

III. KONGRES O KATASTRU U BIH

s međunarodnim sudjelovanjem



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fakultet ¹

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Testiranje BiHPOS VPSP i CROPOS VPPS servisa



Mostar, 2. – 4. prosinca 2015.



Sadržaj:

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2. Koncepti mrežnih RTK rješenja – VRS & MAC
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5. Ispitivanje performansi CROPOS-a (standardna i nestandardna konfiguracija mreže)
6. Zaključak



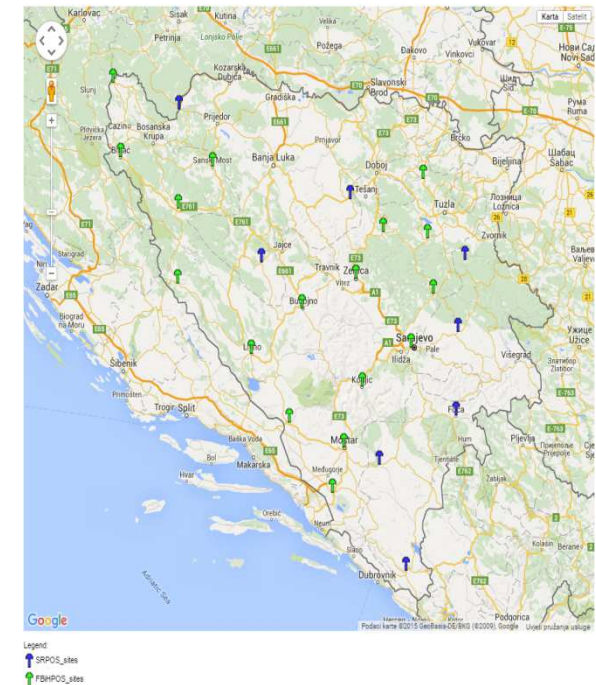
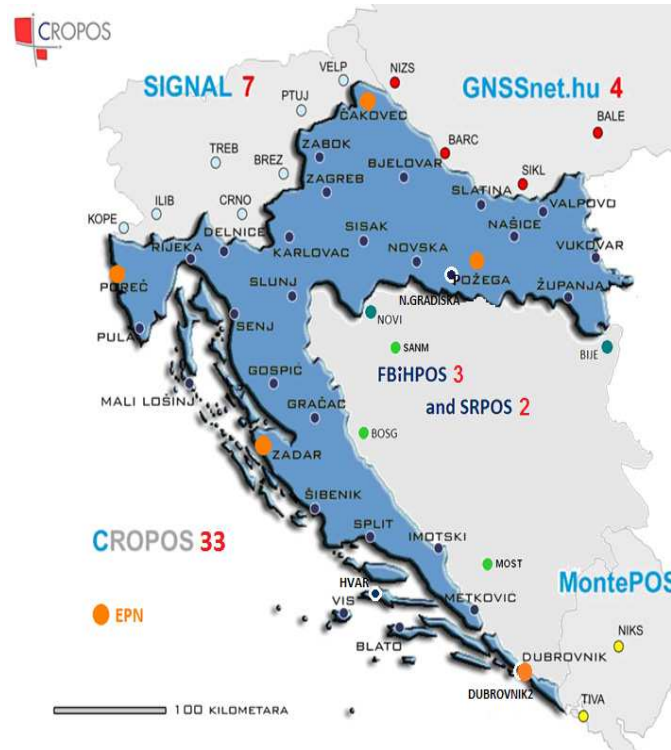
1. Uvod

