

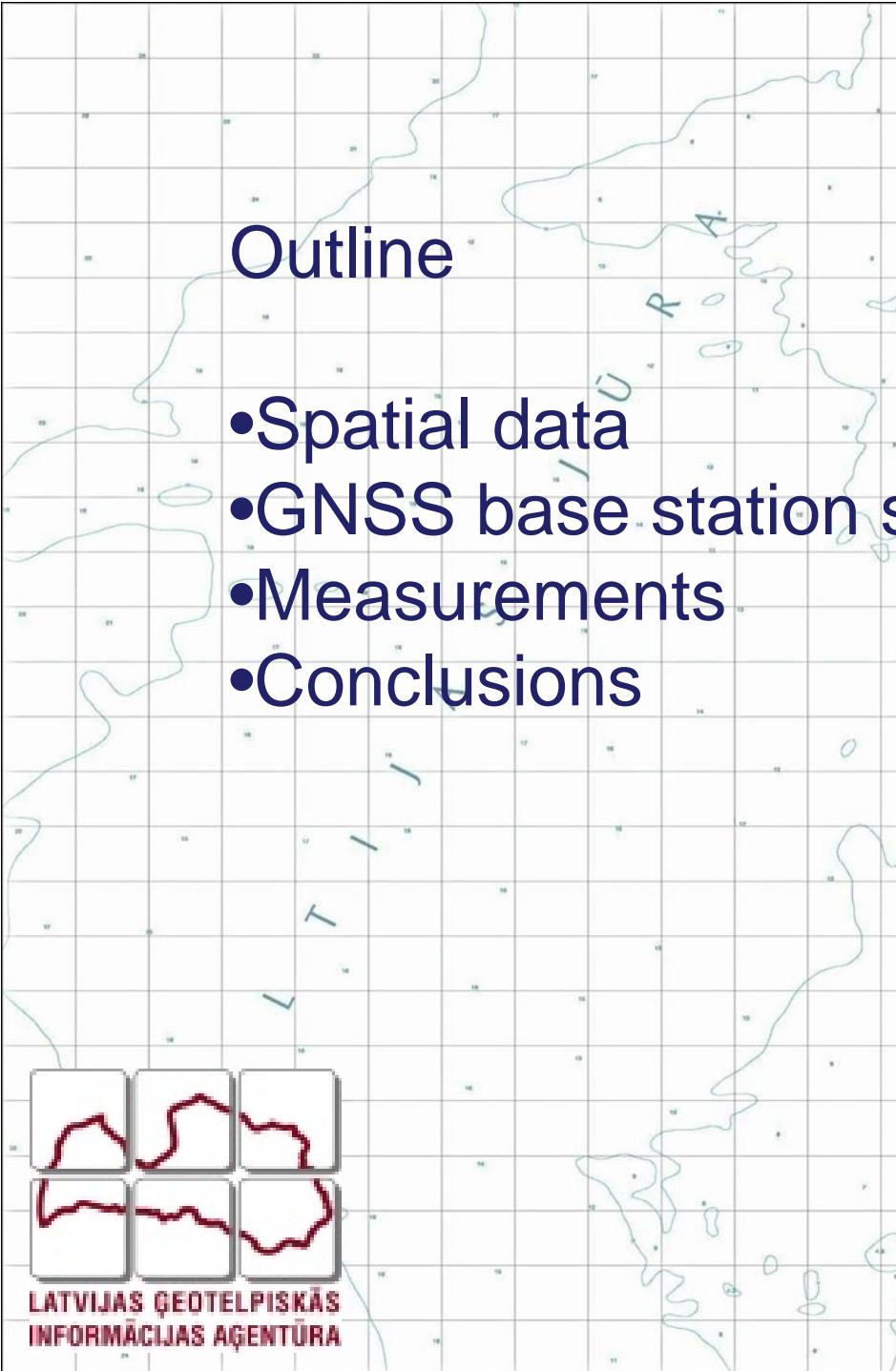
Spatial data quality improvement with GNSS base station system LatPos



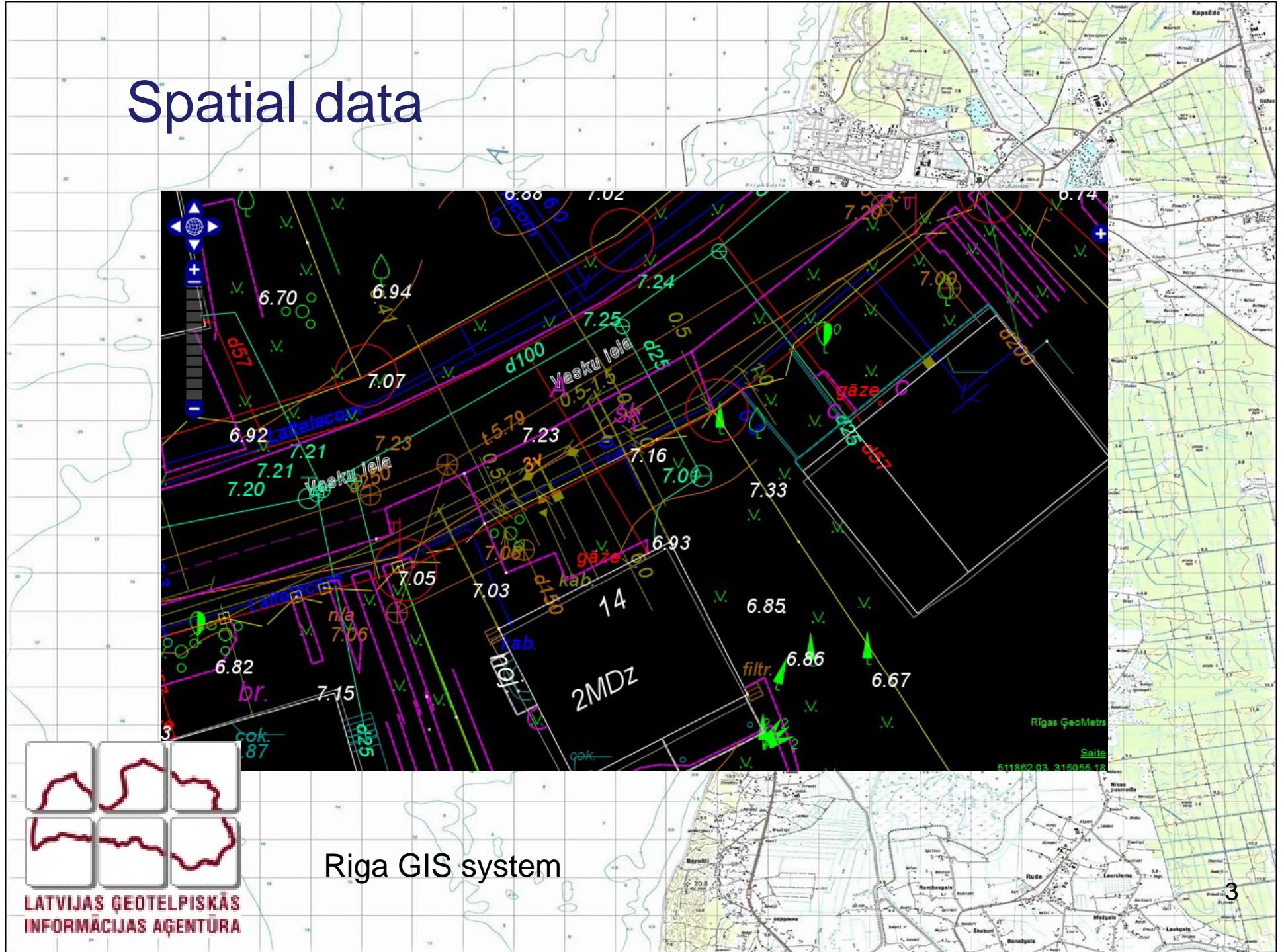
Janis Zvirgzds
Latvia Geospatial information agency
GPS network laboratory

