

30th EUREF Symposium

# National Report of Slovenia

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Virtually from Ljubljana, Slovenia, May 26–28, 2021

# Terrestrial Reference Frame

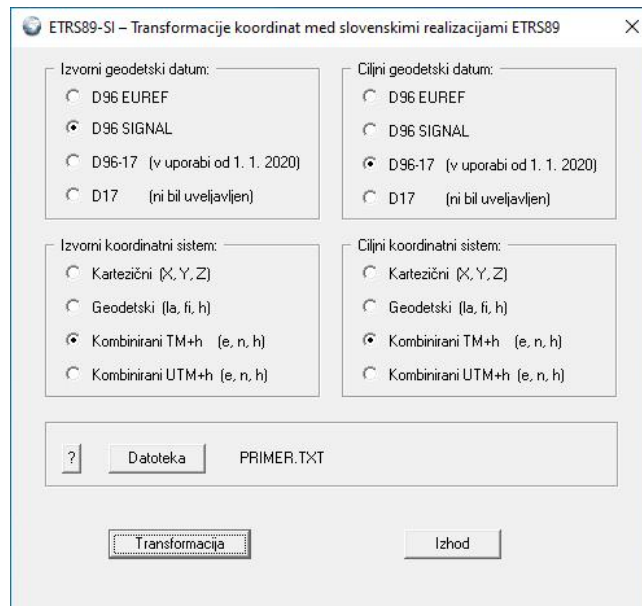
## New realisation of ETRS89 in Slovenia (D96-17) implemented on 1<sup>st</sup> January 2020

- D17 (EUREF realization – Amsterdam, 2018)
- D96 SIGNAL (CORS network realization, 2007)
- D96 EUREF (EUREF realization – Toledo, 2003)



- D96-17 ‘hybrid’ realization, 2020  
a pragmatic solution based on all three previous realizations

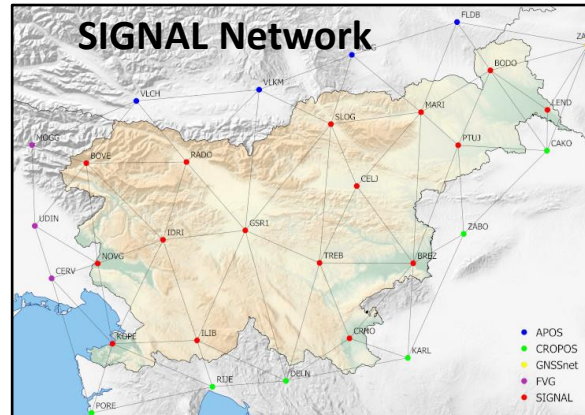
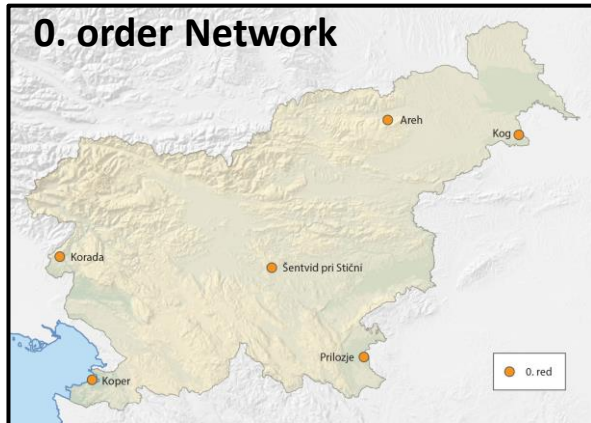
**New freeware tool for coordinate transformations** →  
between the Slovenian realizations of ETRS89