- CROPOS

- 5.12.2008.
- ≈ 70 km
- DSP, VPPS, GPPS

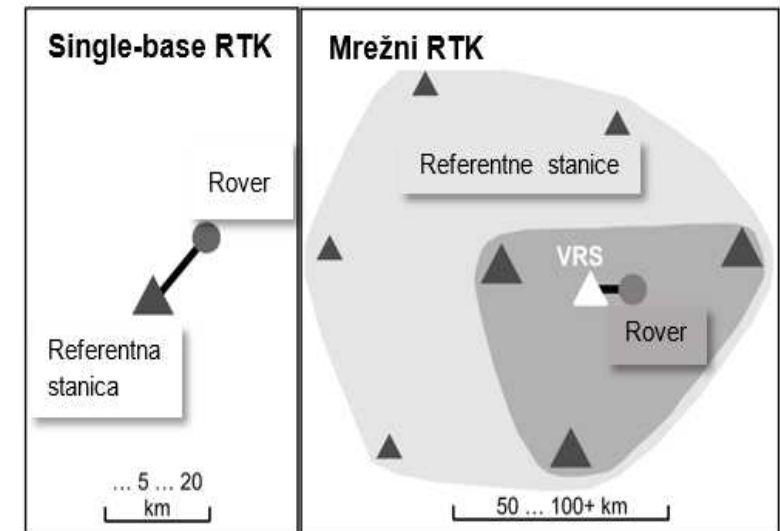
- BiHPOS

- 27.9.2011.
- FBiHPOS (17) & SRPOS (17)
- 35-50 km
- DSP (DGNSS), VPSP (PDGNSS), GPSP

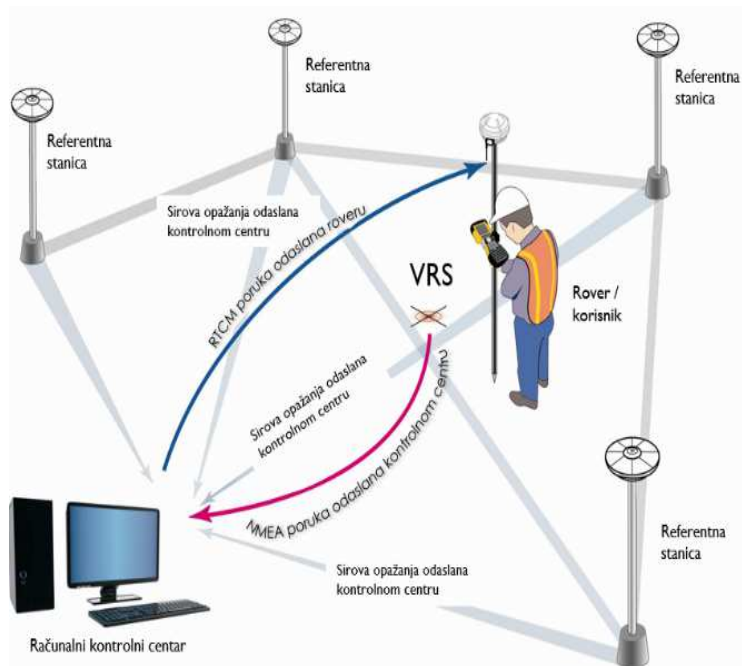


2. Koncepti mrežnih RTK rješenja

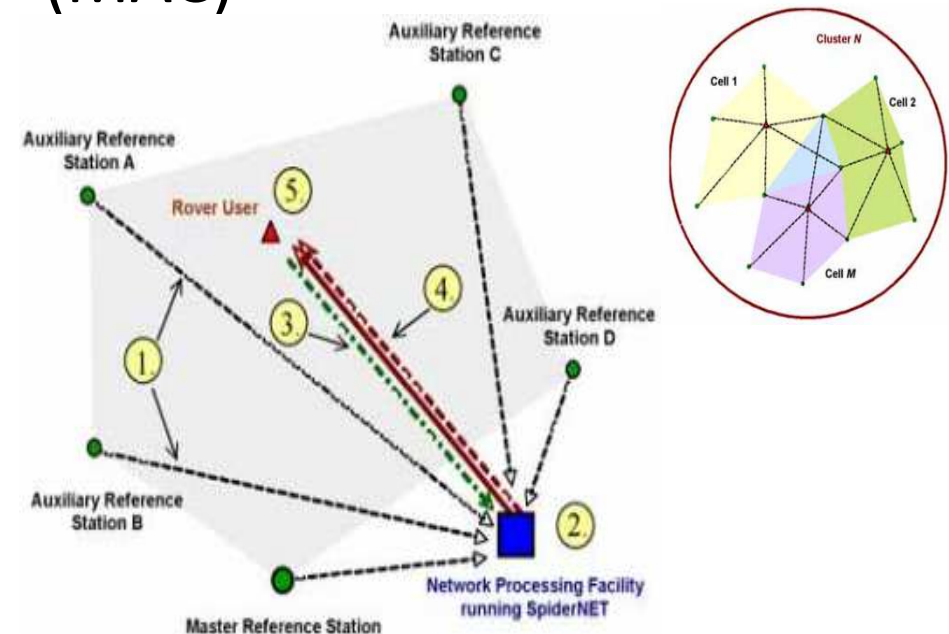
- Single-base VS. Networked RTK
- modeliranje o udaljenosti ovisnih pogrešaka



Virtual Reference Station (VRS)



Master Auxiliary Concept (MAC)