Outline

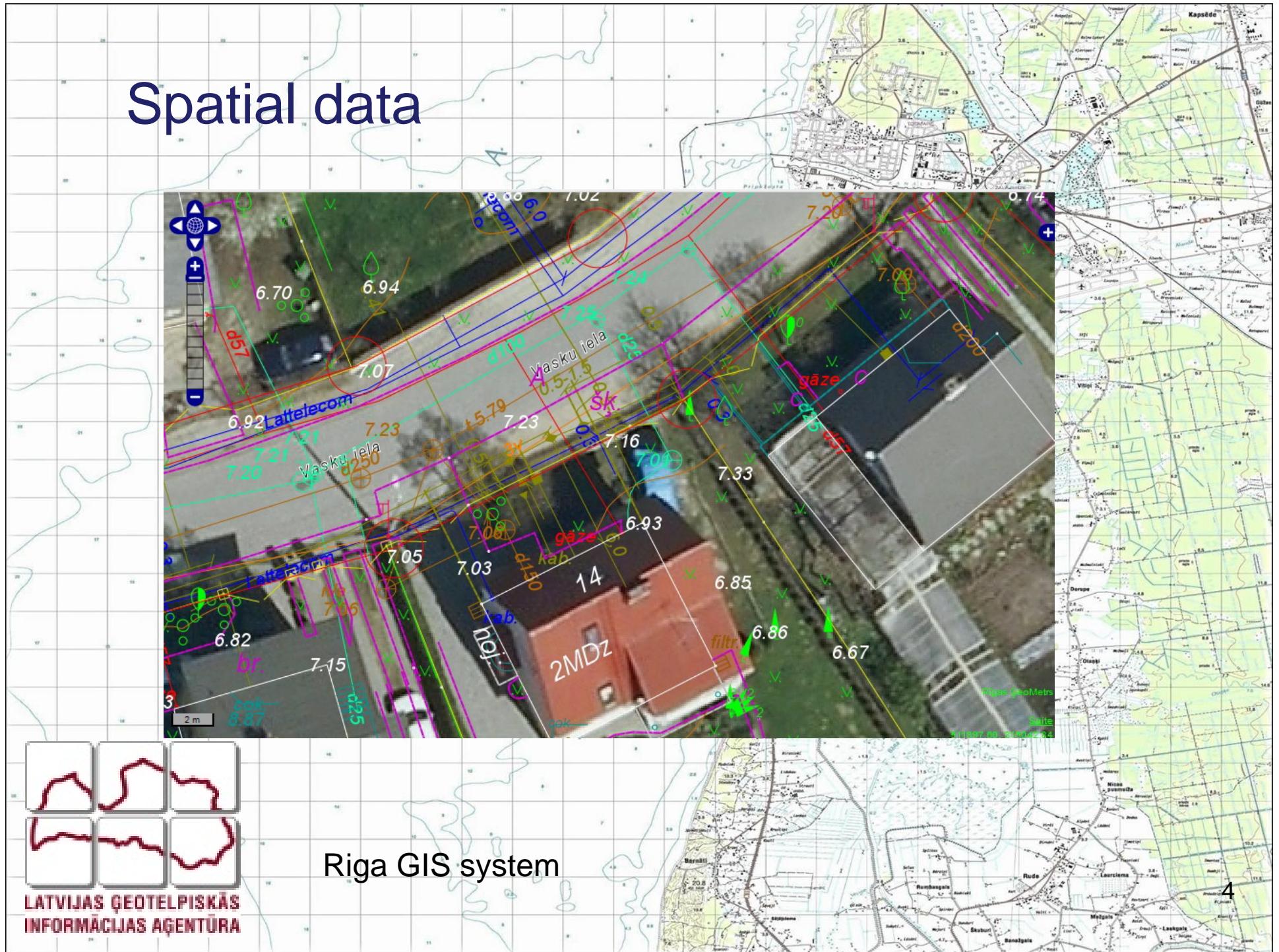
- Spatial data
- GNSS base station system LatPos
- Measurements
- Conclusions



