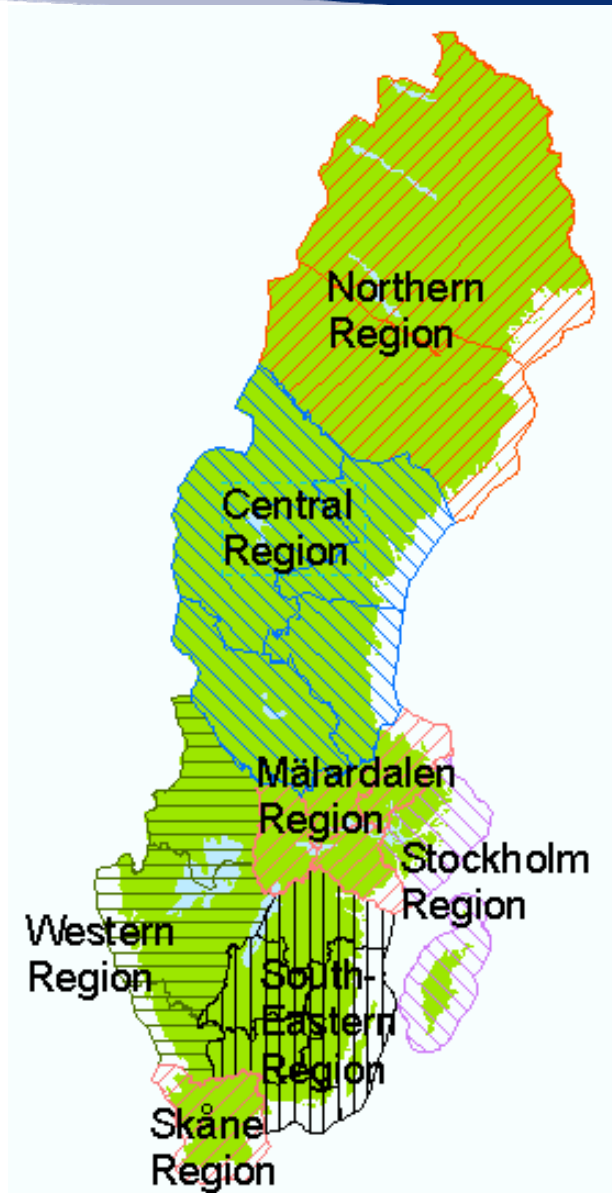
Project Adapted Network-RTK for road construction projects

Swedish Road Administration
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Agenda

- Introduction
- Project Adapted Network-RTK
- The pilot project for Project Adapted Network-RTK
"BanaVäg I Väst"
- Information-VIDEO
- Sum up
- Future of PA-NRTK

SRAs seven regions



Tasks - regional offices

- The regions attend to daily client contact with regard to community development, planning, investigations, sectoral and public authority issues, and running operations and maintenance.
- The regional offices are in charge of the bulk of business projects carried out in the respective regions.
 - ✓ Eg. road construction projects

Project-adapted Network-RTK (?)

- A “project densification” of the SWEPOS network of reference stations for GNSS
 - Distance between reference stations about 10km
- “Services”
 - Project adapted services for network-RTK real-time positioning
 - Projekt adapted post processing service for static GNSS-surveys
 - Support services; SMS-alarm, webb-monitoring,..
- Surveillance by the SWEPOS national command centre
 - Continuous quality control
 - Monitoring of data distribution
 - Technical support

**PA-NRTK
implementation
area**



Project Marieholmsförbindelsen



Marieholmsförbindelsen



A new tunnel connection under the river "Göta älv" and development of the main state roads in central Gothenburg.

Project "BanaVäg I Väst"

E45

Göteborg - Trollhättan



The pilot project for Project-adapted Network "BanaVäg I Väst"

- A joint project between the Swedish Road Administration and the Swedish Rail Administration.
- Dual-carriageway road and double track railway.
- PA-NRTK has so far been used for the project stages between "Agnesberg-Älvängen".