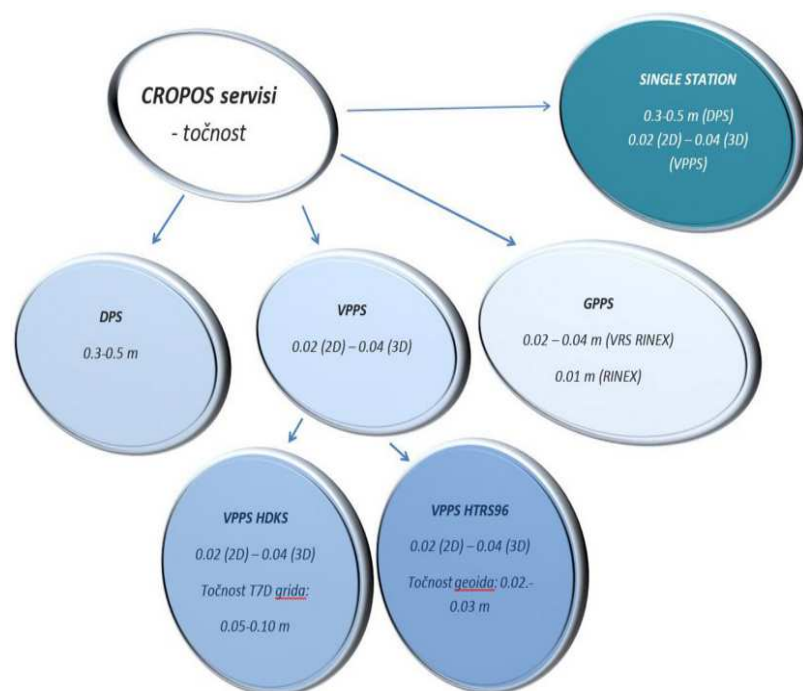
3. Servisi

CROPOS (VRS, Trimble)

- DSP
- VPPS (RTCM 2.3, RTCM 3.1)
- GPPS (RINEX)

SRPOS (MAC, Leica)

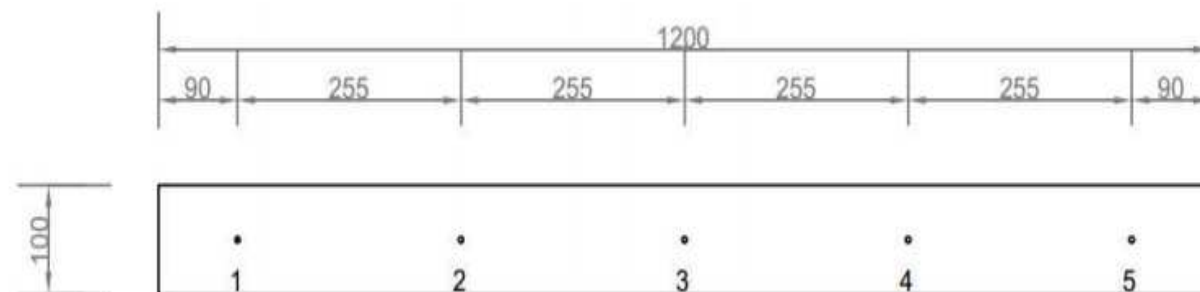
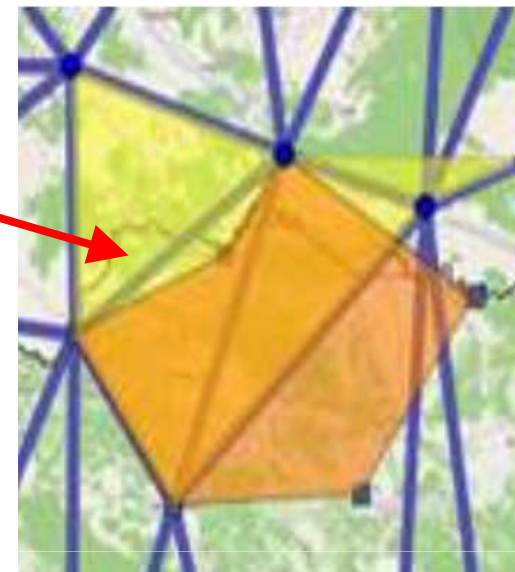
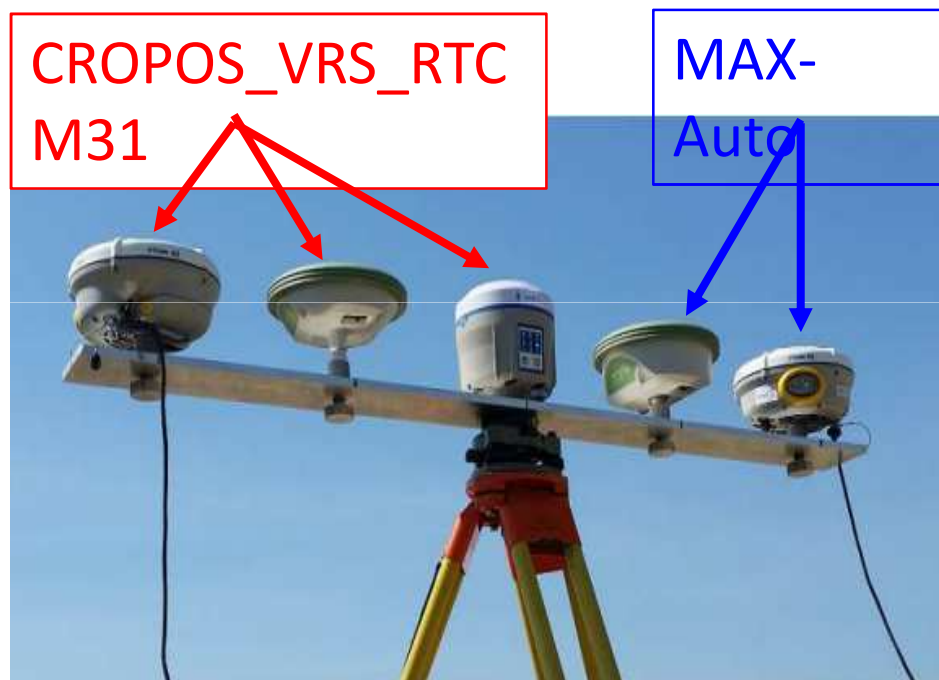
- DSP (DGNSS)
- VPSP (PDGNSS) (RTCM 2.3, RTCM 3.1)
- GPSP (RINEX)