Spatial data

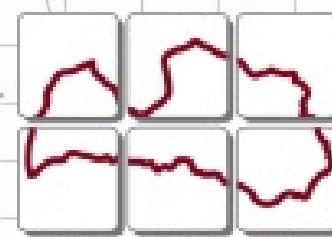


Spatial data

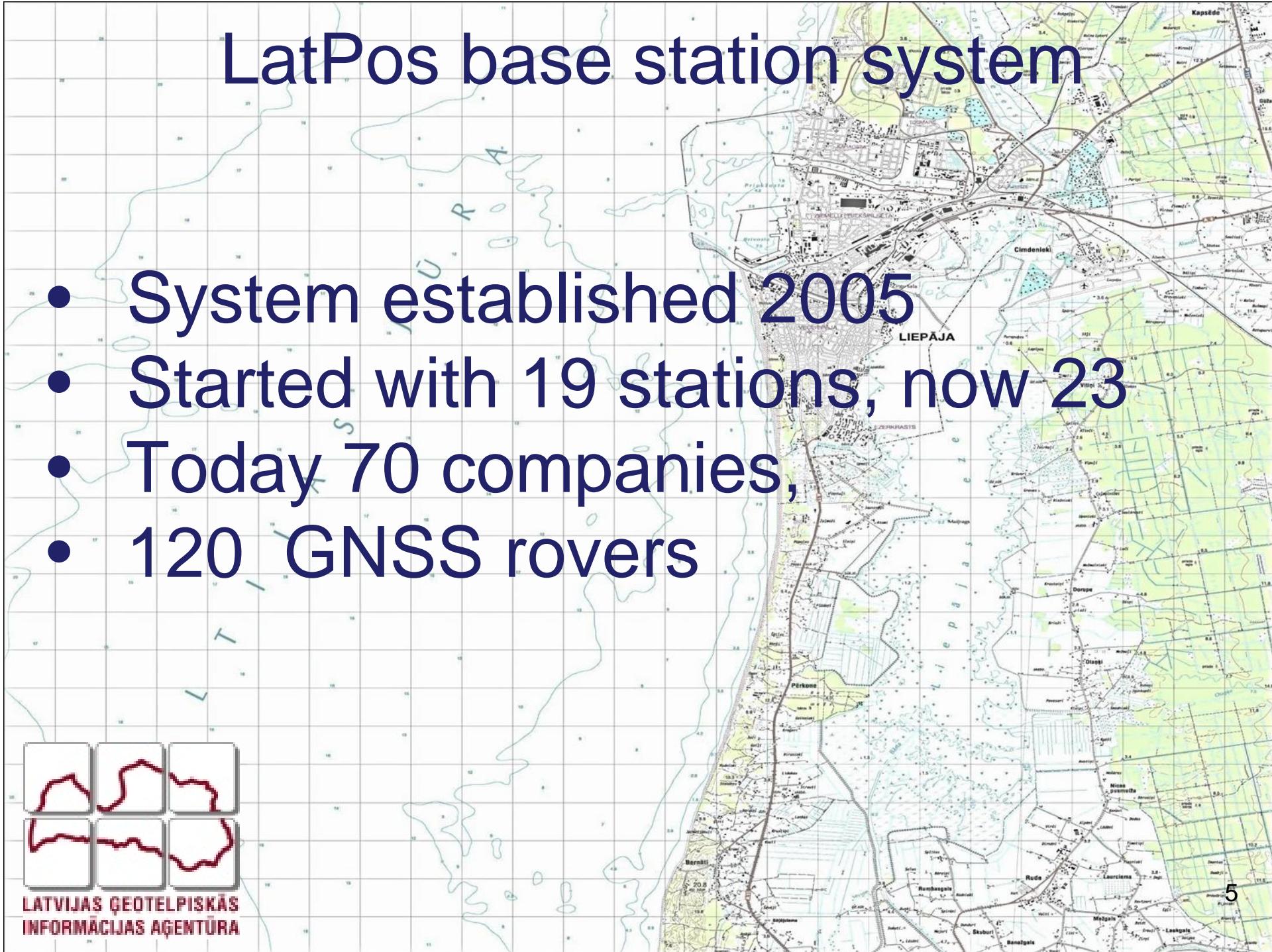


LatPos base station system

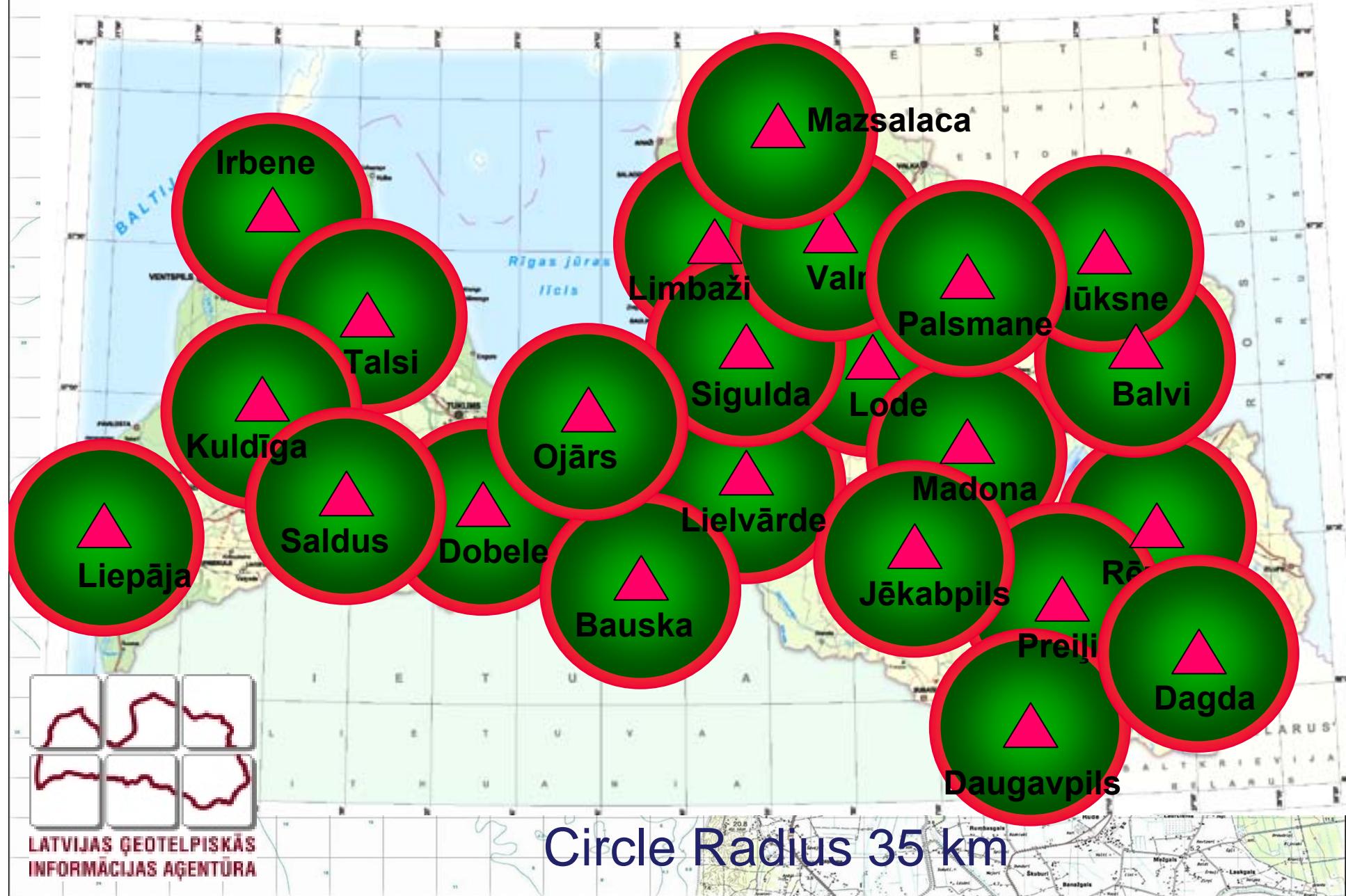
- System established 2005
- Started with 19 stations, now 23
- Today 70 companies,
- 120 GNSS rovers



