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NATIONAL REPORT OF SLOVENIA

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ADOPTION OF THE NEW (EUROPEAN) REFERENCE SYSTEM IN SLOVENIA

- Government of the Republic of Slovenia in 2004 accepted the proposal for the adoption of a new national reference system,
- Emphasis from the proposal:
  - Establishment of ESRS in Slovenia,
  - Establishment of National GPS network and GPS service (SIGNAL),
  - Procedures for the transformation of old coordinate system to the new one have to be defined for all the types of geodetic data,
  - Legislation and regulations for this transition have to be prepared according to the results of thorough testing on a considerable number of test fields.

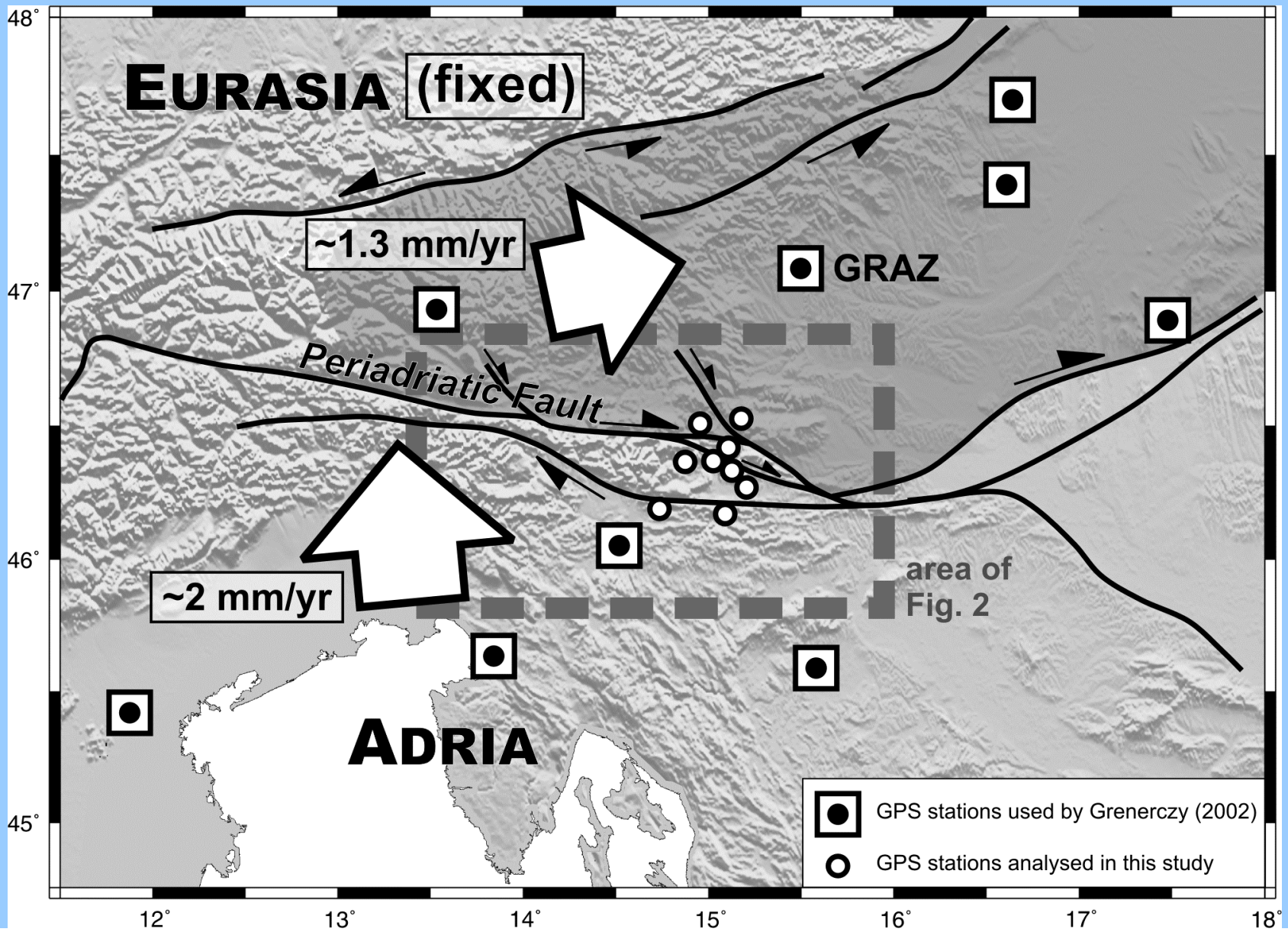
NEW REFERENCE SYSTEM OF SLOVENIA

- Definition of the system according to the ISO standards,
- New Slovenian reference system is part of European reference system (ESRS),
- ESRS system is spatial reference sistem
  - horizontal part (ETRS89),
  - height system (EVRS),
  - gravimetric system (IGSN71),
- Cartographic projection(s):
  - Gauss-Krueger (modulation ?),
  - Lambert conformal projection (standard parallels ?)