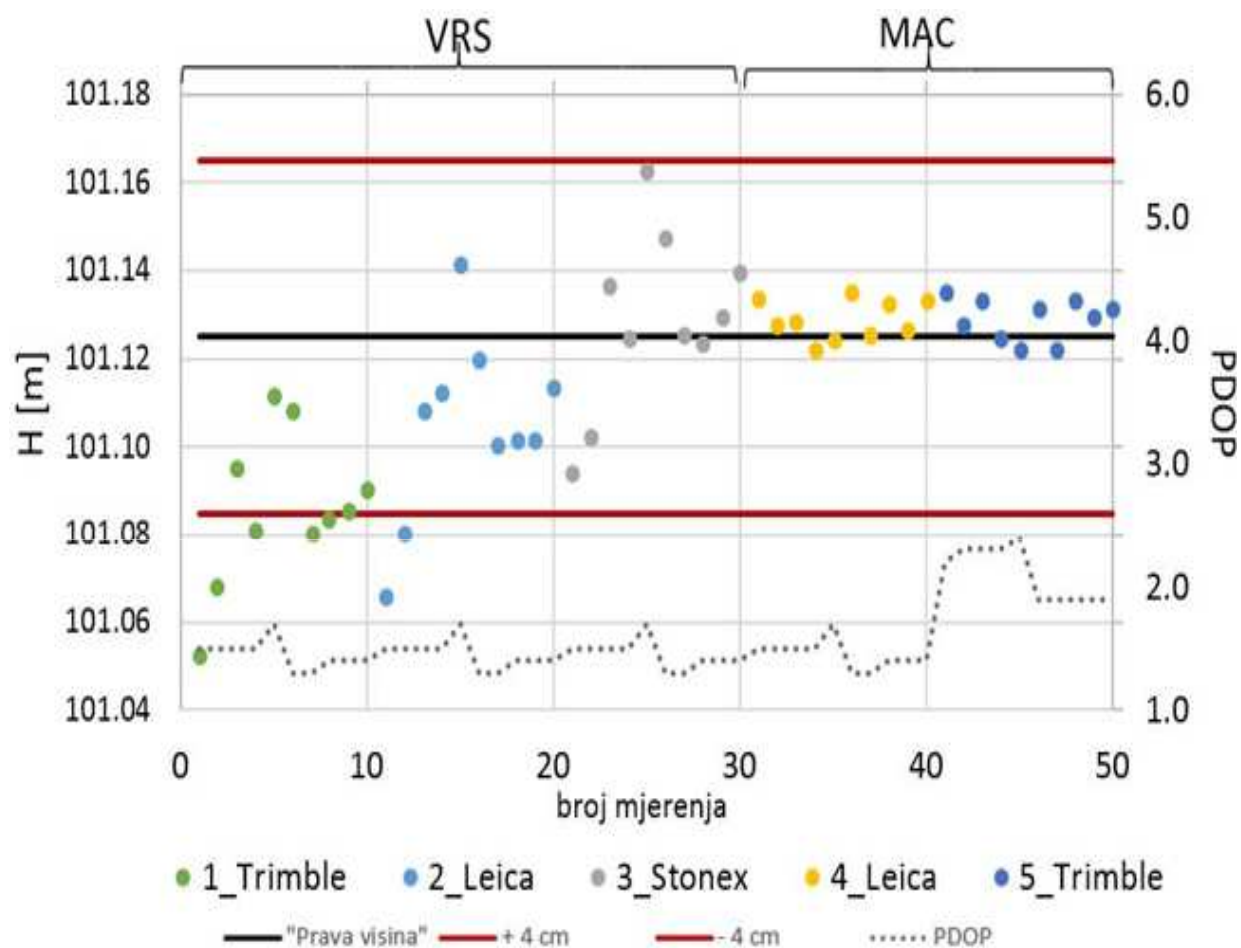
MOUNT POINT
MAX-AUTO
iMAX-AUTO
VRS-AUTO
FKP-AUTO
NEAREST
iMAX-AUTO_2.3
VRS-AUTO_2.3