LATVIJAS ĶEOTELPISKĀS
INFORMĀCIJAS AGENTŪRA



LatPos base station system

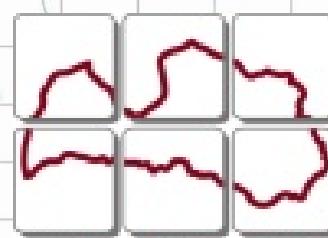


Measurement aim

- Preciseness
- Repeatability

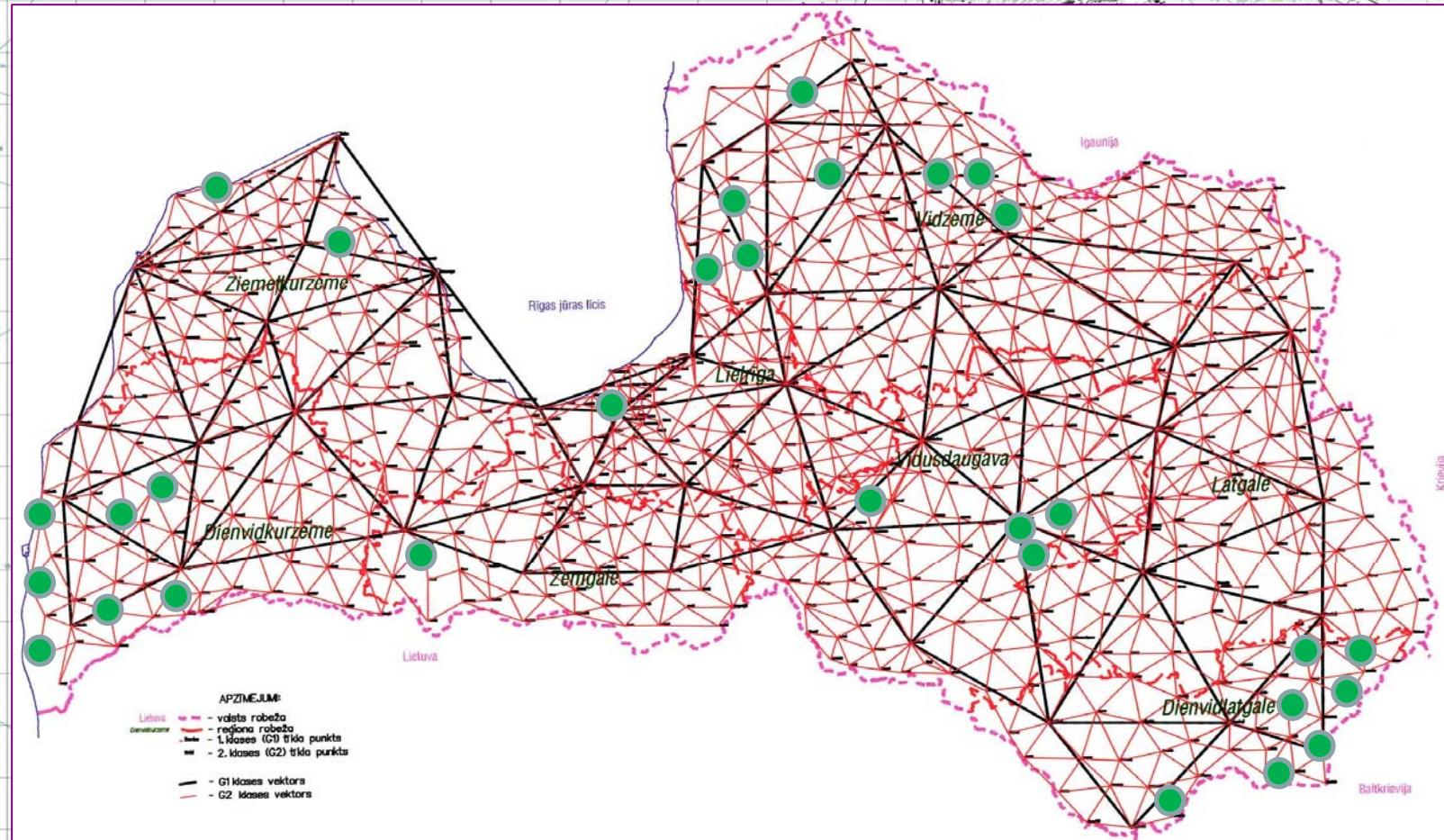
GNSS RTK receiver:

- On G2 benchmarks
- Fixed on tripod
- Single site corrections
- Network solution