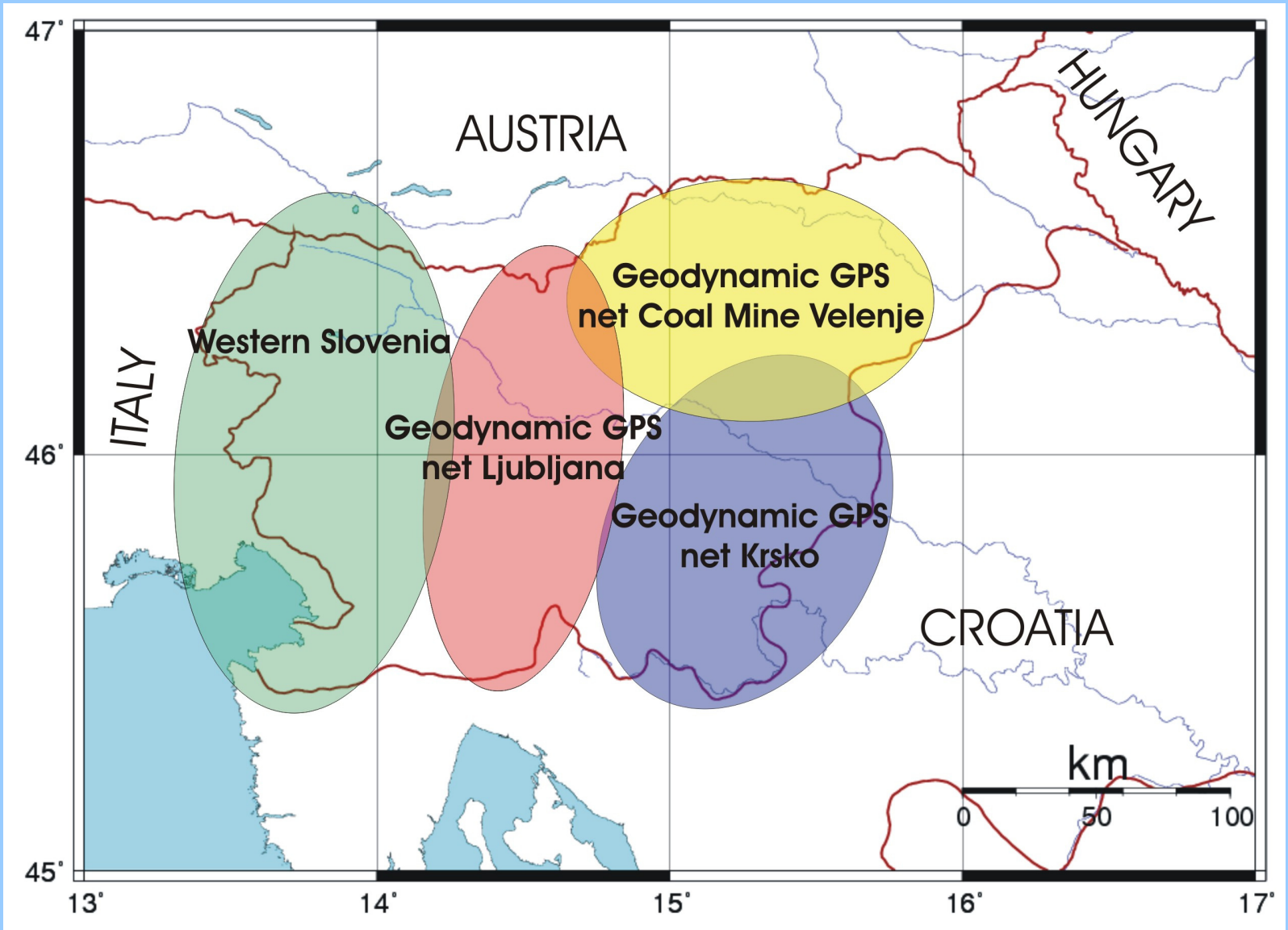
OLD SYSTEM - NEW SYSTEM

- **HORIZONTAL SYSTEM**
  - **Questions:**
    - **EUREF campaigns and geodynamics at the area (> 5 mm/y)**
    - **EUREF campaigns and permanent GPS network**
- **HEIGHT SYSTEM**
  - **Questions:**
    - **Quality of (old) data**
    - **Geodynamics of the area (>10 mm/y)**