Current configuration of reference stations in use

Established reference stations

- ★ Tjurholmen
- ★ Mareberget
- ★ Silon i Surte
- ★ GP-huset
- ★ Bagaregården



Final configuration of reference stations

Reference station set up in progress

- ★ Krusetorp
- ★ Torsåsen
- ★ Göta
- ★ Lödöse

Established reference stations

- ★ Tjurholmen
- ★ Mareberget
- ★ Silon i Surte
- ★ GP-huset
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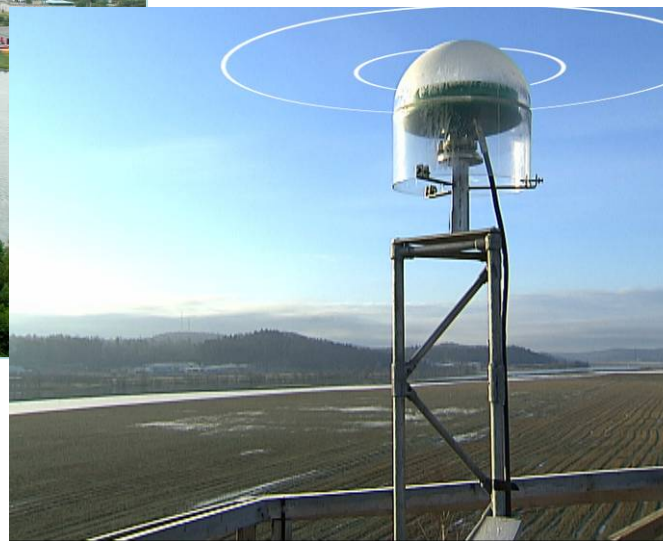


Project adapted Network-RTK

Why?



- Geotechnical conditions
- Control of the geodetic grid
- A geodetic infrastructure that is used in all phases