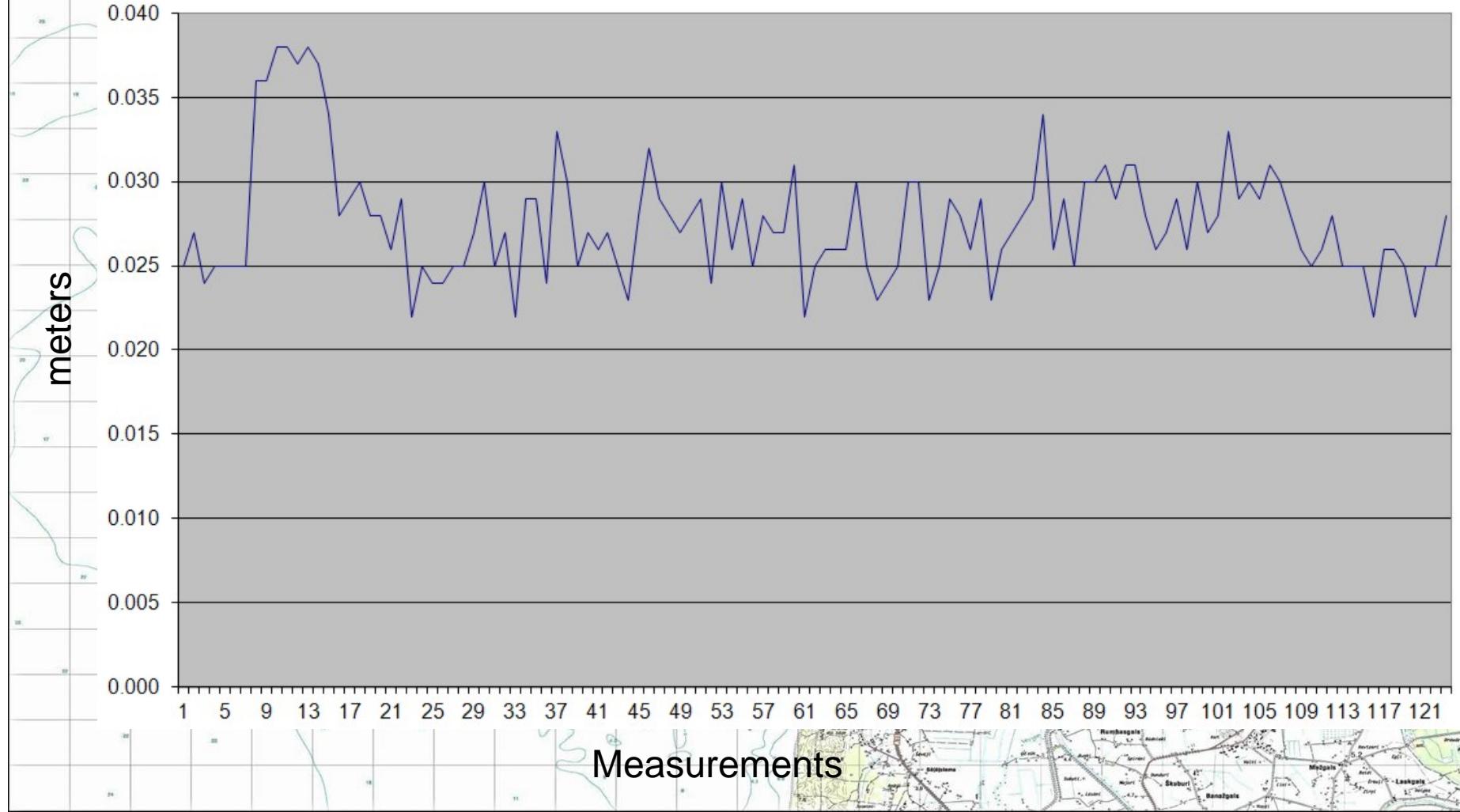
LATVIJAS GEOTELPISKĀS
INFORMĀCIJAS AGENTŪRA