4. Ispitivanje performansi CROPOS-a i SRPOS-a

- Pounje (Hrvatska Dubica)
- GNSS instrumentarij (Trimble, Leica, Stonex)



Usporedba visina (CROPOS vs. SRPOS)



SRPOS:

- preciznost: 0.00 m
- točnost: 0.01 m

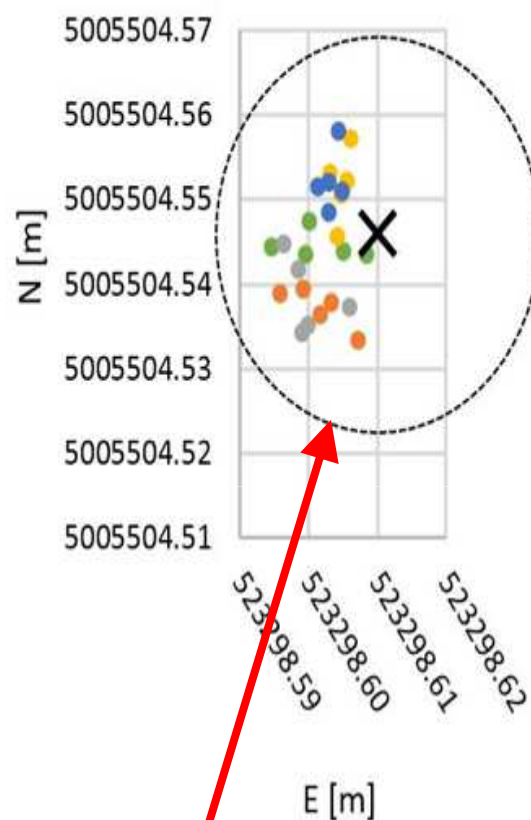
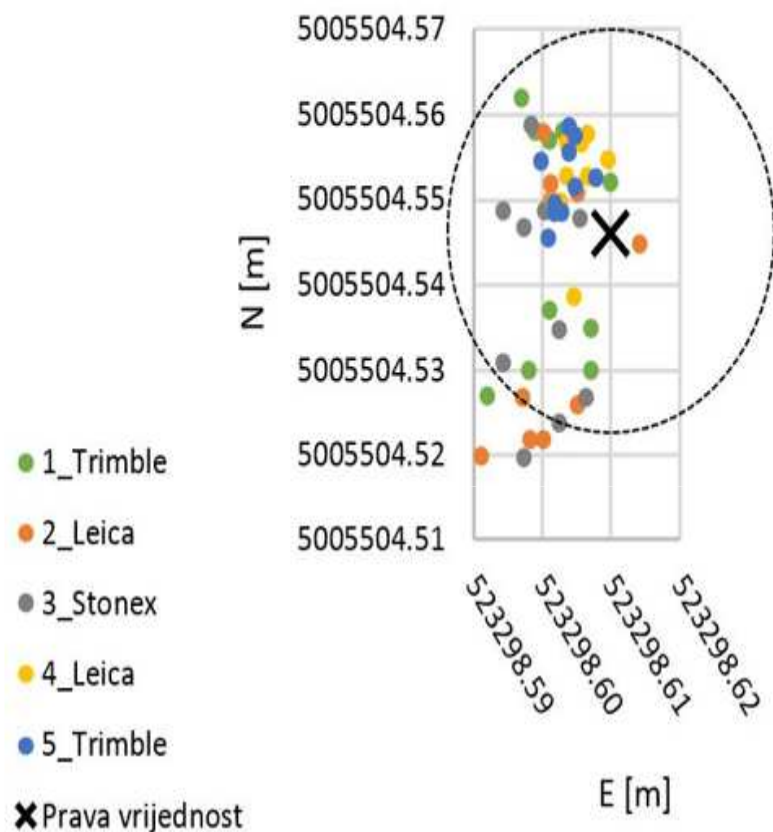
CROPOS:

