Spatial data quality improvement with GNSS base station system LatPos

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Outline

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

Riga GIS system
Spatial data

Riga GIS system
LatPos base station system

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

Circle Radius 35 km
Measurement aim

- Preciseness
- Repeatability

GNSS RTK receiver:
- On G2 benchmarks
- Fixed on tripod
- Single site corrections
- Network solution
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

Distance to base station km

0 10 20 30 40 50

0 0.005 0.01 0.015 0.02 0.025 0.03
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
LatPos base station system

Circle Radius 35 km
Thank You for Your attention!

Questions?

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