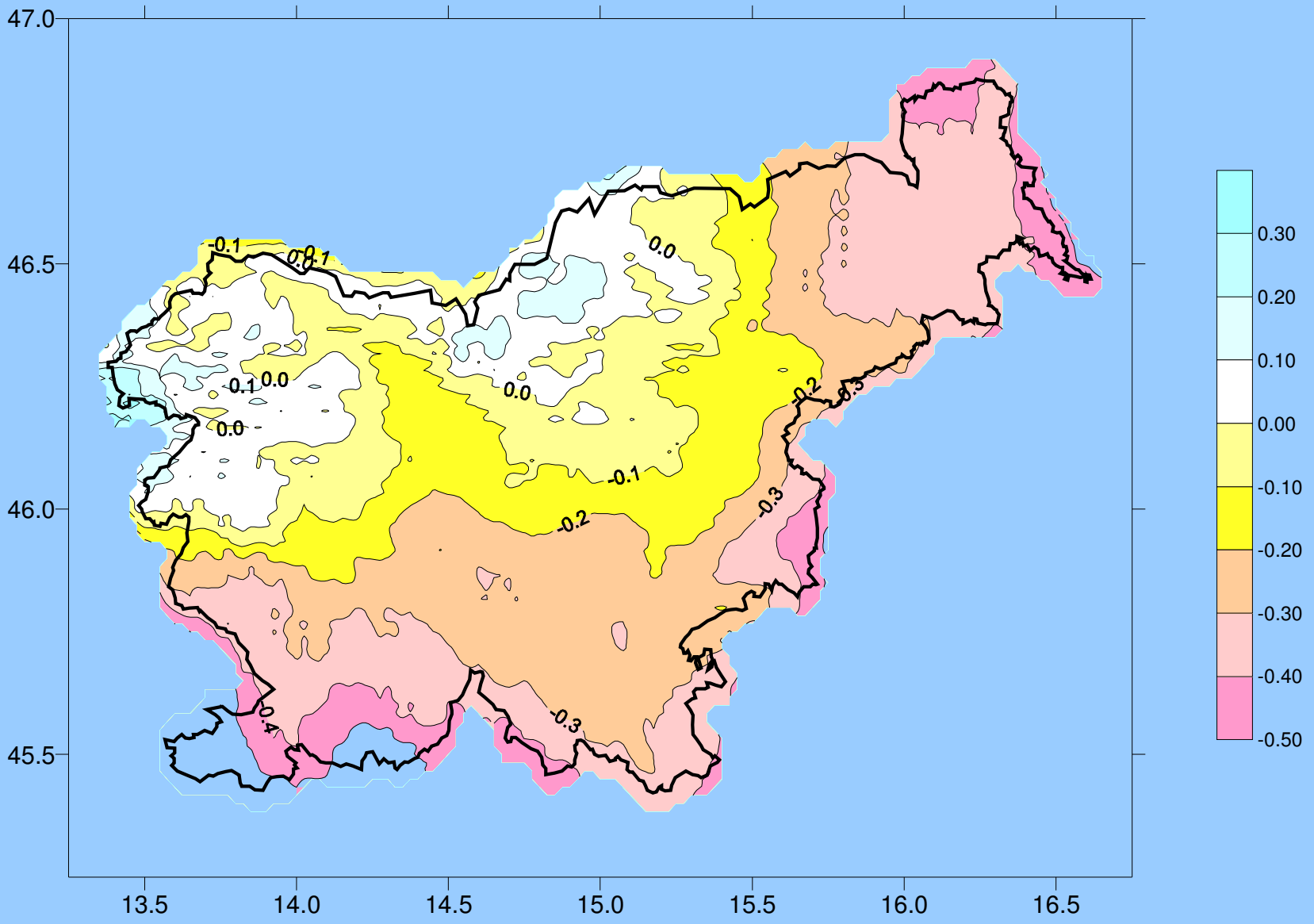
GENERAL GEODYNAMICS AT THE AREA



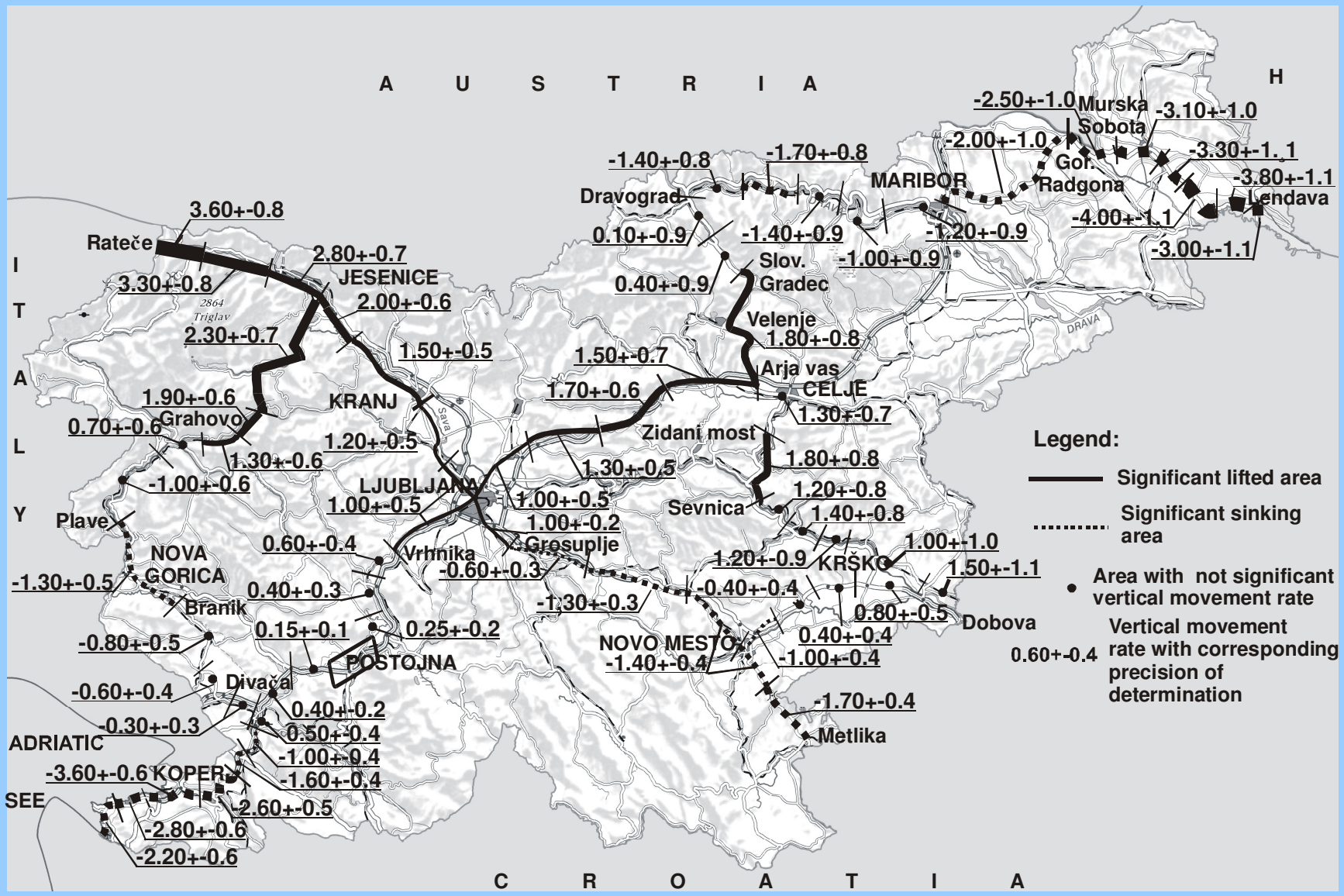
PLANNED GEODYNAMIC PROJECTS



NEW SLOVENIAN GEOID AND EGG 97