- 1_Trimble: 0.02 m; 0.07 m
- 2_Leica: 0.02 m; 0.06 m
- Stonex: 0.01 m; 0.04 m

23/30 (77%) unutar ± 4 cm



Usporedba položaja (CROPOS vs. SRPOS)



SRPOS:

- preciznost: < 0.01 m
- točnost: 0.01 m

CROPOS:

- preciznost: 0.01 m
- točnost: 0.03 m

25/30 (83%) unutar ± 2 cm

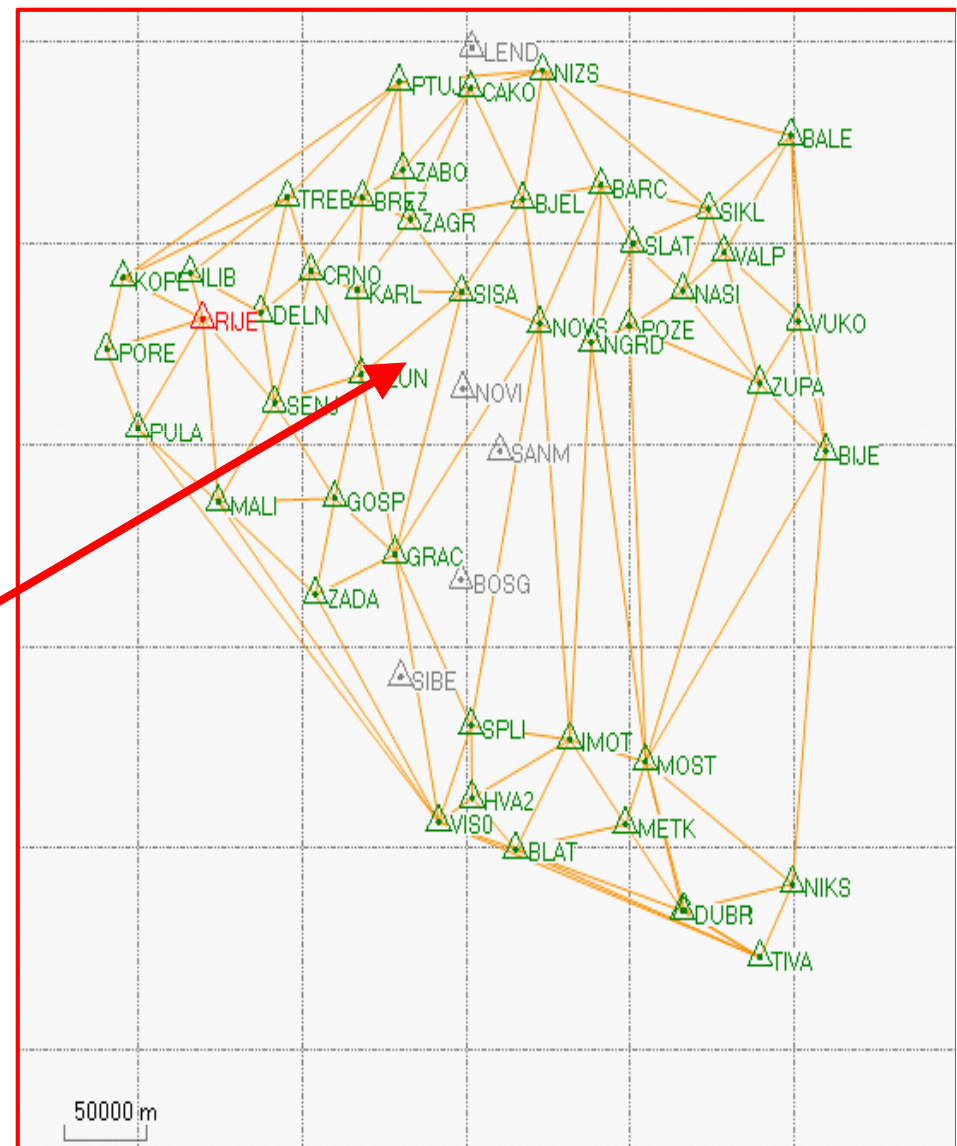
osrednjavanjem rezultata dviju sesija povećava se pouzdanost