# National CORS Networks

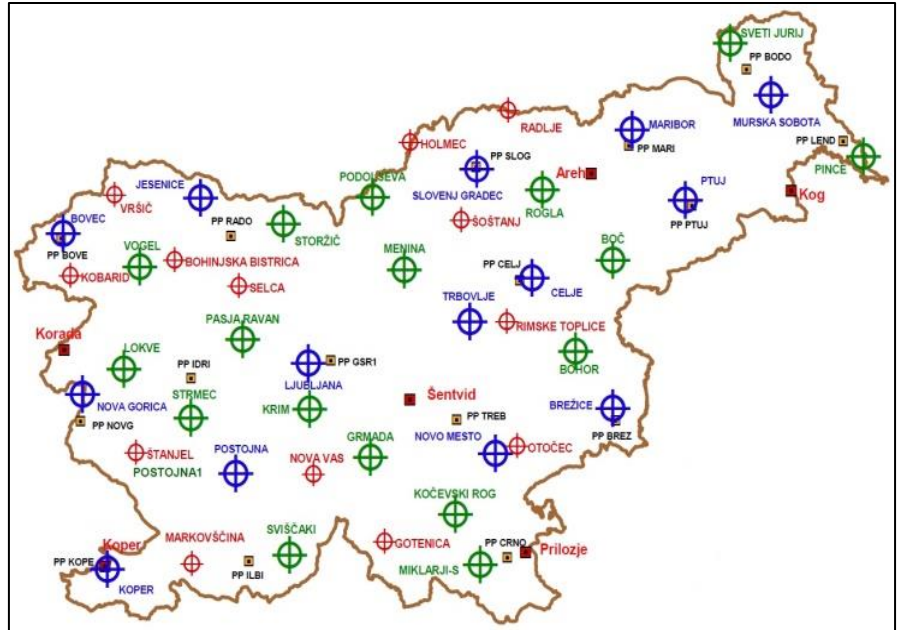
## SIGNAL Network

- Since 1<sup>st</sup> January 2020, all CORS network coordinates were replaced with the new ETRS89/D96-17 coordinates
- Upgrade of equipment (SW, HW, antennas+recivers, new website ...)
- 1 new additional station – Koper (test operating)



# Passive GNSS Control Network

- To monitor the quality of the national CORS network products and services
- To verify the quality of methods and measurement equipment for GNSS positioning
- 58 points stabilized on 44 locations
- Testing RTK GNSS positioning
- 14 locations with pairs of points (ISO 17123-8 standard)



# Vertical Reference Frame

## New Slovenian Height Reference System (SVS2010) implemented in practice

- New 'Technical Instruction for the Use of the New National Height System'
- New on-line transformation software called **SiVis** →
- Some urban area levelling networks were also re-measured

SiVis - Pretvorba višin med višinskimi sistemi RS

**Interaktivni vnos koordinat**

$\varphi$  / n

$\lambda$  / e

h nad GRS80

Rezultat:

45.25 <  $\varphi$  < 46.99992, 13.25 <  $\lambda$  < 16.75

**Branje podatkov iz datoteke**

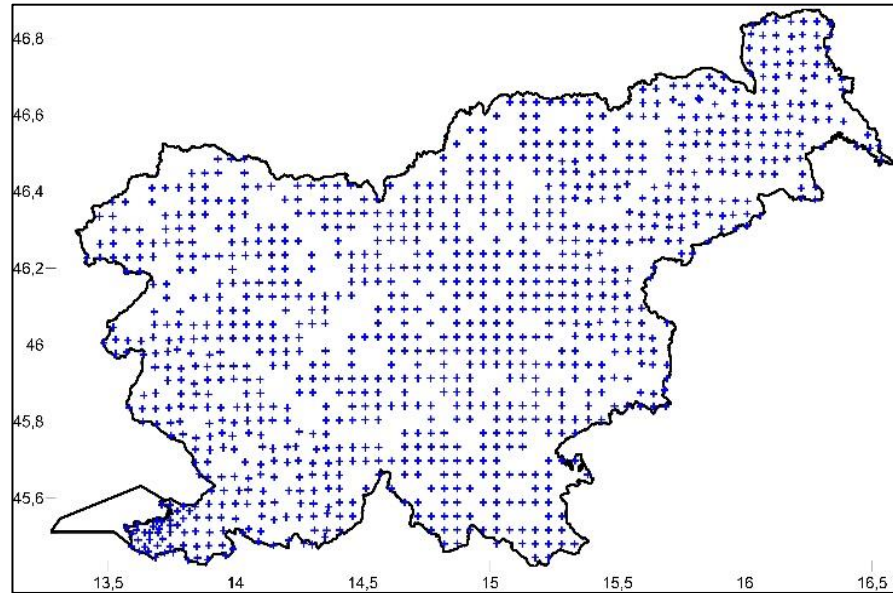
Datoteka:  Datoteka ni izbrana.

\* Datoteka max 60 KB - pribl. 1500 točk

# Vertical Reference Frame

Campaign of **regional gravimetric survey** was completed

- Points in the  $4 \times 4$  km grid
- Next step: geoid model



# Ongoing Research Projects

- SLOKIN – Geokinematic Model of Slovenian Territory
- RI-SI-EPOS – Development of Research Infrastructure for the International Competitiveness of the Slovenian Development of Research Infrastructure Space
- The Increase of Reliability of Public GNSS Network SIGNAL and Combined Zero Order Geodetic Network
- Development of Methodology and System for Verification of GNSS Permanent Networks and Stations
- Permanent Geodetic Marks as a Basis for the High-Quality Performance of the Geodetic Profession

**Thank you for your attention**