Information-VIDEO

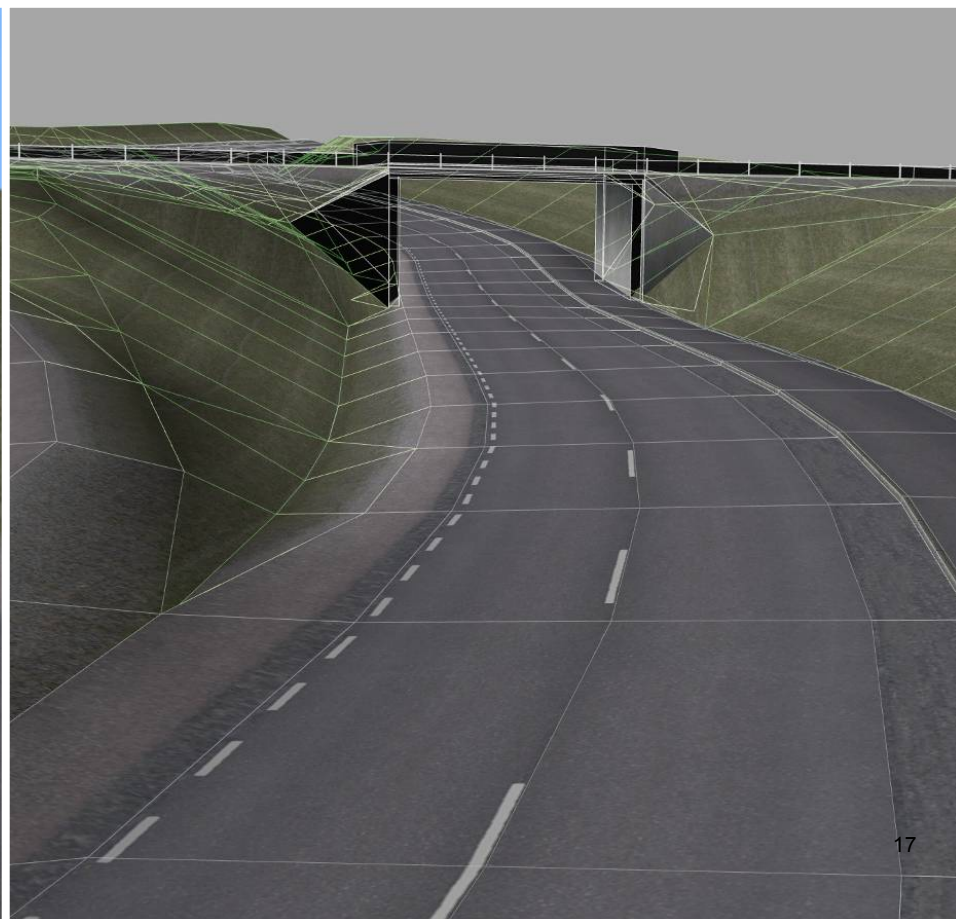
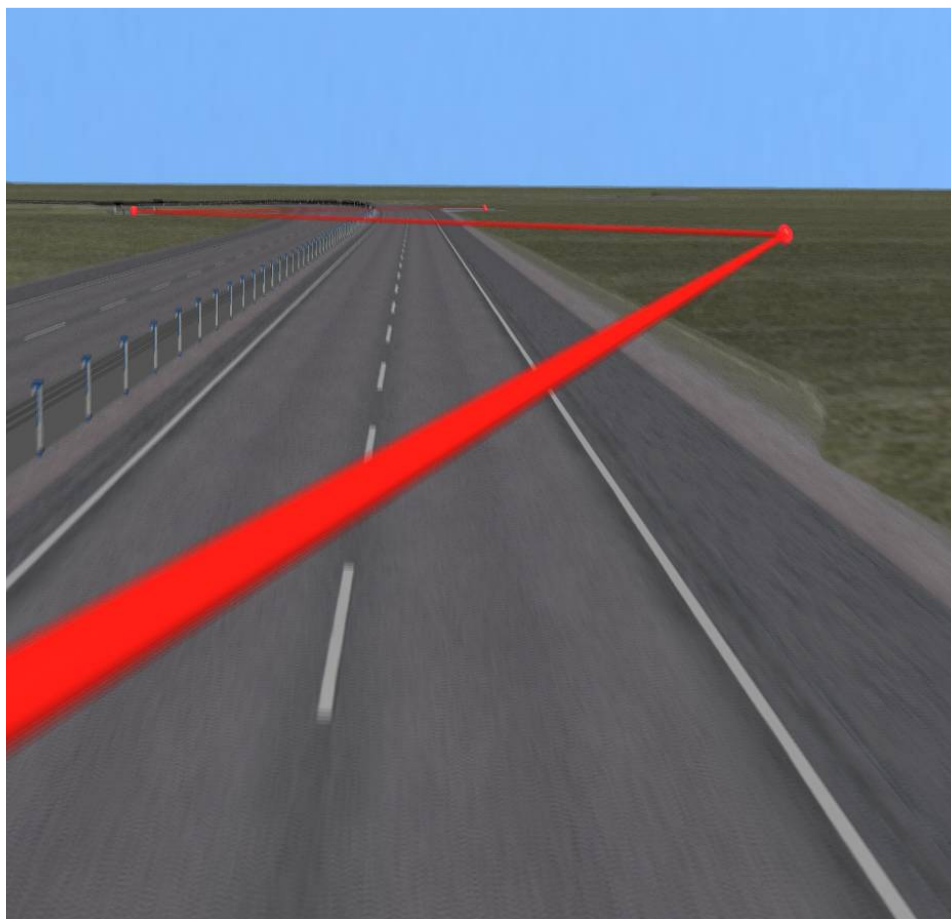
Sum up

- All actors are using the the same survey grid
- PA-NRTK offers the contractors an excellent infrastructure suited for steering construction equipment .
- The system is able to be in operation 24-hours a day
- Grid points are unaffected of ground movement in the building area
- Conditions for model-based construction has improved.

Sum up

- Project conditions also has improved in terms of
 - cost
 - time savings
 - control and follow-up

Future of PA-NRTK (SRA)



Future of PA-NRTK

- PA-NRTK a future "standard" for major construction projects within SRA
- Possible future projects with PA-NRTK
 - Project "Marieforsförbindelsen"
 - Project "Förbifart Stockholm"
 - Kiruna

Future development possibilities

- GNSS-systems
 - GPS
 - GLONASS
 - Galileo
- Methodology
 - Combination of satellite positioning with traditional terrestrial surveying techniques

Thank You for Your attention!

Questions ?

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