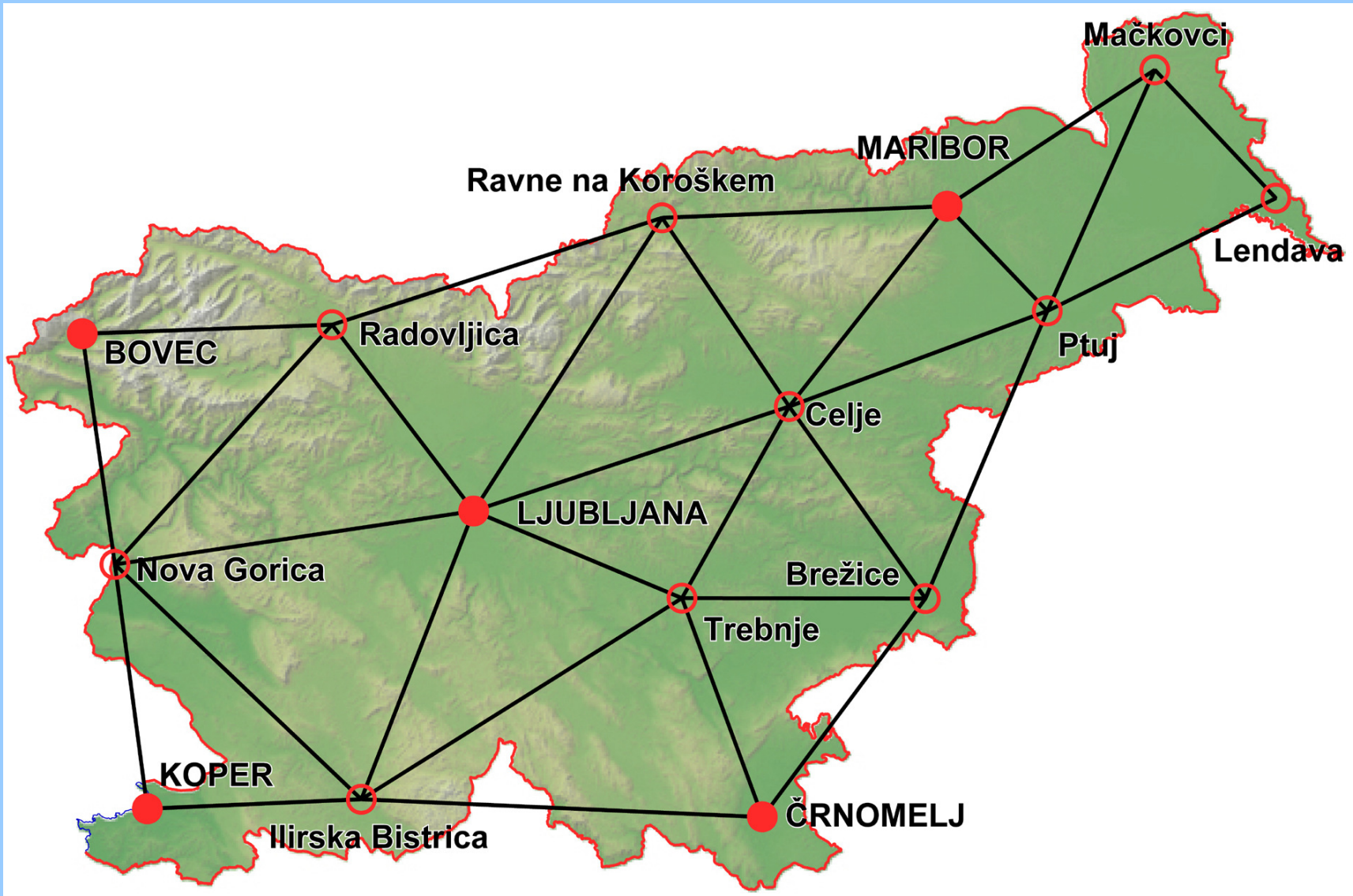
VERTICAL VELOCITIES AT THE AREA



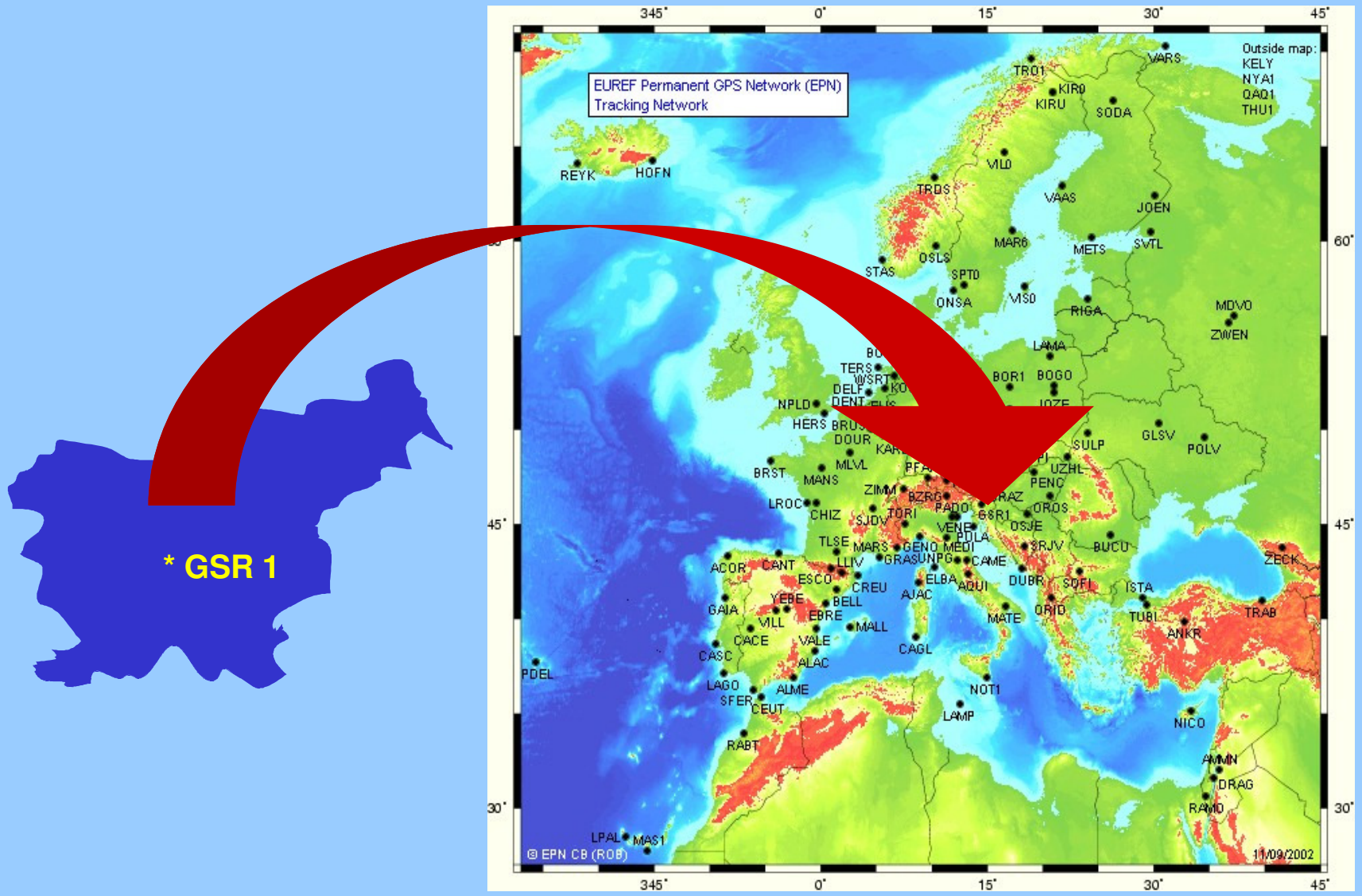
NEW GRAVIMETRIC SYSTEM

- Gravimetric system is based on IGSN71
- Zero order of the gravimetric network consist of 6 absolute gravimetric points
- First order gravimetric network will be consisted of 13 points and gravimetric point at a new tide gauge station in Koper