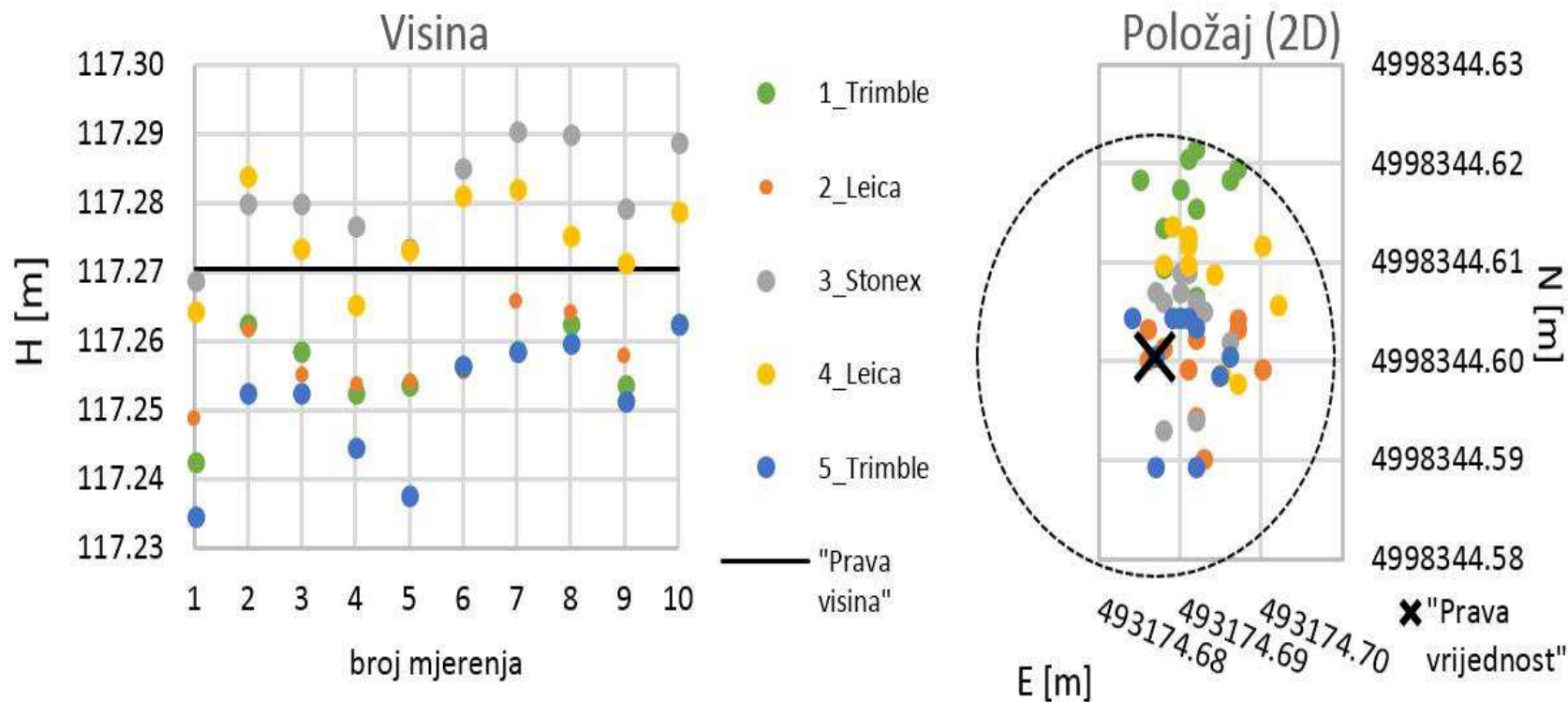
5. Ispitivanje performansi CROPOS-a (standardna i nestandardna konfiguracija mreže)

- CROPOS: 33 (51) CORS točke
→ standardna konfiguracija
- nestandardna konfiguracija
- deklarirana točnost VPPS-a:
 ± 2 cm (2D); ± 4 cm (3D)

lokacija Unčani (9. i 10. 5. 2015.)



