NEWS FROM SLOVAKIA
2016

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3rd EUPOS® Council and Technical Meeting
November 14-15, 2016. Prague, Czech Republic
SKPOS infrastructure
Status in October 2016

- 34 Slovakian permanent stations (14 individual calibrated)
  - All stations with TRIMBLE receivers and antennas
  - All stations observe GPS+GLONASS signals
- 19 foreign permanent stations (APOS, gnssnet.hu, CZEPOS, ASG-EUPOS, ZAKPOS)
SKPOS infrastructure for geodynamics research

- 12 of 34 slovakian SKPOS permanent stations have monumentation suitable for geodynamic research purposes
  - 7 stations reinforced-concrete pillar monumentation
  - 5 stations deep drilled braced mark monumentation (5m deep)
SKPOS infrastructure
new stabilization

- Preparation for the relocation of two stations
  - reinforced-concrete pillar monumentation
SKPOS
control software & receivers firmware versions

- **Trimble® Pivot™ Platform GNSS Infrastructure Software**
  - Main software: version 3.8.3
  - Back-up software: version 3.8.3

- **Receivers firmware**
  - Trimble NetR9 receivers: version 5.14
  - Trimble NetR8 receivers: version 4.87
**SKPOS services portfolio**

Only network solution (Network RTK in VRS concept) is provided. No single RTK!

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SKPOS

number of users

- over 1260 registrations (Sept. 2016)
- number is still increasing
SKPOS

Type of users

- Surveying fields (cadastre, surveying, mapping, GIS) - 81%
- Other fields (precise agriculture, machine guarding) - 19%
SKPOS

simultaneous logins

- Maximum: 256 simultaneous logins (12/4/2016)
Alberding Checkstream application

- Independent NTRIP Caster monitoring tool
- Check the availability and consistency of mountpoints on specific caster
- Message type and update rate monitoring  **New**
New SKPOS web page

- 13.10.2015 – new (redesign) web page was launched
- Full of interesting information (SVK/ENG):
  - News
  - Infrastructure
  - Packages and prices
  - Quality Monitoring
  - Availability Monitoring
  - Registration
  - ...

http://skpos.gku.sk
New SKPOS registration and ordering system

- Complete new system for user registration and ordering subscriptions
- User management and automatization of numerous processes
- Fixing inconvenient Trimble registration module
- Registration via web form (no paper agreement)
New SKPOS registration and ordering system

User interface
New SKPOS registration and ordering system

Back office - automatic generation of statistics
New SKPOS registration and ordering system
Back office – orders management

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10 years of SKPOS

2006 - 2016
10 years of SKPOS
Conference for users

- Two days with the same topics
- More than 150 participants
10 years of SKPOS
Conference for users

- SKPOS promotional brochure
- Book 10 years of SKPOS
Guideline: Usage of Slovak real-time determination system for surveying

- Table of contents
  - Introduction
  - About SKPOS
  - Planning and practical recommendations for RTK/RTN measurements
  - Planning and practical recommendations for post-processing
  - Summary and Conclusions

- Mandatory for all measurements adopted into a cadastral documentation
- It will be launched later this year
Problem with GNSS instrument

- 5 different stations
- Different time of problem
- Different behavior

Potential issues
- Receiver
- Antenna
- Monumentation
Problem with GNSS instrument GANP station

- Additional receiver and antenna
- Made a various analysis:
  - Multipath on L2
  - Coordinates differences
  - ...

Daily RMS due to multipath on L2
Thank you for your attention

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