SLOVENIAN GPS NETWORK-SIGNAL



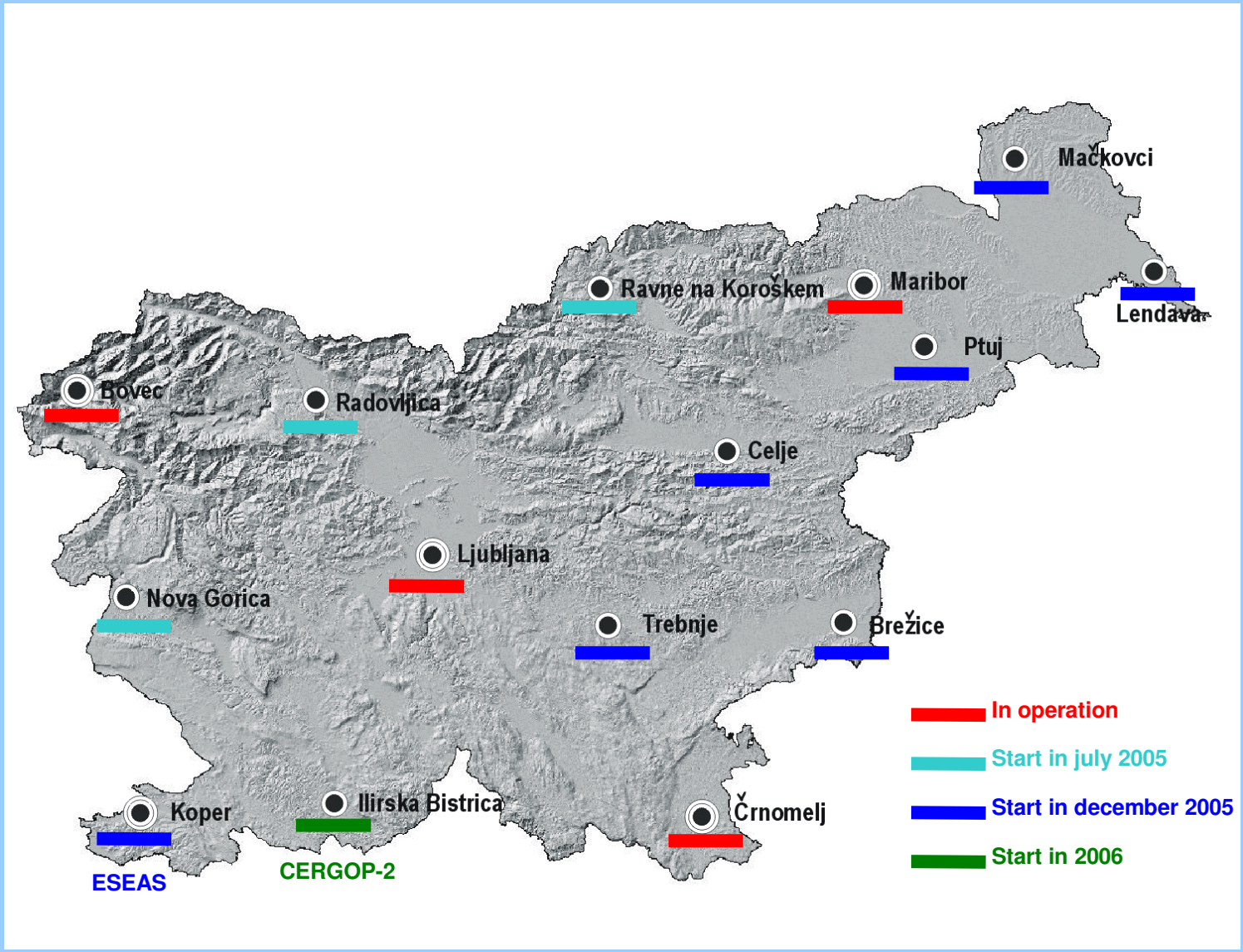
SIGNAL AND EPN



SIGNAL NETWORK

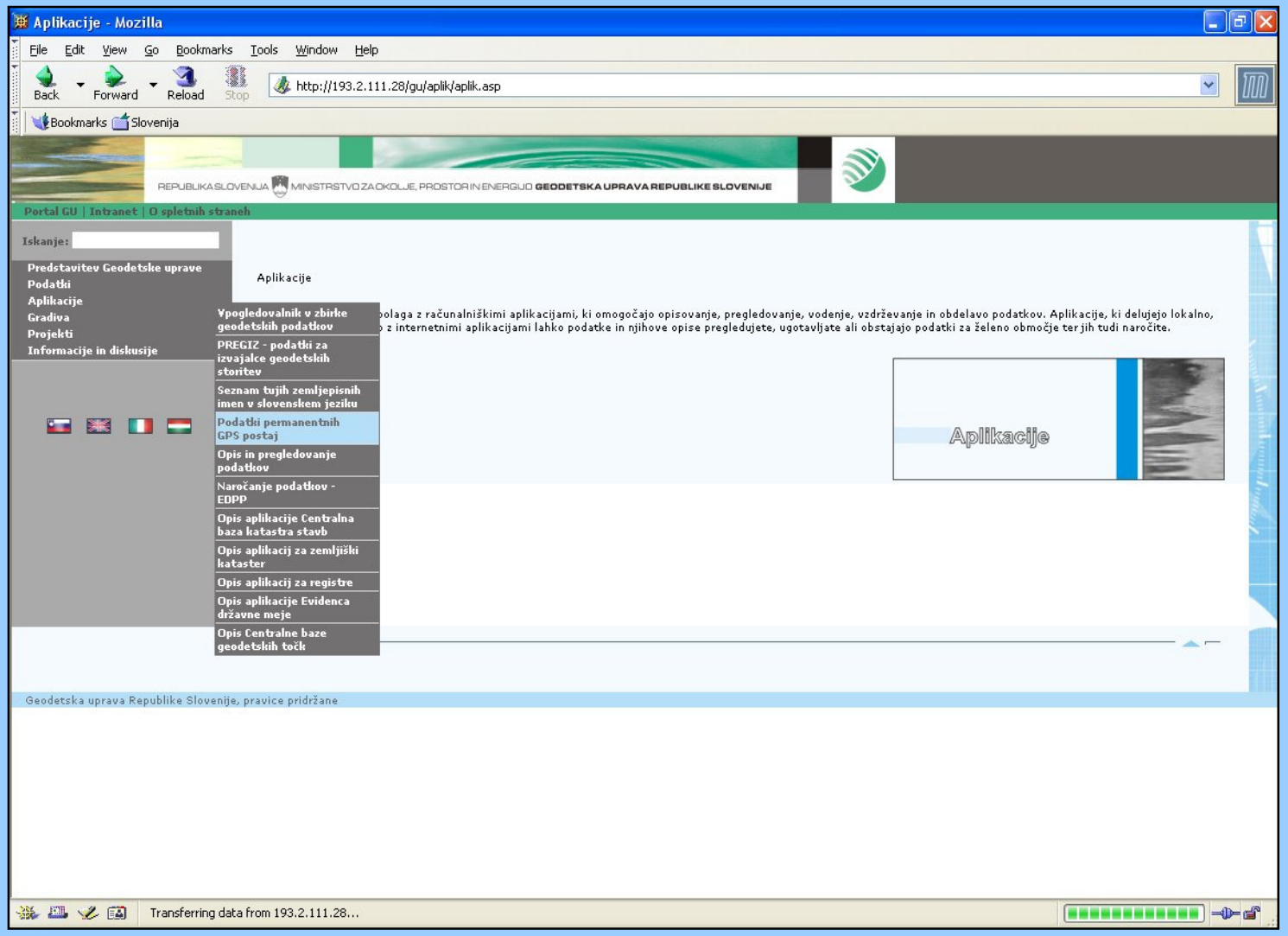
- **THE OBJECTIVE:**
  - Geodetic accuracy (cm rank) over the whole national territory
  - 15 stations
  - Average distance 50 to 70 km
  - GPS service in operation at the Geodetic Institute of Slovenia
  - Exchange of data with neighbouring countries
- **CURRENTLY:**
  - 5 networked stations
  - 1 of them part of EUREF-EPN (Ljubljana)
  - Average distance 70 to 130 km
  - Sub-decimeter accuracy
  - Trimble VRS/FKP in operation
  - 50 registered users
  - Exchange of data: APOS – SIGNAL (1 station – 1 station)
- **Outside SIGNAL:**
  - 8 private GPS stations exist (not networked)