CROPOS – standardna konfiguracija mreže

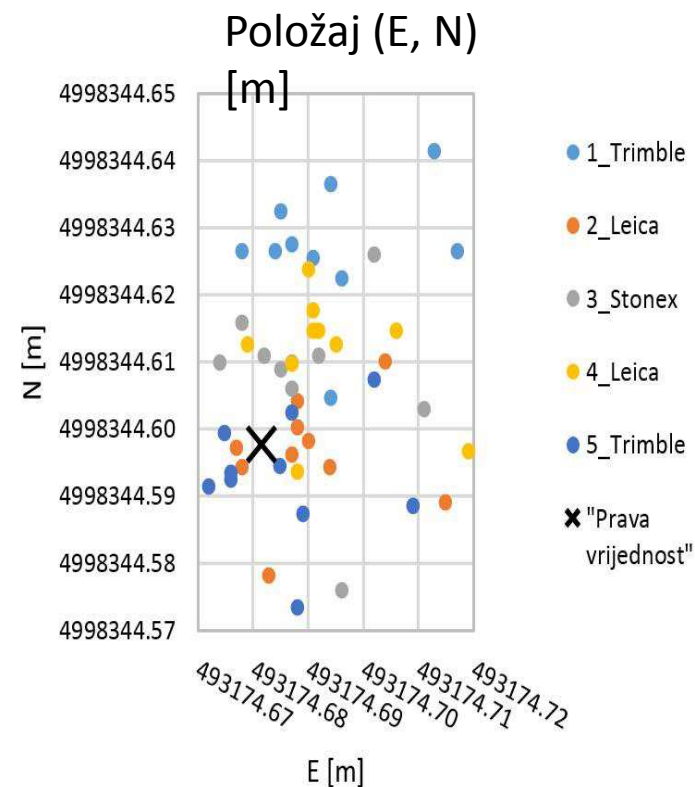
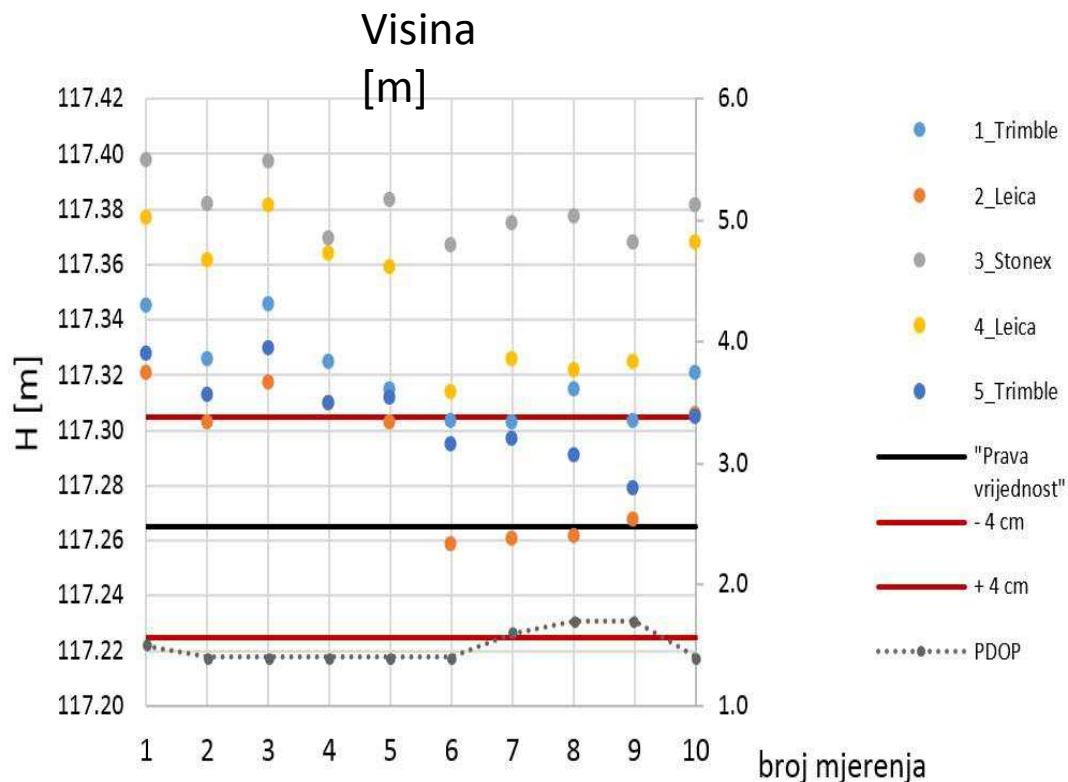


preciznost: 0.00 – 0.01 m (2D); 0.01 m (3D)

točnost: 0.01 – 0.02.m (2D); 0.01 – 0.04 m (3D)



CROPOS – nestandardna konfiguracija mreže



preciznost: 0.01 – 0.03 m (3D)

točnost: 0.06 – 0.13 m (3D)

preciznost: 0.01 m (2D)

točnost: 0.03 – 0.04 m (2D)



14/50 (28%) unutar deklarirane točnost ± 4 cm

5. Zaključak

- SRPOS (MAC) daje pouzdanije rezultate od CROPOS-a (VRS)
 - ✓ za potrebe ispitivanja planirano je bilo isključenje CORS KOZD
- dobri pokazatelji preciznosti (SRPOS), nešto lošiji (CROPOS)
- CROPOS (Hrvatska Dubica): točnosti: 3 cm (2D), 4-7 cm (3D)
- CROPOS (standardna konfiguracija mreže) → postignuta deklarirana točnost
2D i 3D
- CROPOS (nestandardna konfiguracija mreže) → degradacija točnosti:
3 – 4 cm (2D), 6 – 13 cm (3D)
- Potreba uspostavljanja usluge obavještanja korisnika o ispadu iz sustava pojedine CORS točke tj. nepouzdanosti sustav na određenom području





pitanja

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