Measurements on G2 benchmarks



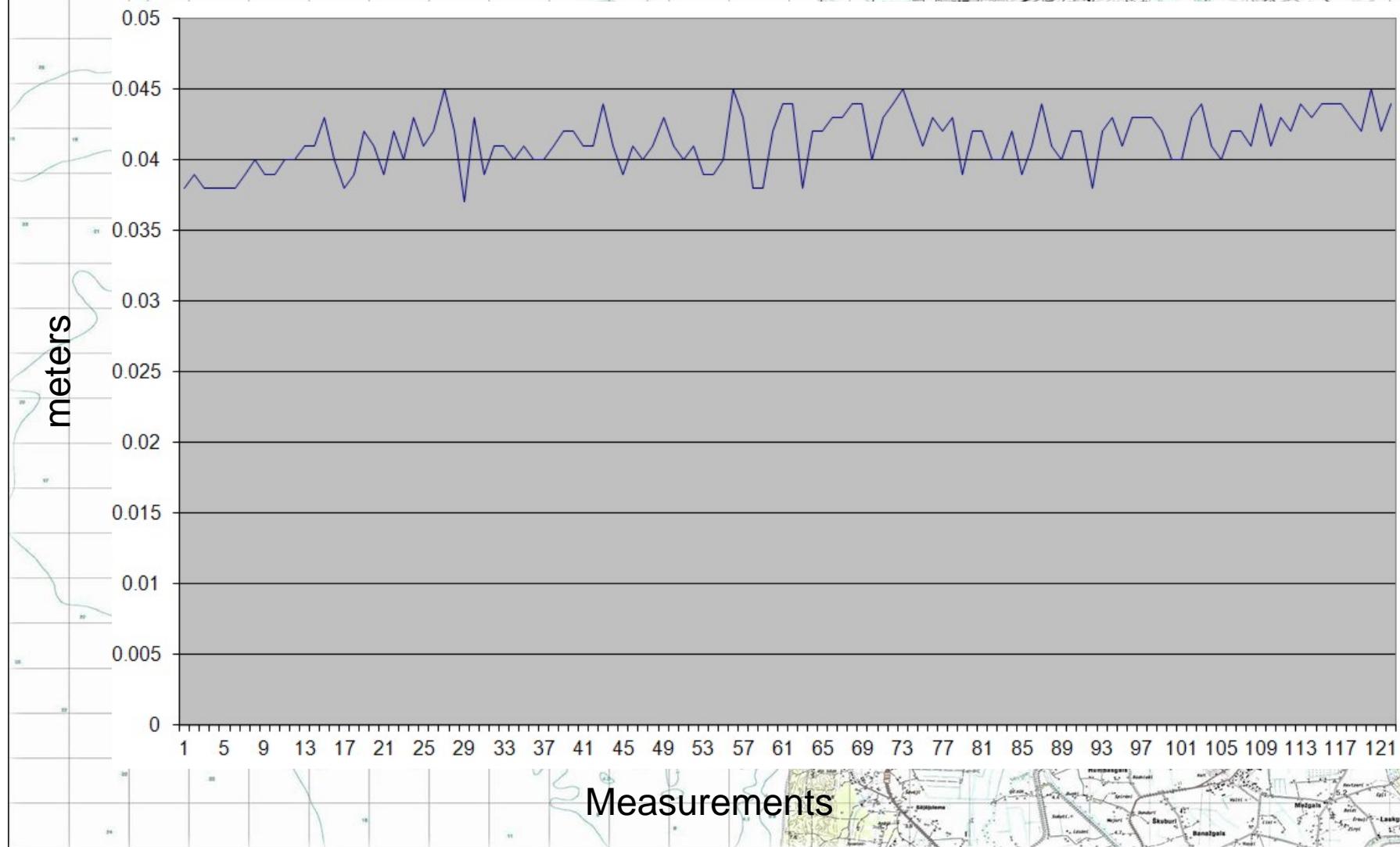
RTK measurements

- Single site corrections

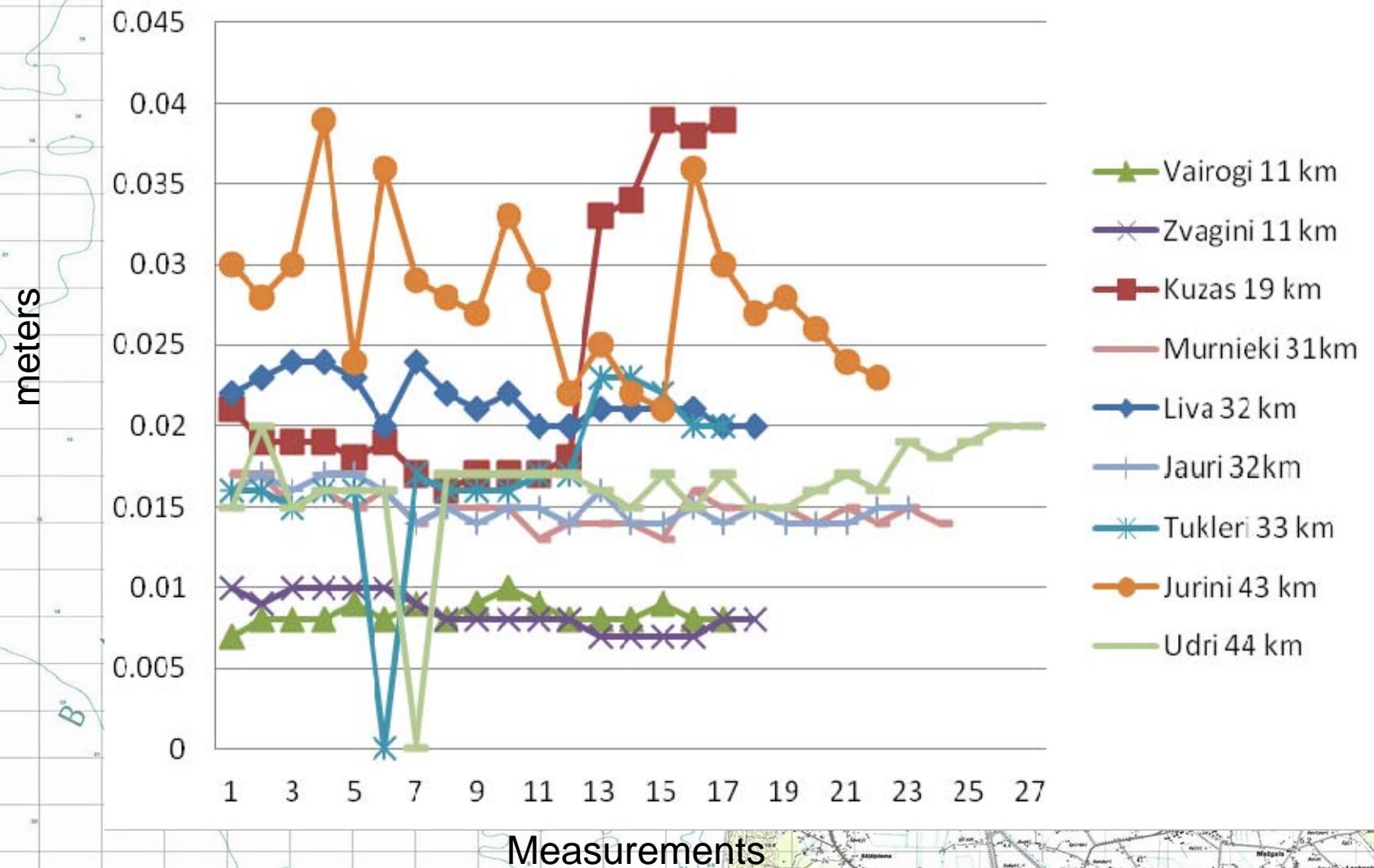


RTK measurements

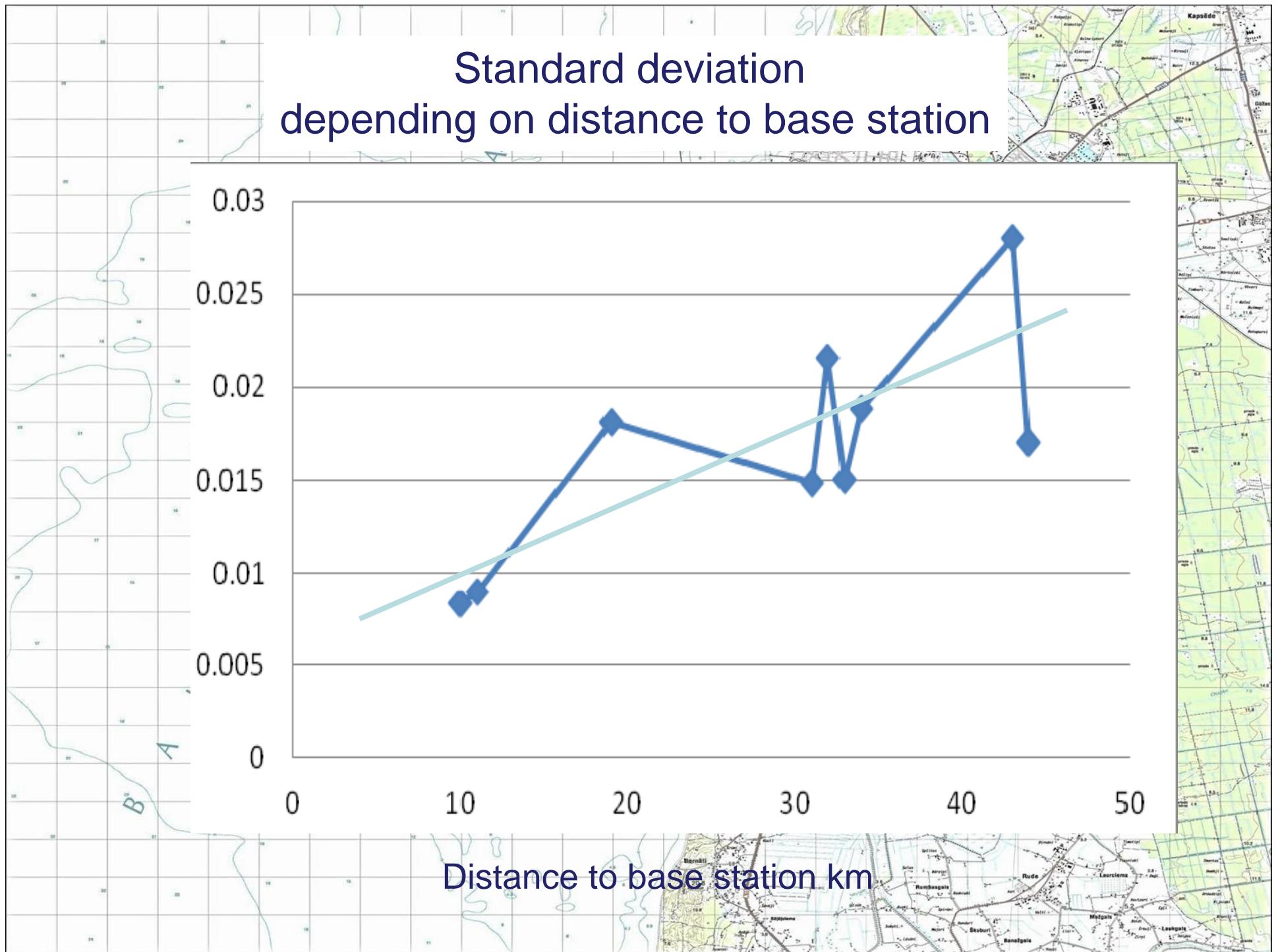
- Network corrections



Standard deviation depending on distance to base station

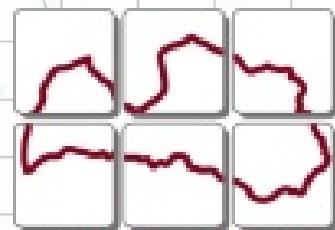