STATUS OF SIGNAL NETWORK



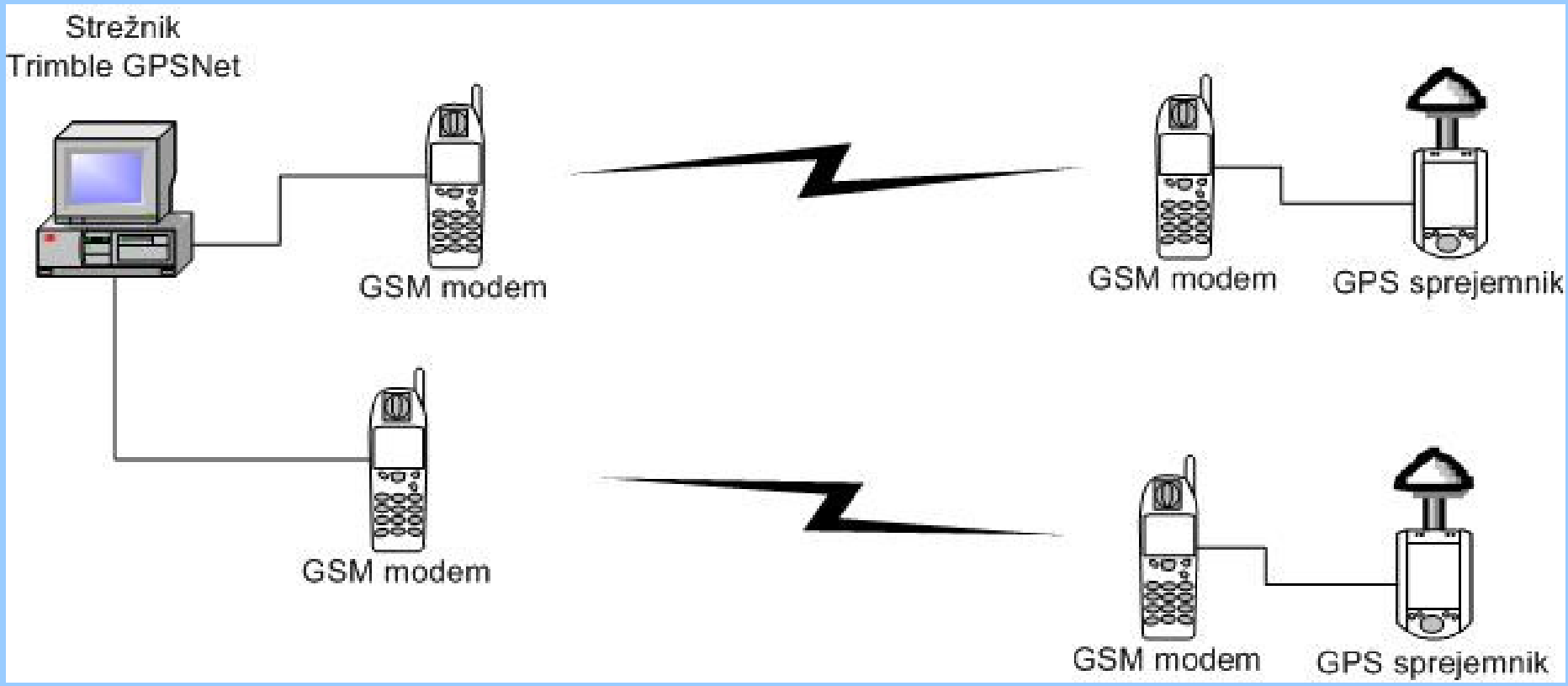
DATA DISTRIBUTION

POST PROCESSING - Via web server (SMA's home page)



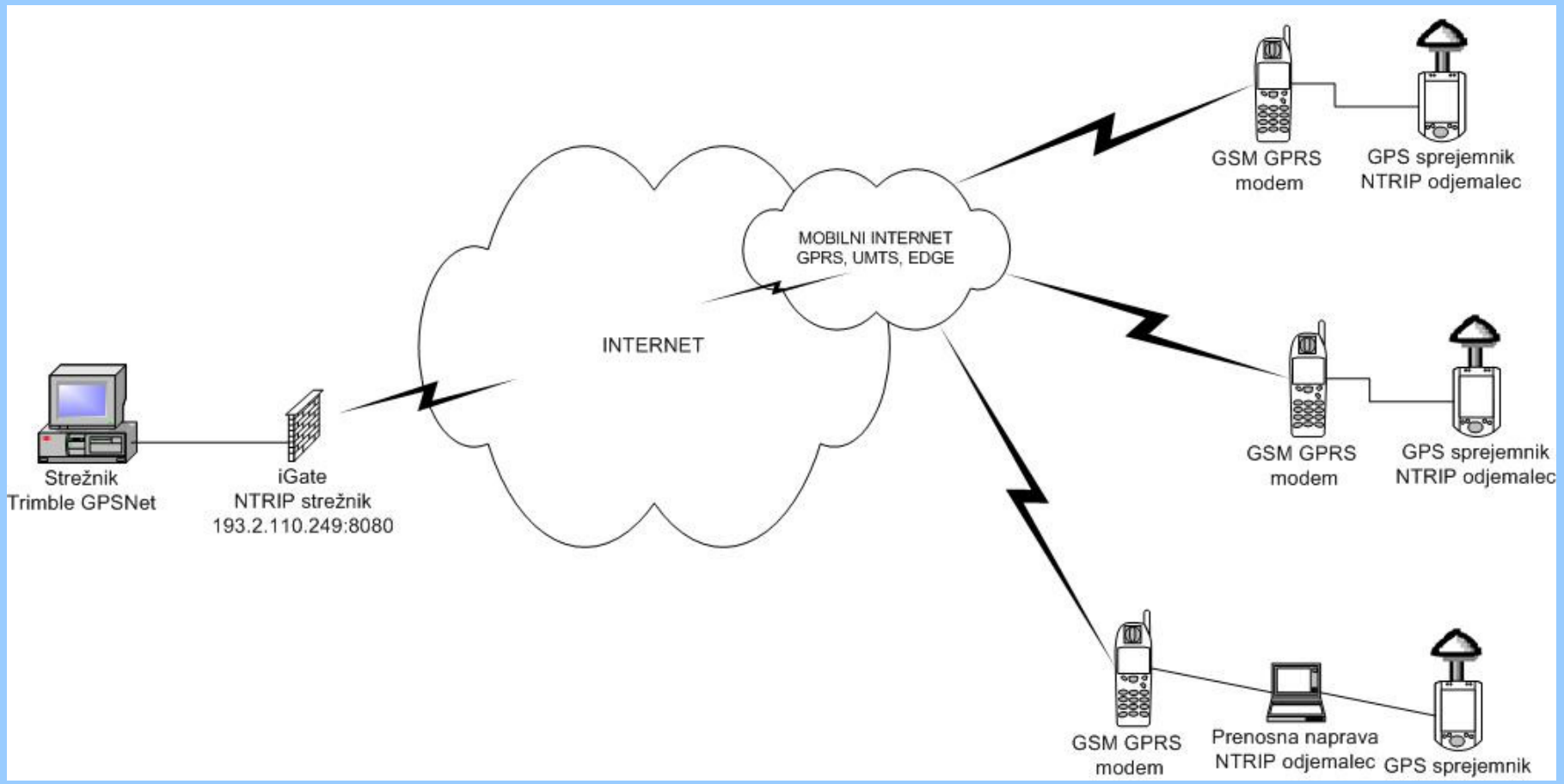
DATA DISTRIBUTION

REAL TIME – Via GSM with GSM modems in the center



DATA DISTRIBUTION

REAL TIME – Via mobile internet – NTRIP



DATA DISTRIBUTION

REAL TIME – Via GSM provider