Standard deviation depending on distance to base station

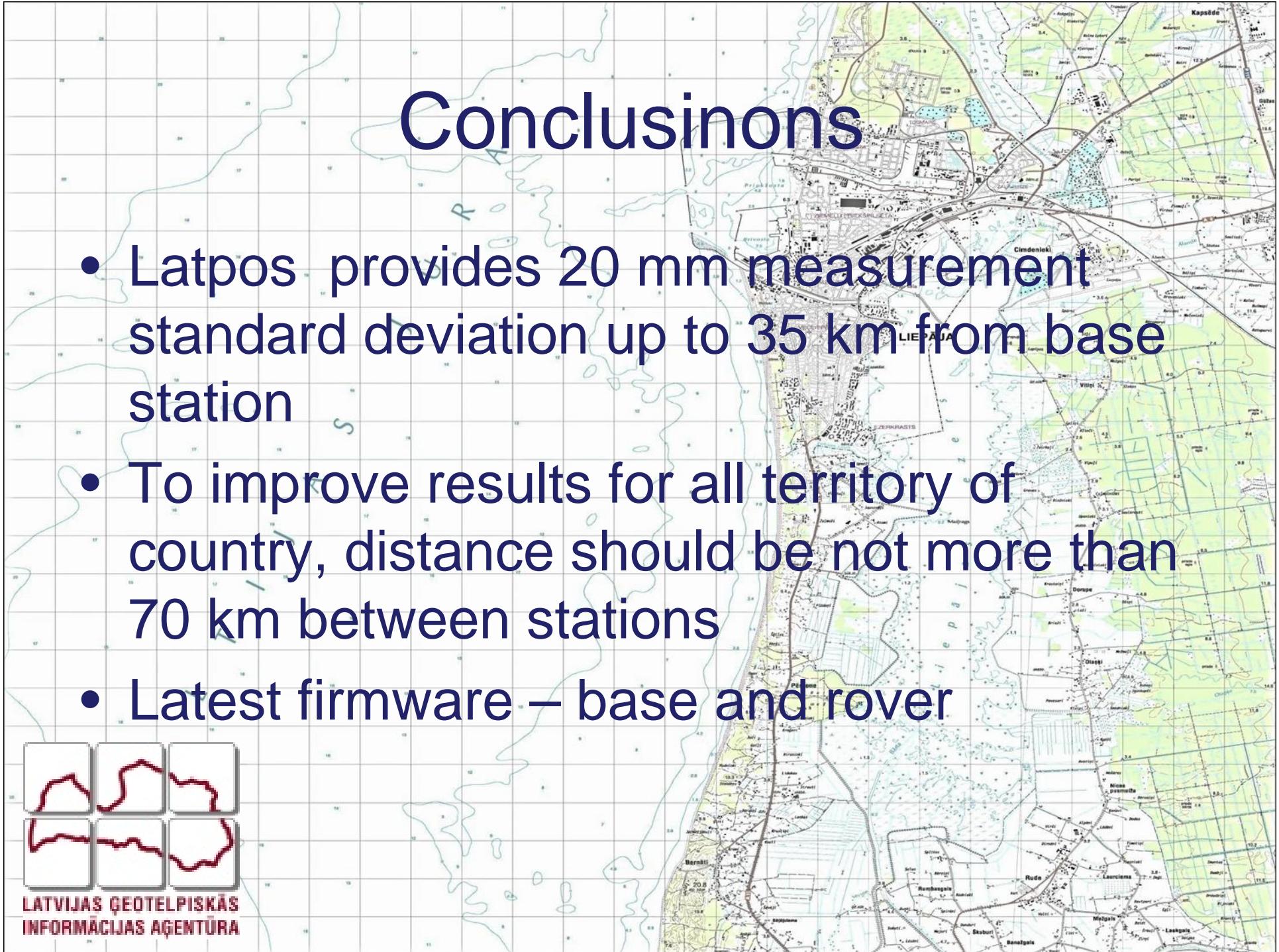


Conclusions

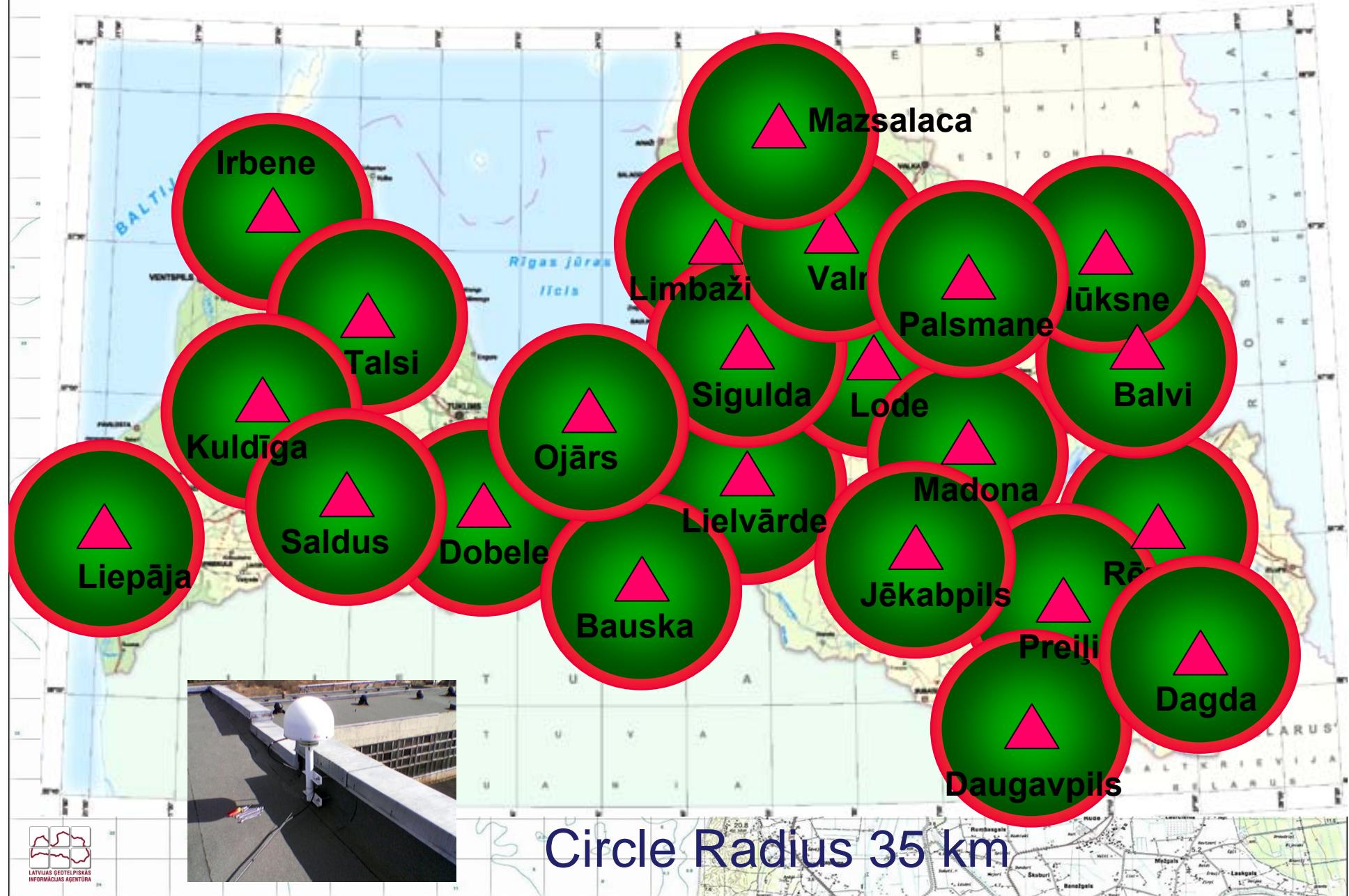
- Latpos provides 20 mm measurement standard deviation up to 35 km from base station
- To improve results for all territory of country, distance should be not more than 70 km between stations
- Latest firmware – base and rover



LATVIJAS GEOTELPISKĀS
INFORMĀCIJAS AGENTŪRA



LatPos base station system



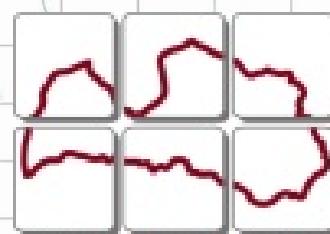
Thank You for Your attention!

Questions?

Janis Zvīrgzds

janis.zvirogzs@lgia.gov.lv

www.latpos.lgia.gov.lv



LATVIJAS ĶEOTELPIŠKĀS
INFORMĀCIJAS AGENTŪRA

